UNIVERSITAS PENDIDIKAN INDONESIA UNIVERSITI SAINS MALAYSIA

Proceeding

The **3rd IPCoRE**

International Postgraduate Colloquium of Research in Education

Strengthening Education
through High Quality Education Research

13rd - 14th June 2014

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"Strengthening Education through High Quality Education Research"

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Editors:
Prof. Anna Permanasari, M.Si.
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PREFACE

We are pleased to welcome all of the participants to The Third International Postgraduate Colloquium of Research in Education (IPCoRE). The 3rd IPCoRE is organized by Forum Komunikasi Mahasiswa Sekolah Pascasarjana Universitas Pendidikan Indonesia (FKM SPs UPI), in collaboration with:

- Sekolah Pascasarjana Universitas Pendidikan Indonesia (Graduates Program)
- Universiti Sains Malaysia (USM)

IPCoRE has been started since 2012 as an International Postgraduate Colloquium of Research in Education. This seminar is motivated by improving the quality of education in science, social and language scopes. The aims of the seminar are: (1) To bring together the scientists, education experts and practitioners, students, and civil society organization representatives in the scientific forum; (2) To share and to discuss theoretical and practical knowledge about innovation in science, social, language and education.

IPCoRE will be held every year to provide forum for researchers science, social and language education to share new ideas or research result in their field. The theme for this seminar is *"Strengthening Education through High Quality Education Research"*. This seminar is sponsored by SPs UPI.

The scope of research results to be presented and discussed in this seminar covers science, social, language and education.

The 3rd IPCoRE features 6 invited speakers and 82 contributed oral presentations, which come from Indonesia and Malaysia. All papers reviewed before and after they are presented in this event.

To all participants, we hope that you will learn new subjects, make new contacts, and have fruitful discussions with others. To overseas participants, we wish you a pleasant stay in Bandung.

Finally, we wish to express our sincere appreciation to all of the presenters for their valuable contributions and also to the members of the program committee for their excellent works in selecting abstracts and organizing the program.

February, Bandung 2016

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SECTION 1 :
SCIENCE

ANALYSIS OF STUDENTS' LEARNING OBSTACLES ON THE SUBJECT OF PYTHAGOREAN THEOREM

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Abstract

This research used a descriptive exploratory to describe the learning obstacles within students in solving Pythagorean theorem problems. The learning obstacles will be classified into three learning obstacles, which are: ontogenic obstacles, epistemological obstacles, and didactical obstacles. The research data obtained from a test of Pythagorean theorem problems and the result of interviews that then extracted to the instructional material design in the mathematics textbooks. The analysis results will be gathered and concluded in the way to design an instructional material that based on the didactical design research.

Keywords: learning obstacles, didactical design research, Pythagorean theorem, instructional material design

A. INTRODUCTION

Learning obstacles in students are different; depend on the factor that cause it; such as physiological, social, emotional, intellectual and pedagogical. Prior knowledge is the instance of intellectual factor, which is greatly affect the success of student learning, because learning occurred in the process of coding and encoding of information in students' mind. For students who have a sufficient prior knowledge will easily accept new information and communicate them in learning experiences and have more confidence in doing so. As for the students who have less prior knowledge, they will have difficulties to accept new information due to the lack of experience of the prior knowledge, so that making students difficult in understanding the concept.

To meet students' needs and to provide sufficient portion for each learning styles, it is required an instructional material that capable to fulfill the needs. Instructional material in question is not mere information transferred from what is in the text book without going through the process of re-contextualization and re-personalization. Re-contextualization is an attempt to put things into another context, so it will be familiar and intertwined and fused by the whole; while re-personalization is making something identifiable as the belonging to a person. As stated by Suryadi and Turmudi (2011) that preparation of instructional material in general is based only on presentation models that are provided in the text books without going through the process of re-contextualization and re-personalization. In fact, the presentation in the mathematics text books, in the form of concepts description, proving, problem examples,

they are the synthesis of a long process that ended in the process of re-contextualization and re-personalization.

This case refers to the need for a renewal of the instructional material prepared by teacher in presenting the material in class. Teacher cannot be a copycat to impose instructional material in the book without looking at the characteristics and obstacles of students who will be taught. As mentioned by the National Council of Educational Research and Training (2006):

> "Mathematics education relies very heavily on the preparation that the teacher has, in her own understanding of mathematics, of the nature of mathematics, and in her bag of pedagogical techniques. Textbook-centered pedagogy dulls the teacher's own mathematics activity."

In the learning process, Brousseau (1997) defined three types of learning obstacles, namely: ontogenic obstacles, didactical obstacles and epistemological obstacles. Ontogenic obstacles are obstacles due to differences in the level of knowledge of student's ability with teacher's level of knowledge in teaching. Didactical obstacles are caused by the lack of precise methods or approach that teacher use in teaching; while the epistemological obstacles are caused by the mathematical concept.

The establishment of knowledge occur very complex, which is through a system of learning that involves students, teachers and system knowledge (Brousseau, 1997). Learning is not limited to the process or read a book or record what is explained, learning is a mental process in which students experience a change so that individuals who previously did not know, after learning, to know. Brousseau (1997) defined learning obstacles into three types: ontogenic obstacles, didactical obstacles, and epistemological obstacles.

1. **Ontogenic Obstacles**

Ontogenic obstacles are caused by the difference between the level of student's knowledge with the moderate level knowledge be taught. It makes difficult to adapt the new knowledge in students' mind. Brousseau (1997) stated "obstacles with an ontogenic origin are those which arise because of the student's limitations (neurophysiological ones among others) at the time of her development". In line with him, Spagnolo (1998) stated:

> "Ontogenic obstacles are linked with pupils' maturity. Possibility to develop some skills, knowledge and abilities depends on pupils' mental age, which means on the state of development of pupils' cognitive abilities. (It is linked with development of pupils' brain, thinking patterns, ego, intellect etc.) So pupils can have for example neuro-physiological limitations, which may depend only on their chronological age."

2. **Didactical Obstacles**

Didactical obstacles caused by the mismatch method or approach that teacher use in teaching. It is also the result of an error in the process of teaching some algorithm, which is considered to be true, but it is not. Brousseau (1997) stated that "obstacles of didactical design origin are those which seem to depend only on a choice or a project within an educational system."

3. Epistemological Obstacles

"Obstacles of really epistemological origin are those from which one neither can nor should escape, because of their formative role in the knowledge being sought." (Brousseau, 1997). Epistemology associated with knowledge and how knowledge is acquired. Spagnolo (in Vankus, 2005) "Epistemological obstacles come from the nature of the concept that has to be taught. For instance, if there are some non-continuity or radical changes in the evolution of mathematical concept, epistemological obstacles during the teaching of this concept could appear". Epistemological obstacle is an obstacle that can be seen from the way students be able to solve a problem with a certain concept but students cannot solve the problem in different context yet with the same concept.

In learning, there are three important elements that connect teacher, students, and material. The three elements will form a relation, which are students-teacher, teacher-material, material-students. These three relations form a study called Didactical Design Research (DDR).
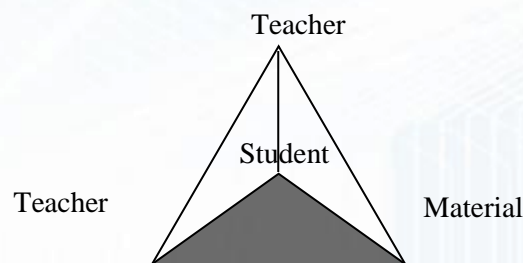
Picture 1 Metapedadidaktik Prism (Suryadi, 2010)

As illustrated, Metapedadidaktik explains the relation between students and teacher and material. This metapedadidaktik prism is modified from the Kansanen didactical triangle by Suryadi that added a relation between students-teacher-material, which is called anticipation of didactical and pedagogical.

Didactical is emphasized in learning since the planning stage (Suryadi, 2010). The didactical analysis is conducted before learning, which focuses in relation between teacher, students, and material. The didactical analysis will be the referral to form a learning design. In the design instructional material, teacher must be able to predict what response will arise, and anticipate what response given after that. This stage mentioned by Suryadi as anticipation of didactical and pedagogical. In this stage, the competence and ability of teacher is needed to build the structure of good instructional material design.

These three relations are not formed by the class itself, but must be designed by the teacher in advance. The design of a learning scenario that regulates how the learning will be done. However, there are things that also occur spontaneously or beyond expectations, and teacher must improvise swiftly so that learning objectives still be achieved. In this case the teacher's competence and ability to design a good learning are indispensable. Suryadi named the capability as Metapedadidaktik.

B. RESEARCH METHOD

The method used in this research is descriptive exploratory method, where the approach taken towards the object under study is a qualitative approach. This research uses descriptive method, because the data to be collected is not a number, but rather the results of interviews, field notes and documents. This is done because the phenomena will be discussed in a complex and holistic. Therefore, this research uses the instrument interviews, and observations to match the empirical reality of the prevailing theories using descriptive methods. "Descriptive research is research that seeks to describe a symptom, event, incident that occur in the present." (Sujana and Ibrahim, 1989:65)

This research was conducted to obtain in-depth information about the learning obstacles experienced by students, the results of the analysis of learning obstacles will be used as a guideline in designing instructional materials that according to the three components of didactical design research (DDR).

C. RESEARCH RESULTS AND DISCUSSION

Based on the results of the instruments given to the three schools with different clusters; discovered the problems experienced by students in solving the problems. The problem was then analyzed and explored more deeply through the interviews. The students involved in this study were: 38 students of the school with the first cluster (high), 29 students of the school with the second cluster (moderate), and 32 students from the school with the third cluster (low). Of the total students were given the Pythagorean theorem problems; some selected to be interviewed to gain a deeper understanding of the problems experienced by students in solving the given problem. From each cluster, students were selected based on the obstacles they experienced and to confirm the responses, so that there is no misunderstanding between the students and the researcher. The findings of which has been through a general analysis then categorized into three types of learning obstacles, namely: ontogenic obstacles, obstacles epistemological and didactical obstacles.

1. The Category of Data Based on Ontogenic Obstacles

Ontogenic obstacles are obstacles that arise from a gap between level knowledge of the students and the students' actual knowledge. This gap can be seen from the steps were selected by students in solving problems.

a. The Influence of Algebraic Thinking on Ontogenic Obstacles

The problems that arise in solving the problem were an understanding of the variable r in the question. Students who at the time was studying the circle have the knowledge that r is the radius, so they assumed r is the radius of the circle in a triangle and thought that the required answers will be very difficult, so many students did not work on this matter. Then some of the students also thought that r was not the part of the long sides, so that when they draw the right triangle, the lengths of the sides that they wrote were 35, 3, and 4.

b. The Influence of Geometry Ability on Ontogenic Obstacles

In the development of junior high school students, they already reached the third level of Van Hiele's geometry level development, it means that student be able to explain the relation and differences between each geometry plane. However it is often found that students still on

the first level of Van Hiel's geometry development level, where students could only recognize the geometry based on the visual appearance. The research result shows in the problem five regarding trapezoid problem, students did not know the nature of a trapezoid. The obstacle that arise in solving this problem are the lack of geometry knowledge, such as: students do not know the formula of trapezoid circumference, students could not construct a rectangle or triangle in the trapezoid, and students can determine the final answer because students do not know the comparison of special angle-based right triangles.

2. The Category of Data Based on Epistemological Obstacles
a. The Influence of Misconception on Epistemological Obstacles

There is the tendency that students started solving the problem from the second step. Judging by the answer, there are two possibilities that can be withdrawn: the first possibility, students indeed understand the fact that using $c^2 = a^2 + b^2$ means they already knew that c is the longest side of the triangle. The second possibility, students used $c^2 = a^2 + b^2$ because the given problem is about Pythagorean theorem, eventhough they do not know how to use the formula in the problem context. The difference between the first and second possibility is the conclusion, in the first possibility, students will withdraw the conclusion regarding the longest side of the side, but by the second possibility, students will stop after substituting the sides' length of triangle and concluding nothing in the end, because they do not know what they are working on.

b. The Influence of Implicit Information on Epistemological Obstacles

The obstacles occurred is students could not come up with the problem solving either using Pythagorean theorem or the formula of the triangle area and the rectangle area. In the interview, S31 said that the area in the problem cannot be determined because there is no known value in the problem. S31 thought that the questions are incomplete, so that student could not move to the next step of solving the problem.

"gimana mau dicari luasnya kalau gak ada nilainya bu?"

'How to determine the area with unknown value of the length' this suggest that student did not see the implicit information within the known question. Student assumed that the term of area is always about numbers, so when it comes to variables like p and q, student cannot work on the problem.

3.2.3 The Influence of Visual Representation on Epistemological Obstacles

The problem arises because students made mistake in drawing the illustration of the question. This kind of obstacle is derived from the lack of geometry knowledge like the definition of line and angle; this can be found in students' answer in the following picture:

Picture 2 The Answer of S74
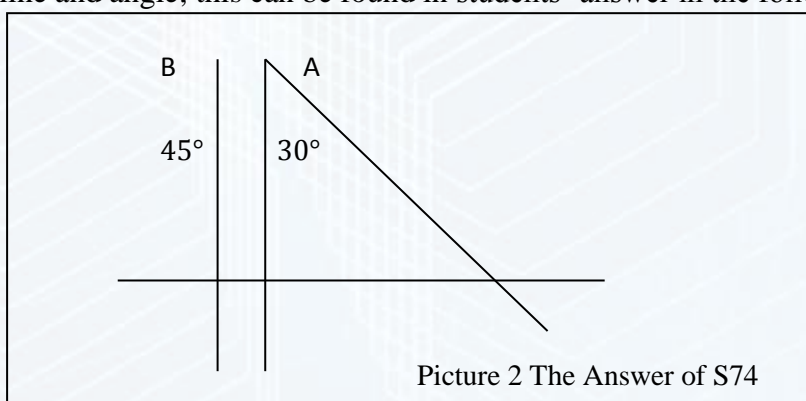
3. Category of Data Based on Didactical Obstacles
a. The Influence of Verbalistis on Didactical Obstacles

According to Kamus Besar Bahasa Indonesia (KBBI), *verbalistis* is the nature of verbal or recitation, this word is usually used when a term or word used without knowing the meaning of the term. In terms of student learning, *verbalistis* often occurs, both from teachers and from students. In the learning process, teachers often deliver quick way to use the term that aims to facilitate students in remembering a concept, but it sometimes takes students to do the recitation of the term without understanding the meaning behind the term.

Terms such as '*ditambah-tambahkan'* (addition) '*dikurangkan*' (subtraction) or '*sisi yang miring'* (the sloping side) are the examples of *verbalistis* apparent from the results of the students' answers. This will bring a custom for students to memorize concepts quickly with the term, but without an understanding will draw a misconception and learning obstacles. As in problem 5, where there are many students were not able to solve the problem correctly because of the term 'ditambah-tambahkan' as the term they often used to describe the formula of circumference. This term make students add all of the known value in the question such as adding a side length and angle. This suggests that there is learning obstacle within students, which are didactical obstacles.

The obstacle that experienced by almost all students is the first step that is how to determine the hypotenuse. Students are familiar with the term 'the sloping side' which refers to 'hypotenuse'. In this case, students assumed that the hypotenuse is the sloping slide, whilst in the provided picture there are two sloping sides. This makes students confused on how to determine the hypotenuse because the only definition they know about hypotenuse is 'the sloping side'. It is caused fatal impacts, because there will be a lot of sloping sides in one right triangle based on the shape of the right triangle.

The results of the extraction of research findings and the analysis of mathematics textbook indicate that the information in the textbook immediately accepted as a finished product by students. The process of discovery and investigation gives a large role to the development of students' creative thinking process. By involving students actively in finding Pythagorean theorema using cutouts papers with right triangle shape, this way seems to be a positive influence on students' self-confidence and creativity, just the need for a guide that directs them to come to the thinking processes, such as by provide questions and reinforcement. Examples do not always show the use of the formula but need to raise to the problems that need higher oreder thinking, so that when the students will work on the problems in the non routine problems, students already be equipped by working on the varied experience of the previous.

From the results of the above analysis concluded some important things to be used as reference in designing teaching materials Pythagorean theorem:
1. Performing the discovery of Pythagorean theorem by engaging students in inquiry, problem can use in everyday life, for example is the concept of distance;
2. Providing implicit information and questions that can stimulate students to think;
3. Providing reinforcement;
4. Avoiding giving quick way that can lead students to verbalistis and misconceptions;

5. Providing questions that are contextual and varied by giving time to students to complete in their own way before students are given the correct procedure;
6. Provide exercises that sharpen students' problem solving ability;
7. Problems should not always use pictures in order train students' ability of visual representation;
8. Giving students the opportunity to express their opinions and ask students to practice communication skills.

D. CONCLUSION

From the analysis result and the discussion on the research findings, it can be concluded as following:

a. The students tend to use the quick way to solve the problems without adequate understanding of the concept.
b. Students tend to remember the term alone without further explanation regarding the concept. The students often memorize the concept but without lack of understanding, so that students did not do well in the problems with different context.
c. The students tend to fail in doing the problems with implicit information and the problem that requires visual representation in the process of solving the problem, this occurs because students usually work with the problem with explicit information and presented picture. It is also because of the lack of students' understanding and geometry ability; students often make mistakes in doing visual representation, this lead student to incorrect answer.
d. Based on the interview results, the students do not like the word problems or a problem with long questions. The students thought that this kind of problem will lead to complicated and long answers, so students tend not to answer the problems even before read the problem first.
e. From the analysis result and extraction of mathematics textbooks, it is needed a didactical design that involves students actively in the learning process, such as discovery, reconstruction and work in variatif problems.
f. This research indicates that the most common learning obstacles found within students is epistemological obstacles, which supposedly caused by the less of flexibility in doing problems and the meaningless learning, that it also can be caused by the didactical obstacles.

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IMPROVING THE UNDERSTANDING OF MATHEMATICAL CONCEPTS THROUGH THINK TALK WRITE LEARNING STRATEGY A STUDY IN SECOND YEAR JUNIOR HIGH SCHOOL STUDENT

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Abstract

This paper presents the findings of a quasi-experimental with the pre-test-post-test control group design. The aims of this study were to analyze in depth the difference between the gain score from the students who were taught by TTW learning strategy and who were taught by direct learning strategy, and determine the achievement on each indicator of understanding of mathematical concepts. Subject of the study were 64 of 8th grade students from public junior high school in Bandar Lampung, Indonesia, which were selected by purposive sampling. The Instrument of the study was mathematics test to obtain student's understanding of mathematical concepts skill. The data was analyzed using t-test. The level significance was 5%. The study found that (1) the mean normalized gain score of the students' understanding of mathematical concepts in TTW learning strategy is higher than that of in direct learning strategy; (2) over all the achievement of the student's understanding of mathematical concepts in TTW learning strategy were higher than that of in the direct learning.

Key words: understanding of mathematical concepts, TTW

A. INTRODUCTION

Education is a very important need in human life. Education be well planned in order to realize the learning process so that students actively develop their own potential and skills as provision in social life. It is accordance with the goal of education in Indonesia which is stated in the national legislation of Indonesia about the national education system.

All our experience and what we learnt from research indicate that learning based on understanding is more enduring, more psychologically satisfying and more useful in practice than learning based mainly on the rehearsal and routines low in meaningfulness. With a good understanding of the concept students may have the capability of reasoning, connections, and mathematical communication, as well as applications in mathematical problems. Therefore, understanding the concepts is very important in the learning of mathematics.

Improvements that need to be done by teachers involved in the selection of instructional strategies used. Learning strategies should be used to bring students into active learning situations. In situations such learning, student's understanding of mathematical

concept are expected to be developed well. Good understanding of the concepts can help students achieve better learning outcomes as well.

One of learning strategies which can enhance students' understanding of mathematical concepts is by involving students actively in learning through indirect learning strategy. One alternative is to use the type of learning strategy Think Talk Write (TTW). According to Yamin and Bansu (2008: 84) this strategy was introduced by Huinker and Laughlin. This strategy consists of the process of thinking, talking, and writing. It is known as the learning of individuals in the group which will be more effective when applied in a heterogeneous group consists of 3-5 students.

Based on the prior observation, it was found that the teacher only explained the lesson and example directly after giving exercises to the students. In this activity, students were only active as recipients of knowledge. Though, from the characteristics of the students, each student was able to be directed in a more active learning.

The purpose of this study was to (1) analyze in depth the difference between the gain score from the students who were taught by TTW learning strategy and who were taught by direct learning strategy, (2) to determine the achievement on each indicator of understanding of mathematical concepts.

B. LITERATURE REVIEW

Soedjadi (2000) stated that the concept is an abstract idea that is used to categorize or classify a set of objects that are normally expressed by a term or series of words. The concept is associated with the definition and the definition of an expression that limits the concept of. By definition, one can create an illustration or symbol of a defined concept.

In terms of function, Sulton and Hayso (Wanhar, 2008) stated that the mathematical concepts are divided into three groups, namely the concept which allows for a student to classify objects, a concept that allows students to be able to connect concept to each other, and concept that allow students to explain the facts. In addition, Gagne (Wanhar, 2008) classified mathematical concept in terms of its form into two groups, namely the concept based on the basis of observation and definition. This may imply that a mathematical concept is very useful for the achievement of a learning goal. This is in line with Hamalik (2002: 164) who explained that the concept can be useful in a lesson, which is to reduce complexity, help students identify existing objects, learn something more extensive, and direct students to the instrumental activities.

Understanding of mathematical concepts is defined as the ability to associate a mathematical notation and symbols relevant to mathematical ideas and combine them into a series of logical reasoning. This is in accordance with the opinion of Skemp (1987) " ... the ability to connect mathematical notation with symbolism and relevant mathematical ideas and to combine these ideas into chains of logical reasoning. "

The ability of understanding mathematical concepts is one of the important goals in learning mathematics due to the material being taught to students not only as rote. With a good understanding, students can understand the concepts of the subject matter itself better.

Understanding of mathematical concepts is also one of the goals of any material presented by the teacher, because the teacher supervised students to achieve the expected concepts.

In this study, learning outcomes obtained by the results of the understanding of mathematical concepts test. The indicators used in this study were (1) restate a concepts, (2) classify objects according to certain properties of the corresponding concepts, (3) give examples and non-examples, (4) expressed a concepts in different forms of mathematical representation, (5) develop necessary and sufficient condition of a concepts, (6) use, utilize, and select a proper procedure or operation, and (7) apply the concepts (Wardhani, 2008: 10).

Basically, TTW learning strategy was conducted by three steps, which were Think, Talk, and Write. According to Yamin and Ansari (2008) the steps of TTW learning strategies are: (1) the teacher gives a worksheets to the students containing problems, clues and the process procedures; (2) students read the worksheet and make notes based on their readings individually, (*think*); (3) students take a part in interaction and collaboration with groups to discuss the contents of the note (*talk*). The teacher acts as a mediator of the learning environment; and (4) the students construct their own knowledge as a result of collaboration (*write*).

C. METHODOLOGY

This study was a pretest-posttest control group design. Sample in this study was obtained by purposive sampling. It was chosen from 8 classes. It was obtained 1 class as experimental group, and 1 class as control group. The experimental group was taught by TTW learning strategy and the control group by direct learning strategy. Before it was started, both of the experiment and the control group were given pretest of understanding of mathematical concepts. Then at the end of series of experimental group and control group term were given post-test. The questions between pretest and posttest were same. N-Gain scores were determined to obtain the improvement of understanding of mathematical concepts.

1. Given the radius of a circle below is 14 cm and $\angle AOB=60^0$. Find:
   a. The length of arc AB
   b. The area of sector AOB
   c. The area of shaded region (segment)
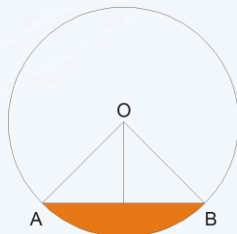
2. The surface of a slice of tart-cake was like a sector of a circle. The area of a slice of tart-cake is 157 cm^2. If the central angle is 45°. Find the length of arc on the slice of tart cake.
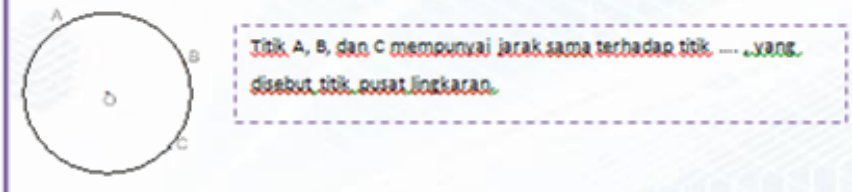
The research instrument used in this study was a test to obtain the understanding of mathematical concepts. The instrument validity was obtained by the teacher's and lecture's judgment. The reliability of this instrument was 0.798. This is the sample of mathematical understanding concepts test.

This is the sample of the worksheet.
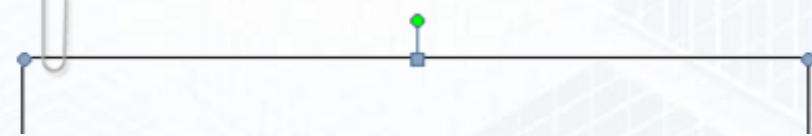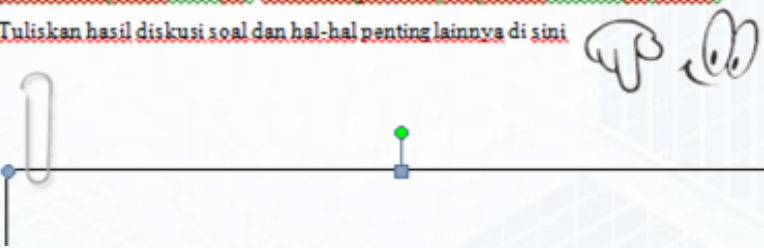
The hypothetical test is begun with the normality and homogenous of variance test. The result was the data came from normal population and the variance was homogenous so that to determine the difference of the mean in this research it used t-test with the significance level 0.5 %.

D. FINDINGS

At the beginning of the experiment, students in both groups were asked to do pre-test. Study was found that there was no difference on previous mathematics ability between the two groups. At the end of the experiment, students in both groups were asked to do post-test. The study found that there was difference on posttest score between the two groups. The N-

gain was analyzed to find the improvement of students' understanding of mathematical concepts. The findings illustrated that the students that taught by TTW learning strategy had better improvement that the students in other group. Testing hypothesis about the N-gain of the understanding of mathematical concepts was presented in Table 1.

Table 1
Testing N-gain

Group	Test	Mean	N-Gain	t-obs	t-table	Conclusion
Experiment	Pre-test	33.5	0,55			
	Post-test	70		2,36	1,67	Significantly Different
Control	Pre-test	28.4	0,46			
	Post-test	60,25				

Depth analysis on students' understanding of mathematical concepts related to the indicator used was illustrated in Table 2 and Tabel 3.

Table 2
Students' Understanding of Mathematical Concept According to Pretest Score

No	Indicators	Score		Score max		Mean (%)	
		Eks	Cont	Eks	Cont	Eks	Cont
1.	Restate a concept	379	384	768	768	49,35	50
2.	Classify objects according to certain properties of the corresponding concepts	129	117	192	192	67,19	60,94
3.	Give examples and non-examples	55	33	64	64	85,94	51,56
4.	Expressed a concept in different forms of mathematical representation	53	40	64	64	82,81	62,50
5.	Develop necessary and sufficient condition of a concept	143	104	704	704	20,31	14,77
6.	Use, utilize, and select a proper procedure or operation, and	75	57	512	512	14,65	11,13
7.	Apply the concept	30	20	320	320	9,38	6,25
	Mean					47,09	36,74

Table 3
Students' Understanding of Mathematical Concept According to Post-test Score

No	Indicators	Score		Score max		Mean (%)	
		Eks	Cont	Eks	Cont	Eks	Cont
1.	Restate a concept	671	591	768	768	87,37	76,95
2.	Classify objects according to certain properties of the corresponding concept	146	160	192	192	76,04	83,33
3.	Give examples and non-	55	55	64	64	85,94	85,94

No	Indicators	Score		Score max		Mean (%)	
		Eks	Cont	Eks	Cont	Eks	Cont
	examples						
4.	Expressed a concept in different forms of mathematical representation	55	53	64	64	85,94	82,81
5.	Develop necessary and sufficient condition of a concept	470	380	704	704	66,76	53,98
6.	Use, utilize, and select a proper procedure or operation, and	275	234	512	512	53,71	45,70
7.	Apply the concept	154	113	320	320	48,13	35,31
	Mean					71,98	66,29

E. DISCUSSION

Based on the results of data analysis and hypothesis testing using the t-test right side, it was known that the students' mean score gain of understanding of mathematical concept who taught by TTW learning strategy was higher than students in other group. Thus, the TTW learning strategy had a better impact to improve the students' understanding of mathematical concepts.

The improvement could be happen because in TTW learning strategy the students are required to read the worksheets and work on individual at the first time. Thus, students had a preparation for the discussion. Students also did not hesitate to ask the teacher about things that were not understood in the individual step even groups. In contrast to direct learning strategy, students only got information from teachers that were less motivated to read the material and do the exercises given.

Based on the indicator's analysis, it showed that the students in the experimental group obtained better achievement on six of seven indicators. It implied the mean of the achievement in experimental group were higher than in the control group, that was 71,98% for the experimental group and 66,29% for the control group. In addition, students who were taught by TTW learning strategy had increased understanding of the concept better than that of in the direct learning. The mean gain score of students in TTW learning strategies was 0.55 and the mean gain score of students in direct learning strategy was 0.46. According to the classification of Hake (1999), both of the gain score was classified in medium criteria.

In TTW learning strategies, the students were more motivated to understand the subjects being studied. The students discussed well and asked to the teacher when they faced a problem or difficulty. However, the teacher not answered the question directly. The teacher considered to answer directly or not or ask the students to be more careful in discussing the case in question. The step was in accordance with the role and duties of teachers in an effort to make effectiveness in using TTW learning strategies which proposed by Silver and Smith.

The students' understanding of concept who were taught by TTW learning strategy were better than students who were taught by direct learning strategy. This was due to the TTW learning strategy were taught by three stages, namely think, talk, and write. The three

step were done both in individually and group. The three of steps provided an opportunity for students to learn by themselves through learning activities. In accordance with the opinion of Hamalik (2004), these activities gave a chance for the students to take a part in effective learning. Although in practice, the three stages were not implemented optimally, but those steps helped students in understanding the concept being studied well. In contrast to the class using direct learning strategies, students only got information from the teacher's explanations so that students were often seen not enthusiastic in understanding the lesson.

F. CONCLUSION

Based on analysis, findings, and discussion, the study derives some conclusion as follow. The students which were taught by TTW learning strategy had better improvement of understanding of mathematical concepts than the students in direct learning strategy. In depth analysis, the students in TTW learning strategy obtained six of seven higher indicators than students in direct learning strategy. It implied the mean of the students' indicator achievement in TTW learning strategy was higher than the students in direct learning strategy.

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NUMERACY: DIFFERENCE IN ACHIEVEMENT ACCORDING TO EDUCATIONAL STREAMS FOR SECONDARY SCHOOL LEAVERS

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Abstract

This quantitative study was done in order to determine the difference in the achievement of secondary school leavers in numeracy based on the Science, Arts, Accountancy, Technical and Islamic Studies streams. As many as 386 lower sixth-form students categorized as secondary school leavers were involved in the study. Students involved were given a numeracy test containing 36 items which consists of Whole Numbers, Fractions, Decimals and Percentage topics in the field of Numbers with a distribution of 9 items for each topic. One way ANOVA test was used for the analysis of data. Finding of this study shows that there is a significant difference in the achievement for secondary school leavers of different streams. Since there is a significant difference between several streams such as the science stream compared with the arts, Islamic studies and technical streams, the Null Hypothesis in this study is thus rejected. It is hoped that the finding of this study may give inputs to relevant parties so that necessary actions can be implemented.

Keywords: Numeracy, mathematics, real-life situations, secondary school leavers, streams

A. INTRODUCTION

The term 'NUMERACY' is said to emerge for the first time in the Crowther Report which considered numeracy as same as literacy but it involved more quantitative thinking (Crowther, 1959). Following that, Cockroft (1982) defined numeracy as the compatibility with numbers and the ability to use mathematical skills in daily life, as well as the capability to appreciate and understand mathematical information such as graphs, charts or tables, and percentages. The Ministry of Education Malaysia (MOE) had defined numeracy as the capability to do basic mathematical operations and understand simple mathematical ideas as well as applying mathematical knowledge and skills in daily life (Manual Am Numerasi, 2010).

Numeracy has definitely become a topic of discussion among intellectuals since the term was first introduced. Discussions were not limited to numeracy in mathematics, but also related to other fields such as the fields of science, technology, arts, English language, health (Western Australian Department of Education and Training, 2004), geography, physical education, music and Islamic studies. Apart from that, numeracy constructs are also found in the fields of social, culture, history and politics (FitzSimons, 2008). In fact, numeracy also exists in real-life situations of an individual which consists of the daily life, work, social, education and recreation (Asiahwati Awi, Munirah Ghazali & Abdul Razak Othman, 2012). In this study, numeracy is associated with mathematics that is used in the real life situations of an individual. Thus, every mathematical problem can also bring implication to an individual's achievement in numeracy.

1.1 Problem Statement

Malaysia sees education as a very important investment. This is clearly shown in the objectives of the Secondary School Mathematics Curriculum which aimed to develop individuals with mathematical thinking skills and able to apply mathematical knowledge effectively as well as responsible in solving problems and making decisions, so as to being capable in handling the challenges of daily life in accordance with the development in science and technology (Kementerian Pendidikan Malaysia (KPM), 2013). The education system in Malaysia also provides various platforms and opportunities in education such as the streaming system which may have the options of science, arts, accountancy, technical and Islamic studies streams.

Studies on the ability and weakness in solving mathematical problems among Form Five students of different streams had been done. It was shown that science stream students displayed better results compared with the arts stream students. Arts stream students' knowledge on ratios and mathematical thinking skills were weaker than that of the science stream students. They faced difficulties in converting the currency of ringgit into Singapore dollar (Yeong Wai Chun & Johari Hassan, 2009).

The '*Programme for International Student Assessment'* (PISA) test which intends to evaluate the educational systems around the world by assessing 15 year-old students' skills and knowledge, had reported on Malaysia's placing in Mathematics compared with other nations in PISA 2009. It was shown that Malaysia obtained 404 points behind Thailand, Taiwan, Korea, Hong Kong, Singapore and Shanghai-China with 419, 543, 546, 555, 562 and 600 points respectively (KPM, 2012).

Meanwhile, the study of '*Trends in Mathematics and Science Study*' (TIMSS) reported that the mean score for Malaysian Form 2 students' achievement in Mathematics had significantly decreased starting from 1999, then in 2003 and 2007, and finally in 2011. The achievement mean scores obtained were 519, 508, 474 and 404 respectively. Malaysian students' achievement in Mathematics showed a decline compared with students in Korea, Singapore, China, Hong Kong and Japan (TIMSS, 2011).

PISA and TIMSS reports showed that Malaysian students' achievement in Mathematics is less than satisfactory. The PISA test focused on evaluating applications for real-life problems, disregarding the curriculum of the participating nations. Meanwhile, the test in TIMSS also used items concerning the solving of real-life mathematical problems. Since numeracy is defined as the ability of an individual to apply mathematical knowledge and skills to solve quantitative problems in the real-life situations (Asiahwati Awi et al., 2012), thus those findings of PISA and TIMSS may describe the Malaysian students' achievement in numeracy.

1.2 Research Question

The objective of this study should be able to answer the following research question: Is there any difference in the achievement of secondary school leavers based on the Science, Arts, Accountancy, Technical and Islamic Studies streams?

1.3 Research Objective

This study intends to determine the difference in the achievement of secondary school leavers based on the Science, Arts, Accountancy, Technical and Islamic Studies streams.

1.4 Research Limitations

This study took only samples of secondary school leavers who are pursuing their lower sixth-form education in Pulau Pinang. Meanwhile, each information given by the samples were considered true and valid for analysis. In addition, the scope of this study only involved the field of Numbers which consists of Whole Numbers, Fractions, Decimals and Percentage topics.

B. METHODOLOGY

This quantitative study used the stratified random sampling procedure. Sample consisted of 600 secondary school leavers who were continuing their studies in the lower sixth-form. As many as three schools that were randomly chosen in each five districts of Pulau Pinang were involved in this study.

This study measured the students' achievement in numeracy by using the numeracy test. A set of test paper consisting of 36 items was prepared. All the items in this study were taken, translated and also adapted from existing items on numeracy from ten different sources. All the items in this study were to test the students' ability to apply mathematical knowledge and skills in the field of Numbers when solving quantitative problems in the real-life situations. Topics related to the field of Numbers are Whole Numbers, Fractions, Decimals and Percentage. Each topic contributed nine items.

Samples were required to sit for a numeracy test which included 25 objective questions and 11 subjective questions, making it a total of 36 items altogether, at their own schools. The samples needed to give answers inside the given question paper. They had to show their workings for the subjective questions in the provided spaces. The time allocated for the samples to answer was one hour. After that, checking of the test was done manually and the data was keyed-in for analysis.

Statistical test was done in order to analyze the obtained data using the software *Statistical Package for Social Sciences* (SPSS). Levene test was done to check for the homogeneity in the variance of the mean score for each stream. The hypothesis for this test:

Null hypothesis 1: There is no significant difference in the homogeneity for the variance of the mean score between secondary school leavers of different streams.

Next, one way ANOVA test was carried out to test the homogeneity in the variance of the mean score. The hypothesis for this test:

Null hypothesis 2: There is no significant difference in the mean score between secondary school leavers of different streams.

C. RESULTS

Only 386 samples fully completed the required information. Hence, analysis was done only on those 386 respondents. Discussion of results is to answer the research question and thus fulfilling the research objective.

Results shows that 161 (41.7%) science stream students, 66 (17.1%) arts stream students with 79 (20.5%), 29 (7.5%) and 51 (13.2%) accountancy, technical and Islamic studies students respectively were involved in this study. Analysis was continued with the Levene test. The value $p = .084$, $p > 0.05$ in the Levene test shows that the null hypothesis 1 failed to be rejected. Thus, the study finds that there was no significant difference in the homogeneity for the variance of the mean score between secondary school leavers of different streams. One way ANOVA was then done to determine any significant difference in mean score between secondary school leavers of different streams. Table 1 shows the distribution of students, mean and standard deviations for numeracy test score based on the education streams. Table 2 shows the ANOVA test values for mean score of numeracy test between the education streams.

Table 1

Distribution of Students, Mean And Standard Deviations For Numeracy Test Score Based On The Education Streams

Streams	Frequancy	Percentages (%)	Mean	SD.
Science	161	41.7	64.99	21.22
Arts	66	17.1	47.70	20.92
Accountancy	79	20.5	59.26	21.49
Technical	29	7.5	50.13	20.02
Islamic Studies	51	13.2	39.72	15.94

Table 2

ANOVA Test Values For Mean Score of Numeracy Test Between the Education Streams

	Sum of Squares	df	Mean Square	F	Sig.
Between-groups	32871.02	4	8217.76		
Within-groups	160463.86	381	421.16	19.51	.0001
Total	193334.89	385			

The value F (df = 4, 381, p = .0001, p < 0.05) is 19.512, and so null hypothesis 2 is rejected. Thus, it can be concluded that there was a significant difference in mean score of numeracy test between respondents of different streams. For this study's samples (n = 386), the percentage mean for science stream is higher (M = 64.99, SD = 21.22, n = 161) compared with the arts stream (M = 47.70, SD = 20.92, n = 66), Islamic studies (M = 39.72, SD = 15.94, n = 51) and technical (M = 50.13, SD = 20.02, n = 29). Results of *Post Hoc Tukey HSD* test show that there is a significant difference between mean score for science stream with those of arts, Islamic studies and technical streams. The same goes between the arts stream with accountancy and between accountancy with Islamic studies which show significant difference in mean score. Table 3 shows the *Post Hoc Tukey HSD* test for mean score of numeracy test between the education streams.

Table 3
Post Hoc Tukey HSD **Test For Mean Score Of Numeracy Test Between The Education Streams**

Stream (I)	Stream (J)	Mean difference (I-J)	Std. Error	Sig.
Science	Arts	17.30*	3.00	.0001
	Accountancy	5.73	2.82	.253
	Islamic Studies	25.28*	3.30	.001
	Technical	14.86*	4.14	.003
Arts	Accountancy	-11.56*	3.42	.007
	Islamic Studies	7.98	3.83	.228
	Technical	-2.43	4.57	.984
Accountancy	Islamic Studies	19.55*	3.69	.0001
	Technical	9.14	4.46	.244
Islamic Studies	Technical	-10.41	4.77	.189

*the mean difference is significant at the 0.05 level

However, difference in the mean score is not significant between science with accountancy, arts with Islamic studies and technical, accountancy with technical, and also technical with Islamic studies. Negative symbol on the mean difference shows that stream (I) mean score is smaller than stream (J) mean score and vice versa (Table 3).

D. DISCUSSION
The objective of this study is to determine the difference in the achievement of secondary school leavers based on the Science, Arts, Accountancy, Technical and Islamic Studies streams. The overall results show that there is a significant difference between education streams. Secondary school leavers in the science stream showed better achievement compared to the other streams except for the accountancy stream. This shows

that secondary school leavers in the science and accountancy streams had numeracy which was almost at the same level. This findings is supported by a study on mathematical concept knowledge and achievement relationship done at matriculation level (secondary school leavers) which showed that the relationship between mathematical concept knowledge and achievement in mathematics for both science and accountancy streams was positive (Effandi Zakaria et al., 2010).

E. SUGGESTION

Most of the mathematics curriculum abroad displays the importance of mathematical skills and the ability to use it in solving daily problems (Curry et al., 1996; OLC, 2000; BSA, 2001; Gal et al., 2003; MA ABE, 2005; Ginsburg et al., 2006; SCQF, 2009; PIAAC, 2009). Meanwhile, many frameworks had emphasized on the importance of mathematical knowledge which need to be mastered by an adult in order to face real-life situations (Curry et al., 1996; OLC, 200: BSA, 2001; Gal et al., 2003; SCQF, 2009; PIAAC, 2009). The KPM Secondary School Mathematics Curriculum has definitely been well-planned and covers three interconnected fields which are Numbers; Shape and Space; and also Relations. Even though mathematics is categorized into the three fields, theoretically mathematical concepts are all-inclusive for secondary school students. Many hold an opinion that numeracy and mathematics are closely related and inseparable (The Quantitative Literacy Design Team, 2001; Kemp, 2005; Ginsburg et al., 2006). Therefore, an improvement in the mathematics curriculum will also bring about an implication towards numeracy. Since theoretically the curriculum prepared by KPM is already comprehensive, the KPM will just need to give focus on methods of implementing the curriculum so that the objectives of mathematics education will be achieved. At the same time, the education in Malaysia also needs to have the same focal point on numeracy. Through the Mathematics Curriculum, Malaysia has to integrate numeracy into the mathematics education at all levels and for all education streams especially at the secondary level.

F. CONCLUSION

In the future, we are expected to live in an environment which will be flooded by numbers (which requires numeracy) in order to survive the ever-increasing daily activities (Cohen, 2001). In fact at present, numeracy is being given attention by developed countries as special organizations are being set up to handle matters concerning numeracy. It is hoped that Malaysia will also give a significant attention towards the need and importance of numeracy in the real-life situations for every individual in this 21st century.

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DESIGN OF WEBSITE BASED LEARNING MEDIA ON STATIC FLUID MATERIALS FOR TEACHING VOCATIONAL HIGH SCHOOL IN PHYSICS

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Abstract

Physics is one of the adaptive subject given in Vocational High School. Much of the material in Physics subject requires not only sufficient explanation delivered through lectures, but must be proven by experiment or shown through a demonstration. For the purpose of this submission, selection and use of appropriate learning media is one of the main things in the learning process of Physics. Good media is media that is appropriate to the characteristics of the material to be learned and can keep students motivated to learn the subject matter seriously. Web-based learning can be an alternative media that is applied to the study of Physics at SMK, because with this medium students be motivated to be active in the learning process and are required to actively and creatively construct knowledge. Purpose of this study was to obtain design-based learning website on a static fluid material that can be applied in the teaching of Physics at SMK in the hope that vocational students may be more motivated to learn the material in physics and eventually mastering physics concepts can be further improved. This research was conducted using research methods development (developmental research), with testing done through expert testing and limited testing. The results showed that the website based learning can be used for learning physics and students responded positively to the learning based websites.

Keywords: static fluid, Web-based instructional media, research development, student responses

A. INTRODUCTION

Science education has great potential and strategic role in preparing qualified human resources for the era of globalization and information technology. Education is an important means to improve the quality of human resources in ensuring the sustainable development of a nation. If education is one of the main instruments of human resource development, education in this regard teachers as one of the elements that play an important role in it, have a responsibility to develop tasks and resolve any problems that arise. Teachers are a crucial component in the implementation of a learning strategy. Successful implementation of the strategy will depend on the teacher's lesson in the use of methods, techniques and learning strategies.

The era of globalization and modernization have undeniable impact on the development of information and technology, especially computer-based communication technology has developed rapidly. Over time, information technology offers an alternative way to carry out learning activities, such as web-based learning, teaching with power point, online and offline interactive learning and many other ways.

Use of computers as a medium of learning is expected to overcome the limitations of space and time, so that the learning process can be run effectively and efficiently. The computer is a tool that can be used as the main medium of learning for a variety of abilities, including having a virtual quick response (view) to the inputs given student (user), has the capacity to store and manipulate information, and can be widely used as a tool in the learning activities. According Hamalik (2005) Computer is "an interactive medium, where students have the opportunity to interact in the form of influence or change the order presented". According Hamalik (1986) there are several advantages of using computer media when compared to other media, such as to show a lot of things and many diverse aspects, and can create events that can not be seen with the eye.

In the implementation of computer-assisted learning, students directly interaction with a computer equipped with software that contains simulation learning orvirtual lab specific teaching materials that will be made based websites. Through simulation or virtual lab students will be guided to find the conclusion that the material being studied.

On the other hand, the use of instructional media also affects the achievement of learning objectives. Kemp and Dayton (Ikhsan, 2006) describes the role that can be obtained from the use of instructional media are: (1) the delivery of messages can be more standardized learning, (2) the learning process more interesting, (3) learning becomes more interactive by applying the theory of learning, (4) the implementation of learning time can be shortened, (5) the quality of learning can be improved, (6) the learning process can take place whenever and wherever needed, (7) students' positive attitudes towards learning content and the learning process can be improved, and (8) the role of teachers can be shifted to a more positive direction. However, the creation of appropriate learning media also requires substantial time.In addition, not all teachers have the ability to create and prepare the media, so we need the help of others to actualization.

Elections website as a learning medium based upon ease of access to information through the Internet, either through a portable hardware (personal computer) and movable hardware (laptop, PDA, or mobile phone), and can be done anywhere, anytime and by anyone, including by students. In addition, the development of information technology is very fast allowing multiple parties to constantly update the content or the content of teaching materials along with the other components, so that the development of science can easily and quickly to be informed or delivered to students than the use of other learning media.

This study aimed to gain a web-based learning media in a static fluid material. The concept of a static fluid is an important concept in physics learning curriculum. Although this concept has been studied since elementary school student, but in reality, many students find it difficult to apply the concept of a static fluid in a variety of problems. Students difficulty

solving problems related to fluid static phenomena in everyday life. This happens because students accept the concept of a static fluid to listen or record the applicable laws given by teachers without the direct involvement of students in discovering such laws. The same is true for vocational high school students, where learning physics generally occurs only in one direction - delivered through lectures. In fact, the only aspect of cognitive lecture method can be trained while other aspects (affective and psychomotor) can not be trained in this method. The learning process as a whole also needs to be given to vocational students, even in vocational subjects Physics subject only is adaptive, but the mastery of physics concepts will be the starting point in the control subjects more productive.

Based on the above, it is deemed necessary to do a research on the design of web-based learning media in a static fluid material to study Physics at Vocational High School.

B. RESEARCH METHODS

Research on website based learning in this study will be carried out through research that type of development (developmental research). The steps taken in this study is divided into three parts, namely the model development, procedure development, and testing of simulation products. Modeling done in a procedural computer-assisted descriptive (Sunarto, 2005) to produce a media product of learning, taking into account integrity concepts / materials to be delivered, the needs and characteristics of media users, and ease of use of the media. Procedure Development, was conducted to obtain data on the accuracy guarantee of physical quantities used in the design of web based instructional, with media attention to the integration of interactive learning with learning models are selected for certain physics teaching materials so that the message can reach the goal with the right target. simulation product trials conducted to determine the effectiveness and appeal of the product simulations in physics teaching. Trials be conducted with a view to meet the criteria of learning and performance criteria. In this study, expert trials conducted to media expert and expert learning physics to determine the fulfillment of both criteria. While the limited testing done for the students to see what students are learning based websites.

C. RESULTS AND DISCUSSION

Discussion of Results The following study is based on analysis of the data and findings in the field:

Based Learning Website

Development of a static fluid-based learning website is presented in Figure 1.

Initial View of The Virtual		Enter Password To run Application Close Home Information Maximize
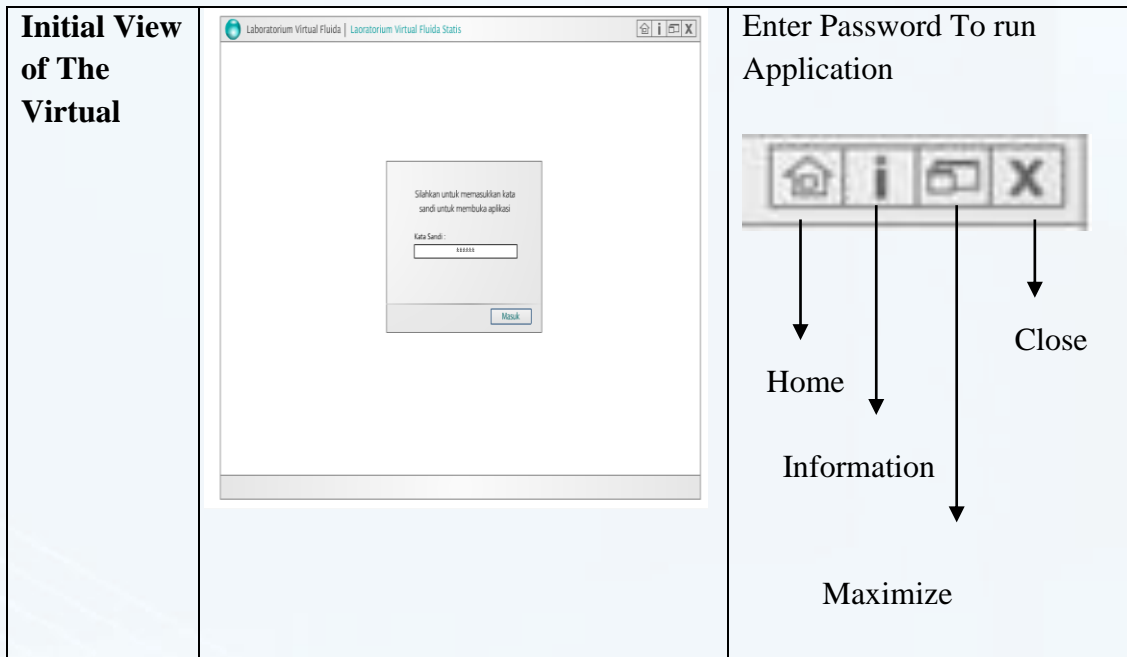
Figure 1a. Start Page Multimedia Website

Main Menu		The initial view of the main menu
		    1. Description of the curriculum
		     2. Virtual Lab Hydrostatic Pressure
		  3. Virtual Lab Pascal
		  4. Virtual Law Archimedes Lab
		  5. About the application This application is clicked to go to the menu which option will be selected
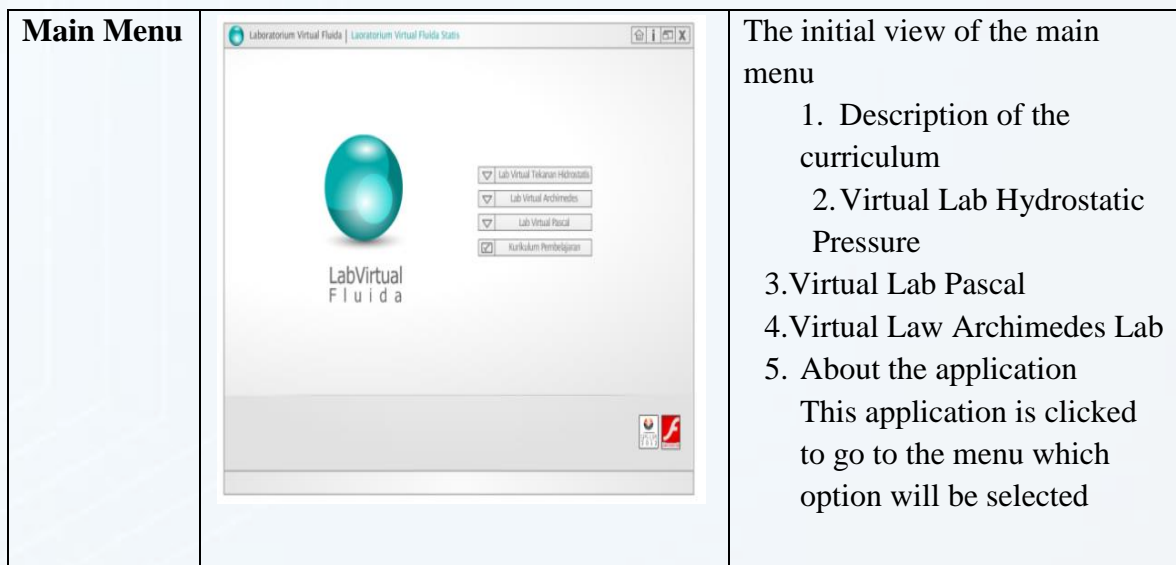
Figure 1b. The main menu page on the website based learning website

Virtual lab menu display Hydrostatic Pressure		1. Including Fluid type 2. Inserting the rubber membrane coated balloon mouthpiece in a beaker, then observed elevation changes that occur. 3. Perform the previous step to observe the fluid type to another
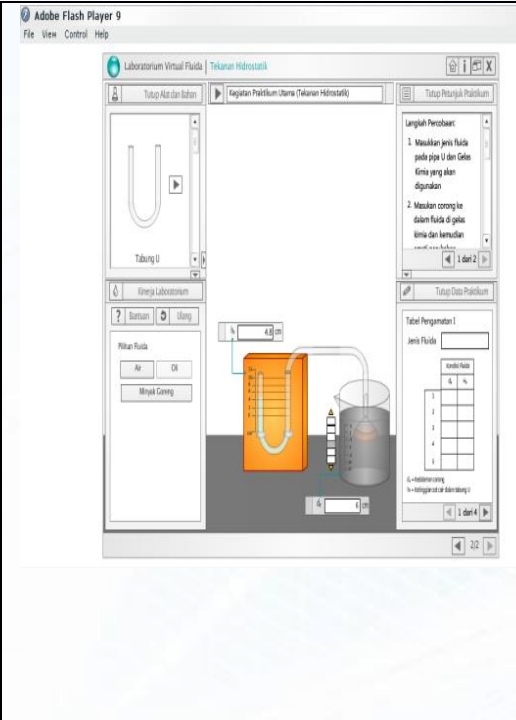
Figure 1c. Page menu on the virtual lab website based learning.

Display Virtual Lab Pascal		1. Include type of fluid on the performance of the panel. 2. drag load to one of the suckers without a spring balance, observe what happens and record data unreadable due to the burden placed. 3. Stack the load and observe the changes that occur 4. Perform the above steps to variations in the fluid liquid used. 5. Record the results in the table has been provided
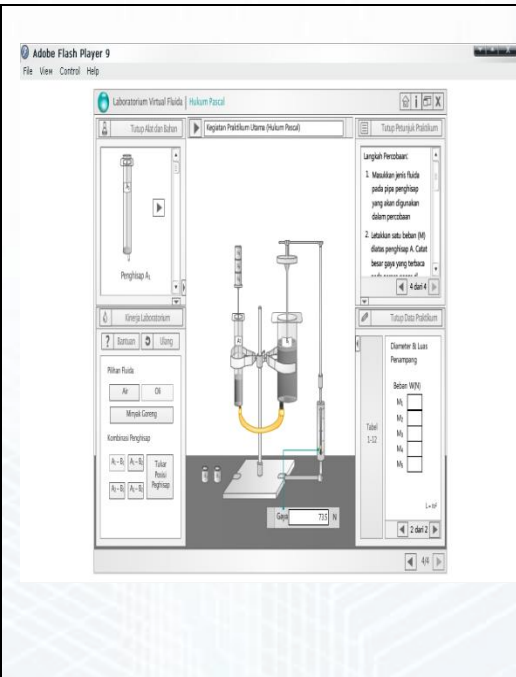
Figure 1d. Virtual lab menu page on Pascal's law on Website based learning

Display Virtual Lab Archimides Law		1. Stringing Tools like the picture on the top right panel is an explanation of procedures. 2. How to Use the student dragging with the mouse and release the black table and then assemble as shown 3. Choosing the type of fluid that will be used to fill the prepared beaker. 4. Hanging spring balance and Drag the load to the mouth of a large beaker 5. Including these expenses, observe the changes
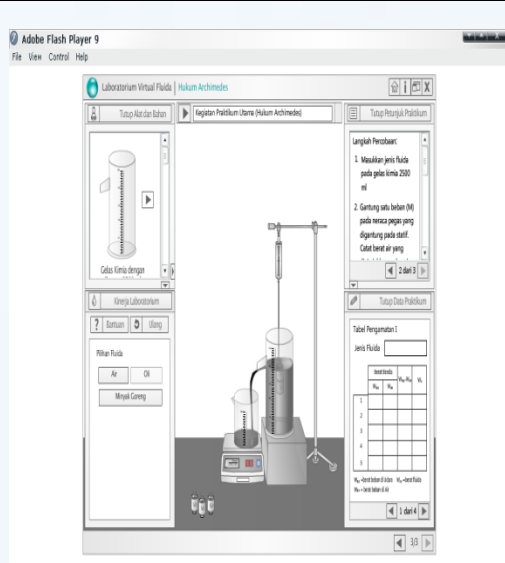
Figure 1e. Page menu virtual lab Archimides law on website based learning

Students worksheet at Website		1. Screen Activity to a virtual lab activities to subject of static fluid consisting of a virtual lab hydrostatic pressure, Pascal's law and the law Archimides 2. There is a table of data, and instructions for use Virtual lab, students will entered manually and then sends it to the menu as a teacher report form
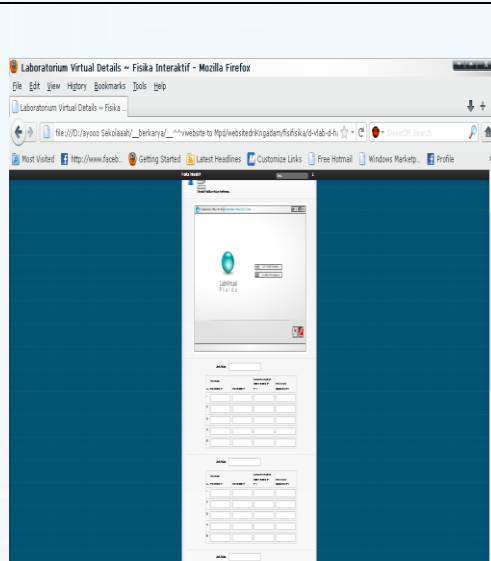
Figure 1f. Student worksheet pages on website based learning

Registration Page/ Log in website		1. There Menu Login 2. And the menu registers Have not register. 3. Start menu before students can access the website further

Figure 1g. Registration on menu page- website based learning

The material on the website menu Inetraktif		1. Featuring material and material subpokk students can select by clicking on one of the icons and buttons that have been prepared 2. Image Icon That can lead students to choose learning activities that will be studied independently.
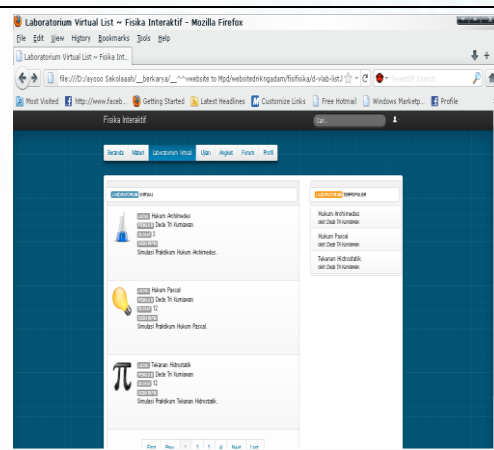
Figure 1h. Page menu static fluid material in website based learning

Questionnaire Responses Student Learning

At the end of the lesson the student responses to the questionnaire given website based learning. In general, students gave positive responses to website based learning. Recapitulation of the student responses are presented in Figure 2.
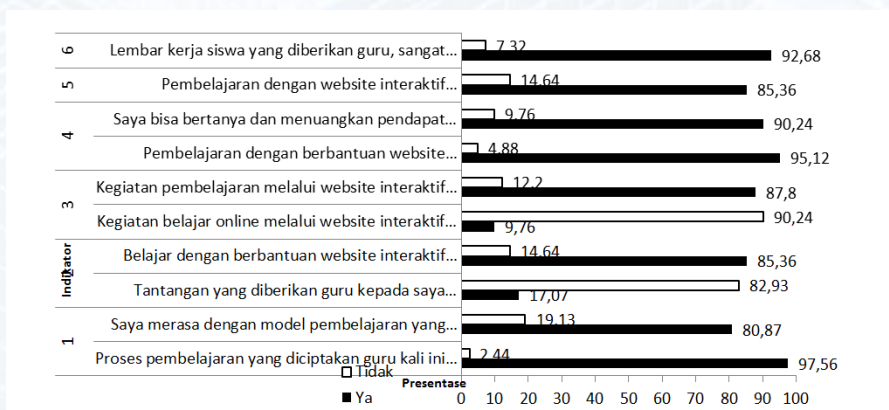
Figure 2 Percentage of student responses to web-based learning

Description indicator questionnaire:
1. Linking to learning
2. Interest and motivation to learn with the applied learning
3. Help understanding the concept of teaching materials
4. Technical learning using instructional media b erba Sisk's Website
5. Learning to develop hands on and minds on
6. Clarity of instructions worksheet

Based on the questionnaire responses of students to the media based learning website shows that in general the students gave a positive response. The percentage of the two indicators of interest statement against assisted virtual lab website shows that most students are interested in a virtual lab that is integrated in thewebsite inetarktif because this lab has not been done before, and fun for students.

The average percentage of the indicators of the spirit of learning through virtual lab showed a positive response most students. Students enthusiasm for learning because, according to this lab students appropriate applied physics learning, can enhance students' motivation to understand the concept of a static fluid and do a practicum. This is in accordance with the statement Husni (2010) which states that web-based learning can enhance the understanding of physics concepts and facilitate student collaboration.

The average percentage contribution to the indicators are integrated in the virtual lab to the understanding of the concept of the website shows the same results in the form of a positive response to most students. Virtual lab is integrated in the website contribute to students' understanding of the concept as a virtual lab diintgerasikan the website to help students understand the concept of a static fluid and would be appropriate if applied to concepts other than static fluid.

Percentage indicators technical issues in integrating virtual lab on the website shows that most students had no difficulty with the virtual lab to integrate the websiteand does not add students to grasp difficult concepts of fluid. Excess virtual practicum to integrate the website according practicum students are easy to do and not boring. While the lack of virtual lab to integrate the website according to students is a cumbersome procedure. Student response stating that the virtual lab procedures to integrate the website convoluted caused by several things such as virtual lab is the first experience for the students.

D. CONCLUSION

Based on data and analysis of the results of research that has been done on the model PBL (Problem Based Learning) assisted interactive *website* on the static fluid learning to improve students' mastery of concepts can be concluded that:
1. *Web-based* learning have to meet performance criteria and learning criteria, so it's ready to use in teaching Physics in Vocational High School.
2. Students gave a positive response to media-based learning *website* the concept of a static fluid. *Web-based* learning media can increasing m and m inat otivasi learning applied

learning, can help understand the concept of teaching materials, and to develop *hands on* and *minds on.*

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THE ANALYSIS OF DECISION MAKING PROPOSED BY JUNIOR SECONDARY SCHOOL STUDENTS FROM "A" ACCREDITED SCHOOLS IN PALEMBANG CITY TO SOLVE TIMSS BIOLOGY TEST ITEMS

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Abstract

An in depth study was carried out to investigate/analyze decision making held by eight grade students in solving Biology TIMSS test items using survey method in Palembang city. A number of students (n=151) from four junior secondary schools with A accreditation was involved as research sample that situated in the center and suburban of Palembang city. Twenty nine released TIMSS 2011 test item on Biology published by IEA consisted of 16 multiple choices and 13 constructed responses had been used as the main instrument. Criteria for decision making were focused into four categories, *id est.*: intuitive, heuristic, empirical, and rational. Guiding questions to detect the category of decision making administered by the students was integrated within the answer sheet for each test item. Research finding shows that there is a tendency the student used intuitive category in making decision to solve TIMSS 2011 test items on Biology. Some test items which tend used heuristic category due to the strong understanding of students about concept mastery so that the student can easily retrieve the concept. These research findings can be urgently used as input to enhance the quality of biology instructions at Junior Secondary School level.

Keywords: decision-making, biology question of TIMSS 2011, a accredited school, Palembang

A. BACKGROUND

The importance of science in human life brings huge change in learning science at school. NCSESA (1996) stated that *Learning science is something students do, not something that is done to them*. The instruction and understanding about biology is not only used to solve certain issues in daily life. But far more beyond that, the understanding about biology could drive how human as a part of the nature could use all natural resources wisely, by that the role of human being is not the destroyer but as the protector but the balance of the nature.

A good Instruction climate at school could support the learning activities for the students. A Conducive and highly motivated students toward their learning tends can be seen clearly in the schools with A accreditation score. The schools which have A accreditation

score has a better in their infrastructure, high quality graduate, and the activeness of the teachers in joining certain trainings to improve their teacher professionalism. The students in these schools in general have a better cognitive achievement compared to the school with B or C accreditation score. The support of human resources, infrastructure and the input quality makes the learning activities goes easier to achieve the learning objectives.

It is better, between learning objectives, learning activities, and evaluations must be in the same line linearly and harmonically support each other. The learning objectives that have been stated earlier must be a guide for how the learning activities were conducted. Not only that, the evaluation that was held by the teachers will be a precious reflection about how well the learning objectives have been achieved. The strong connection between learning objectives and curriculum and the question in the evaluation that is used could help the teachers to get the information about how well the students achieved the learning objectives.

The continue evaluation that is conducted in the school, national and international. In the international level, Indonesia has participated in *Trends in Internasstional Mathematics Science Study* (TIMSS) that was held by IEA (*International Association for the Evaluation of Educational Echievment*). Biology is one of the domains that are tested in TIMMS. In every TIMMS survey, we can see clear information about Indonesia student's achievement for biology domain and biology literacy. The information can be used to improve the quality of education in Indonesia.

The assessment that was conducted encourages the students to develop their decision making skills to choose the right answers from many choices or certain method that is appropriate to answer the questions. This condition was supported by Tipnadjan, *et al* (2010 who stated that most of the students commonly made decisions related to their academics, for example the assessment that they have in the class.

Wang dan Ruhe (2007) explained four categories about hoe someone making their decision, which is by using their intuition, empirical experiences, heuristic, and rational judgment. The method that commonly used by the students to make their decision in the evaluation process has a strong influences to the result that are going to be achieved by the students. If the way that is chosen and information that is get by the students were right, it's mean that the answers that has been chosen and written also right. This condition will improve student's achievement in their learning. By that, the decision making is the process that has a very important role in assessment process which is identically with the reasoning process that is conducted by someone.

The purposes of this study is to investigate the eighth grade student achievement in answering the TIMMS 2011 questions and doing deeper analysis toward decision making strategies that are used by the students to answers those questions.

B. LITERATURE REVIEW

2.1 Decision-making

Decision making is one of basic human thinking process to choose or a sequence of action that was chosen from certain alternatives based on certain criterions(Wang dan Ruhe, 2007).Beyth-Marom (1993) explained five general steps in decision making, they are (i)

identification of answers possibilities; (ii) identification of consequentions that may come from those possibilities; (iii) doing evaluation for those possibilities; (iv) making a judgment from those consequentions; and (v) combining the previous steps based on the logic rule in decision making.

According to Matlin (2009) there are three basic assumptions when someone making a decision. Those three assumptions are (i) decision making to know all the information and all the possibility related; (ii) decision making to know a detail difference between certain choice; (iii) decision making to make a decision rationally.Wang dan Ruhe (2007) explained four categories in decision making that can be used by someone, they are *intuitive, emperical, heuristic, dan rational*.

2.2 Trends International In Mathematics and Science Study

Trends International Mathematics and Science Study (TIMSS) was conducted for the first time in 1995 through a project from *The Internatinal Association for The Evaluation of Educational Achievment* (IEA) is an independent research institution who corporate internationally and dedicated to improve the education qualities. The mission of IEA is to give as much as high quality information about student's achievement and in which context the students could achieve it. The TIMMS has the purposes to prepare outstanding students in mathematics and science.

TIMMS is conducted periodically in every four years. The TIMMS 2011 is the fifth TIMMS after the TIMMS 1995, 1999, 2003, dan 2007. This evaluation is joined by fourth grade and eighth grade students. In 2011 the TIMMS in joined by more than 70 Countries. Indonesia only joined for eighth grade students. The determination of the sample in TIMMS study in Indonesia was determined by three stratums, they are type of school, school status, and school performance (Ministry of National Education, 2011).

Biology is one of the domain content that is measured in the eighth grade student's achievement during TIMMS 2011. In 2012, the numbers of the question published by IEA as a part from biology questions that were tested in TIMMS 2011 for eighth grade student was 29 questions. 16 questions were multiple choice items and 13 questions were constructive response questions. The questions consist of six major contents, they were (i) characteristic, classification, organism living process; (ii) cells and its functions; (iii) life cycle, reproduction and heredity; (iv) biodiversity, adaptation, and natural selection; (v) ecosystem; and (vi) human health.

C. METHOD
3.1 Location, Time, and Subject

The study was conducted in Palembang city, in April 2014. The population that become the subject in this study is all eighth grade students in Palembang City, range from schools with A accreditation score (private and public schools) in the town and uptown. The sample in this study was determined by using random cluster sampling. The numbers of the school in this study were four schools with the total students 151 students.

3.2 Research Design

The method that was used in this study was descriptive study. In this study, the students who become the sample were given the TIMMS 2011 biology questions to be answered individually. The questions were embedded by the level of students believes and question about their categories in making a decision in answering each items of the questions. The students were given 20 minutes for answering the first part questions which is multiple choice items and 40 minutes for answering the second part questions which is *constructive responds* questions. After the students finish the test, the students were given a questionnaire to reveal their self-competence in making the decision when they were answering the questions. Afterward, the answers of the students were scored based on the TIMMS 2011 scoring procedure.

3.3 Research Instrument

The instrument that was used in this study is giving the test by using the TIMMS 2011 questions. The questions consist of 29 questions that had been translated into Bahasa. Each item was embedded with certain categories about how student making their own decision in answering the questions. To reveal students decision making, students can choose one or more guidance statements provided. The statements that guide rational and intuition categories was based on the indicator that was stated by Scott and Bruce (1985) and the statements that guide empiric and heuristic categories was based on the indicator that was stated by Wang dan Ruhe (2007).

3.4 Analysis

The data that has been collected by using the instrument were analyzed to answer the research questions that have been stated earlier. The data analysis that was conducted were:

1. The student's achievements in answering the TIMMS 2011 Biology questions are determined by student's score. The scoring procedure based on the TIMMS 2011 scoring that was published by IEA. The score were graded from the highest to the lowest.
2. The tendency from the combination of the categories that was used by the students in answering the questions was tallied for each question. And then, the data were arranged into a distribution frequency table for certain categories or combination of the categories to see how students making their decision in answering the questions.

D. FINDINGS

The research was carried on at Palembang City to determine the achievement of grade VIII students in answering biology section on 2011 TIMMS test and decision making category involved in it. Student's achievement on biology test of 2011 TIMMS is presented on following chart.
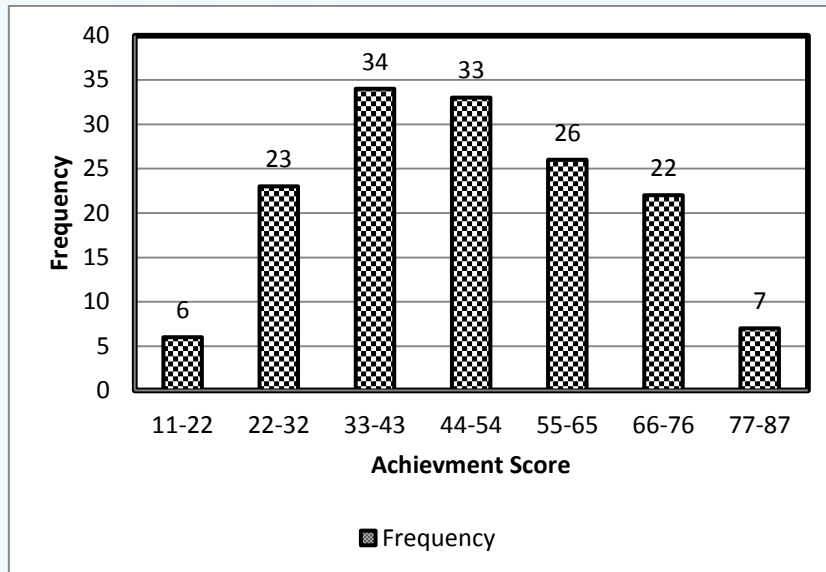
Chart 1. Student's achievement on biology section of 2011 TIMSS test

Further analysis shown that Palembang's student tends to perform better on contructive responds (CR) items and scored lower on multiple choice (MC) items. Student's performance based on type of question is shown below.
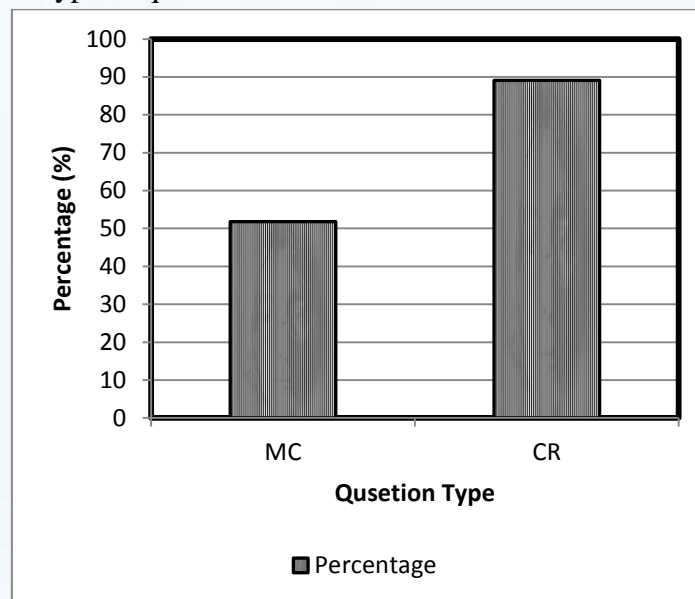
Chart 2. Student's achievement based on question type

Decision makin strategies employed by students in solving biology test on 2011 TIMMS are shown on following table.

Table 1. Frequency tendency of Decision-making category that used by student to solve TIMSS 2011 Biology item

NO. SOAL	STRATEGI PENGAMBILAN KEPUTUSAN														
	I	H	E	R	I.H	I.E	I.R	H.E	H.R	E.R	I.H.E	I.H.R	I.E.R	H.E.R	I.H.E.R
1	68	17	14	26	4	1	14	1	0	0	2	0	0	0	13
2	63	20	21	23	3	0	8	2	6	0	1	1	0	1	2
3	67	23	9	30	1	0	7	2	2	1	1	3	0	0	5
4	61	22	5	33	3	2	6	0	4	0	0	7	1	0	3
5	60	17	22	22	2	1	14	1	2	2	1	3	2	0	2
6	54	26	22	18	3	3	8	4	3	0	3	3	1	2	1
7	58	22	6	30	7	1	8	4	3	1	0	5	4	0	2
8	71	29	10	13	4	2	10	0	1	1	1	5	0	0	4
9	50	36	15	20	5	1	7	4	2	0	0	5	0	0	6
10	43	44	20	17	2	0	4	5	4	0	2	4	0	0	6
11	58	39	15	16	3	2	6	3	3	0	0	3	1	0	2
12	83	15	8	27	1	1	11	0	0	0	0	3	0	0	2
13	56	38	18	11	2	5	5	3	3	1	1	5	1	1	1
14	36	54	25	11	2	0	2	3	2	1	2	6	1	1	5
15	43	32	14	31	3	0	8	1	5	2	0	6	0	0	6
16	62	20	11	25	4	0	15	1	0	2	0	4	0	2	4
17	75	25	61	16	4	2	9	1	3	0	3	3	0	0	3
18	81	22	2	17	4	2	11	4	1	0	3	1	0	0	3
19	29	43	24	11	7	1	4	8	4	3	3	2	2	2	8
20	56	32	16	13	2	5	4	7	3	0	4	4	1	1	3
21	64	15	27	14	5	1	4	7	3	0	5	1	0	2	3
22	73	26	6	14	5	2	5	5	2	1	3	5	1	0	1
23	69	29	9	11	9	0	11	4	4	0	1	1	1	0	2
24	99	7	3	17	1	1	12	3	2	0	2	1	0	0	3
25	81	14	8	14	7	3	5	9	0	0	2	5	0	1	2
26	46	30	24	12	8	2	2	6	0	4	6	0	1	2	8
27	93	16	4	13	6	3	6	1	1	1	5	0	0	0	2
28	89	15	7	17	3	0	6	2	2	2	3	1	0	1	3
29	70	24	11	9	2	3	9	6	2	2	5	0	2	1	5

I : *Intuitive*; H : *Heuristic*; E : *Empirical*; R : *Rational*; Item 1-16 : Multiple choices; 17-29 : Constructive responds

E. DISCUSS

Decision making is a complex mechanism of human thinking system influenced by multiple factor that will lead to some different effects and outcomes (Lizzaraga, et al., 2007). Decision making strategies is not limited to big and important decision only, but are employed in every little decision we make through the day. According to Wang and Ruhe (2007) there are four decision making strategies, i.e *intuitive category, heuristic, empirical, and rational*. Decision maker is free to employ any category suitable for the situation, and more often than not, two or more strategies are employed simultaneously in one decision making process. TIMMS test consists of HOTS questions, thus decision making strategies are heavily involved in solving the test. Questions given in this research were taken from biology test in 2011 TIMMS package issued by IEA.

Result shows that Palembang's students rely heavily on *intuitive* category in solving the biology test of 2011 TIMMS. The trend could be caused by student's unfamiliarity to a

high difficulty test among other factor. While intuitive category is the least knowledge and fact based category, it is not necessarily bad if the students employ it correctly. Intuitive category could lead to a correct answer if the student could identified important information in the question and corroborates it with suitable biology subject to solve the problem. Problem arise when students having difficulties finding keyword in early questions of the test gave up the effort to solve the subsequent questions. Some of the troubled students even abandon the analysis altogether right from the start and rely solely on blind instinct.

Other decision making strategies were employed in small percentage and varied depend on the questions characterisics. Lesmond, et al (2000) explained that if a given task is processed with inappropriate decision making category, the mismanaged problem will likely lead to an inaccurate outcome. Heavy reliance on *intuitive* category is not wrong. Furthermore, Lesmond, et al (2000) added that *intuitive* category is in fact a very useful technique in solving a series of problem. Early analysis in answering the test can be developed and interconnected with further analysis and the whole system could provide a sufficient information in decision making process. In the other hand, data shown that the *intuitive* category employed by the sudents was not followed by further analysis, thus makes the decision made prone to errors.

TIMMS test consist of two kind of questions, constructive responds, and multiple choice question. Palembang's students scored a huge discrepancy between constructive responds and multiple choice questions. Students scored better on constructive responds questions since this kind of question gives the students a lot of room and freedom to costruct their answer based on their knowledge. However, decision making category involved in answering this kind of question still inclined toward *intuitive* category. Students resorted to this category due to time constraint, since most of the student took a relatively long time to process and solve the question. Lack of supporting knowledge and time limitation will render the decision making process to revert to intuitive category. Sukartini (1996) stated that urgent decision that have to be made within a limited time and inability to gather adequate information required will force the decision maker to rely on perception, feelings, and assumptions.

Certain question (e.g question No. 14 & 19) saw a high usage of *heuristic* category by the students. It implied that the students have good understanding over concepts and theories asked in these questions (i.e blood circulation and ecosystem). Both of these topics have been covered in the VII and VIII grade. Some sub-topics of two topics above (e.g chlorophyll) are also been studied by the students under other related topics (e.g photosynthesis). These two topics are recurring subjects on biology since the elementary school, so the students have developed quite a mastery over the topics. The students have taken several tests and examinations on these topics that when they took the research's test, they just need to recall the already developed concepts inside their mind. In short, the students have been familiar with the topics, making the heuristic category as the most relevant category to solve it.

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SCIENTIFIC LITERACY STUDY IN GRADE X STUDENT AND ITS CORRELATION TO THEIR HEALTH BEHAVIOR

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Abstract

This study was correlational descriptive analysis which describes an assessment scientific literacy of high school students grade X between academic school and vocational school and its correlation to their healthy behaviour in daily life. A total 100 students' scientific literacy examined using cognitive item test adopted from PISA 2006 instrument with selected material that contains health-related topic and 20s item questionnaire to measure their healthy behaviour. The sample was taken by stratified random sampling method where divided into two group first based on academic and vocational school and then from each group of 50 samples taken and compared each other using t test and Pearson correlation for data analysis. Findings from this study indicated no significant correlation between scientific literacy and individual healthy behaviour. Meanwhile, there were no significant differences in healthy behaviour although their scientific literacy level of academic student and vocational student significantly different at 0,05 level of confidence.

Keyword : scientific literacy, healthy behaviour

A. INTRODUCTION

Increasingly complex public health problems (eg, violence, hunger, environmental pollution), and health behaviors (eg, smoking, diet, drugs) social conditions and environment direct or indirect has been affect health status,. This "Life Course" had made stressed condition/ experience of the early stages of life (eg, 0-5) and interactions at different stages of development throughout life to achieve optimal health. "Social determinants" such the state of education, socio-economic, political and health systems had played role to promote health status.

During 1990s, interest in the concept of health literacy have been develop. At the international level, the World Health Organization (WHO) introduced the concept in its glossary of health promotion terms in 1998.

However, globally many of the curricula for school science are based on a view that the primary goal of science education should be the preparation of the next generation of scientist (Millar & Osborne, 1998). On the other hand, terms of health literacy, which is one of the development of scientific literacy that is used to measure the capacity of students in making decisions concerning their personal health. In the United States, many studies examined the relationship between health literacy and health outcomes. Health literacy in general, could be

develop from scientific literacy. Thus, thinking about the desire outcomes of science education is become strongly in a belief that an understanding of science is so important and should be a feature of every young person's education (American Association for the Advancement of Science, 1989; Fensham, 1985; Millar & Osborne, 1998). Indeed, in many countries science become an obligatory element of the school curriculum from kindergarten until the compulsory education.

Health literacy, as distinguished from general literacy, is defined as "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decision (Abrams, 2009). Although this definition is still evolving, how to best measure health literacy is an ongoing area of research, not unique to children. The health literacy of children or adolescence can represents a continuum over time, because all children begin life lacking literacy, with their parents' or caregivers' health literacy acting as they interface daily. Adolescence is the periode of developmental transition between childhood and adulthood, involving multiple physical, intellectual, personality, and social developmental changes. Adolescent thinking is on higher level than that of children. In this period, they are able to deal with abstraction, test hypotheses, and see infinite possibilities.

In fact, many health cases occured not only in ordinary people but also affects the people who are involved in the health field. This research want to investigate whether there is a relationship between the level of scientific literacy on individuals health behavior and to determine whether there are differences in the level of scientific literacy as well as health behaviour among students grade X of academic and vocational school.

B. LITTERATURE REVIEW
1. Health Behaviour and Education

An education plays an important role in the feasibility of a program. So it is applied in health education . Although many people realize that education is important, but most practically, implementation of public health services in giving education to the community is limited. Most argued that health education is a long-term behavioral investmen, where the results can be seen a few years later. According Notoatmodjo (2007), in the short term, the results of which can be observed then a change or an increase of public knowledge are also not necessarily a direct effect on health indicators. Only in the medium term, the knowledge will influence subsequent behavior and then change this behavior will affect the improvement of health indicators as a result (outcomes) health education . Blum HL's research results in the United States showed that the environment has contributed most to the health behavioral factors later, particularly those related to health care. While other opinion delivered by Lawrence Green, who explains that behavior was influenced by three main factors, namely predisposing factors, supporting factors (enabling factors), and reinforcing factors. From both these opinions can be concluded that the role of health education is forming of behavioral factors that intervence in the behavior of individuals, groups or communities which appropriate to the value of health (Notoatmodjo, 2007).
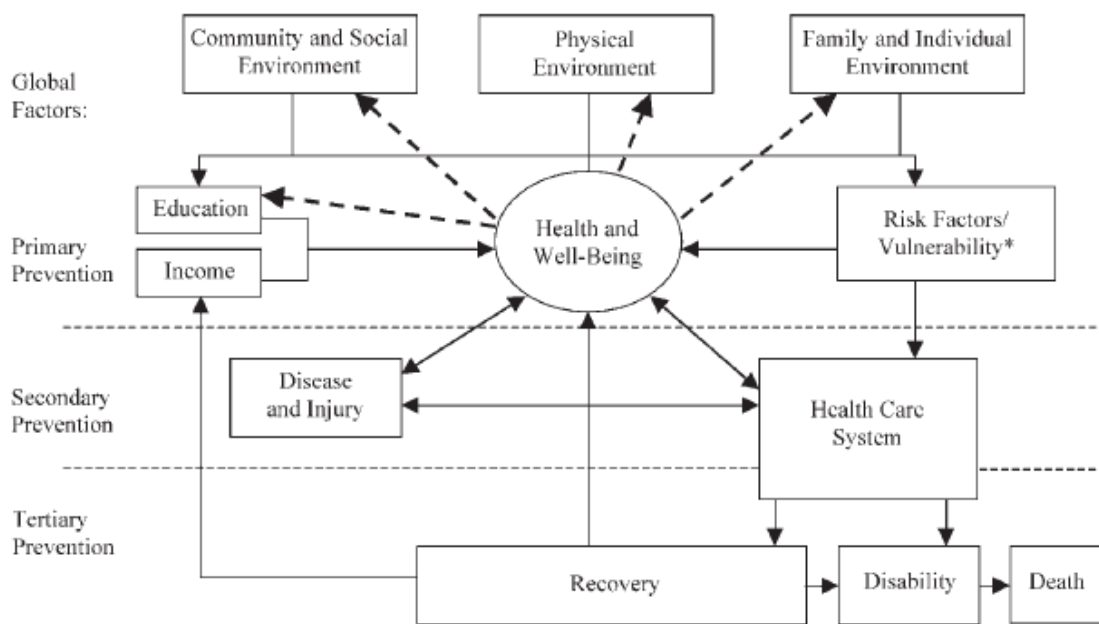
| | Community and Social Environment | Physical Environment | Family and Individual Environment |

Fig 1: Determinants of health: the 21st century field model. The center circle is the goal: maximization of human health and prosperity. Human and financial resources are generally aimed at the 'system' as the remedy. Primary prevention and global factors illustrated above comprise over three-quarters of the health determinants. Source: adapted from Evans, R. G. and Stoddart, G. L. (1994) Producing health, consuming health care. In Evans, R. G., Barer, M. L. and Marmor, T. R. (eds) *Why Are Some People Healthy and Others Not?*, 53. Also in *Social Science and Medicine* (1990) **31**, 1359.

Vocational school give education to their pupils that connects, match, and train humans to have a habit of working to be able entering and thriving in industry, so it can be useful to improve their lives and welfare. Furthermore Calhoun (1982:22) argues: Vocational education is concerned with preparing people for work and with improving the training potential of the labor force. It covers any forms of education, training, or retraining designed to prepare people to enter or to continue in employment in a recognized occupation.

2. The PISA Assessment

The PISA assessment takes a broad approach to measuring knowledge, skills and attitudes that reflect current changes in school priorities, moving beyond the school-based approach towards the use of knowledge in tasks and challenges likely to be encountered in home and work life outside school. It is based on a dynamic model of lifelong learning in which new knowledge and skills necessary for successful adaptation to a changing world are continuously acquired throughout life. PISA focuses on competencies that 15-year-old students will need in the future and seeks to assess what they can do with what they have learnt – reflecting the ability of students to continue learning throughout their lives by applying what they learn in school to non-school environments, evaluating their choices and making decisions.

The PISA science assessment (OECD, 2006) has been choosen as the instrument to measure scientific literacy of the pupils, which topic selected contains health related context. This assessment focus on what 15-years-olds should know, value, and able to do within reasonable and appropriate personal, social, and global context that needed for their "preparedness for life". In selected context, it will draw the ability to create or use conceptual models to make prediction or give explanation, to formulate and communicate predictions and explanations with precision, to analyse scientific investigations, to relate data as an evidence, to evaluate alternative explanations of health related phenomena, and to communicate explanations with precision (OECD, 2006). Based on PISA 2006 framework, scientific literacy defined as "capacity to use scientific knowledge, to identify questions and to draw evidence-based conclusions in order to understand and help make decisions about the natural world and the changes made to it through human activity."

3. Healthy Life Behaviour

Good health and nutrition is one important factor in the growth and human development. The younger generation is truly an important asset of a country because they would be a leaders in the future. In this research, we will investigate the relationship between healthy behavior in adolescence aged 15 years that concern for their own health and environment which realized in the following behaviors such as : eating four healthy and five perfectly food, throwing trash to the appropriate place, cleaning the house, doing physical activity, washing hands with soap, maintaining oral health, as well as implementing "draining, closing, and burying".

C. METHODOLOGY

This research was a descriptive correlational study, which describes the relationship between the level of scientific literacy (X variable) with healthy behavior (Y variable) in grade X of academic and vocational school student. There are three hypotheses tested in this study such as following : 1) That there is a significant relationship between the level of scientific literacy of students toward their healthy behavior; 2) There is a significant difference between the level of scientific literacy in high school academic students as compared with students of vocational school; and 3) there is a difference healthy behaviors between academic student and vocational one. The population examined in this study were all high school students of grade X in academic and vocational school in Bandung, which amounts to 16.564 students. From the total population sample, 100 people was taken through stratified random sampling. The instrument used to examine the level of scientific literacy of students which adopted from PISA 2006 items test with a health-related topic that amount 25 items. They were validated using anates version 4 program and contains multiple choice and essay questions. The multiple choice items have correlation value = 0.38 while the reliability test= 0.55, while the essay items have correlation value = 0.26 and a reliability test = 0.41. For measure health behavior variables, we use 20 items of questionnaire with which has Cronbach's alpha 0.736 using SPSS version 17.0.

D. FINDINGS

1. Distribution of scores between the two variables showed a normal distribution with the Kolmogorov-Smirnov for PISA scores 0.909 and p = 0.380> 0.05, while for healthy Behavioral variables, it has Kolmogorov-Smirnov value = 1.056 and p = 0.215, which can be seen detail on the table 1.

Tabel 1.
One-Sample Kolmogorov-Smirnov Test

		T_PISA Score	Health behaviour
N		100	96
Normal Parameters[a,b]	Mean	42.7037	58.2917
	Std. Deviation	14.80036	6.75888
Most Extreme Differences	Absolute	.091	.108
	Positive	.086	.085
	Negative	-.091	-.108
Kolmogorov-Smirnov Z		.909	1.056
Asymp. Sig. (2-tailed)		.380	.215

a. Test distribution is Normal.

b. Calculated from data.

2. Correlation test between scientific literacy variable and health behaviour, results r= 0.041 and p = 0.694> 0.01 so that Ho is accepted and H_1 is rejected which means that there is no correlation between the scientific literacy of students with healthy behaviors. The data can be seen on tabel 2.

Tabel 2.
Correlations

		T_PISA score	Health behaviour
T_PISA score	Pearson Correlation	1	.041
	Sig. (2-tailed)		.694
	N	100	96
Health Behaviour	Pearson Correlation	.041	1
	Sig. (2-tailed)	.694	
	N	96	96

3. Correlation test between scientific literacy variable and health behaviour with other variables as following :
   a. Between scientific literacy with group of school variables (vocational or academic high school) obtained r = 0.355 and p = 0.000 <0.01 so that Ho refused and H1

accepted, which means there is a correlation between the two variables, although was low relation.

b. Healthy behaviors variables among high school students and vocational students have r = 0.068 and p = 0.509> 0.01 so that Ho is accepted and H1 is rejected which means that there is a significant correlation between the two variables.

Between major and PISA scores variables, obtained r = 0.324 and p = 0.001 <0.01 so that Ho refused and H1 accepted, which means there is a correlation between the two variables, although it was low relation. Data detail can be seen on tabel 3.

To see the difference between academic high school and vocational groups students conducted with independent samples t test and obtained the results as shown in Table 4.2. Based on PISA scores, data obtained that F value = 0.494 and p = 0.484> 0.05, then H_o is accepted or both academic and vocational school group have the same variance, so as to compare the population mean, we should use t-test with equal variances assumed, which t value obtained = -3.755 and p = 0.000 <0.05 so that H_o refused and H_1 accepted or in other words there are differences in average PISA scores between high school and vocational groups.

Meanwhile, if the review of health behavior, the value of F = 1.691 and p = 0.197 >0.05, then Ho is accepted or both academic and vocational highschool group variance is the same so as to compare the population mean using the t test with equal variances assumed, so obtained t=-0.662 and p = 0.509> 0.05 so that Ho is accepted and H_1 is rejected, or in other words there is no difference between the groups of healthy behaviors and vocational high school students.

Tabel 3
Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Groups & T_ PISA Score	100	.355	.000
Pair 2	Groups & Healthy behaviour	96	.068	.509
Pair 3	T_PISA score & major	100	.324	.001

Tabel 4.1
Group Statistics

	Groups	N	Mean	Std. Deviation	Std. Error Mean
T_PISA score	SMA	50	37.4815	13.54415	1.91543
	SMK	50	47.9259	14.26434	2.01728
Healthy behaviour	SMA	48	57.8333	7.86409	1.13508
	SMK	48	58.7500	5.48305	.79141

Tabel 4.2
Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
T_ PISA Score	Equal variances assumed	.494	.484	-3.755	98	.000	-10.44444	2.78178	-15.9648	-4.92409
	Equal variances not assumed			-3.755	97.738	.000	-10.44444	2.78178	-15.9649	-4.92391
Health behaviour	Equal variances assumed	1.691	.197	-.662	94	.509	-.91667	1.38374	-3.66412	1.83079
	Equal variances not assumed			-.662	83.961	.509	-.91667	1.38374	-3.66841	1.83508

E. DISCUSSION

This research results that the high level of scientific literacy in fact does not guarantee a person has good hygiene practices. This is indicated by the absence of a relationship of mutual influence between the PISA scores variables with healthy behaviors scores in students. This is reinforced by the fact that there is no significantly difference in health behavior shown by both of the high school and vocational school students. In fact, someone who has more knowledge in the health field is not necessarily exhibit behavior according to the rules of health. However, the major factor has little effect on a person's level of scientific literacy. This can happen because it is associated with the individual interest and motivation in learning science. Interest and motivation of students to study science will encourage enthusiasm in developing a scientific attitude and way of thinking which will affect their daily behavior as well as in the decision-making process. A person who is literate will tend to be more objective and make decisions based on data. Thus, to establish health-conscious society, it still required the intervention from health workers who serve as controls and effective media in educating the public, particularly in the health field. The best way to

improve health literacy in adolescent may be by focus on education in literacy, health and self-efficacy. Nevertheless, in daily life, pupils are still need intervention to receiving training in health behaviour from their parents and living environment around them involving important role of school system in giving them health education.

F. CONCLUSION

The educational and experience background of a person in such field can affect its level of scientific literacy. However, the levels of scientific literacy and the type of school where individual learning does not have significant correlation to his/her health behaviors. Someone who is an expert in the field of health is not a guarantee that he/she has the appropriate health behavior norms.

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AWAL NUMERASI DAN KEPENTINGANNYA
SERTA PENGLIBATAN IBUBAPA DALAM PEMBENTUKANNYA

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Abstrak

Awal numerasi telah dibuktikan mempunyai impak yang besar terhadap pencapaian matematik di masa hadapan. Kajian terdahulu menunjukkan kanak-kanak membentuk kemahiran awal numerasi ketika mereka masih belum melangkah kaki ke sekolah rendah. 2 persekitaran yang mempengaruhi pembentukan awal numerasi kanak-kanak adalah prasekolah dan persekitaran di rumah mereka. Sungguhpun begitu, peruntukan masa kanak-kanak berada di prasekolah sangatlah terhad berbanding masa mereka di rumah. Kertas konsep ini akan membincangkan penglibatan ibubapa dalam menyediakan peluang pembelajaran awal numerasi di rumah. Penglibatakan ibubapa di dalam menyediakan aktiviti di rumah yang melibatkan pembentukan awal numerasi kanak-kanak sangatlah penting. Aktiviti numerasi yang terdapat di rumah boleh dikategorikan kepada aktiviti langsung dan tidak langsung. Dalam merancang dan melaksanakan aktiviti awal numerasi di rumah, terdapat beberapa faktor yang perlu diberi perhatian. Antaranya adalah jenis aktiviti, bahan yang diperlukan, peruntukan masa yang ada dan kemahiran yang hendak diterapkan. Penglibatan dan kejayaan aktiviti di rumah ini juga bergantung kepada harapan, sikap dan pengalaman yang dimiliki oleh ibubapa.

A. PENDAHULUAN

Penguasaan kemahiran numerasi bukan sahaja dikaitkan sebagai penentu kejayaan seseorang di dalam dunia pendidikan, malah menjadi asas kejayaan di alam kejaya kelak (Lietch, 2006). Seiring dengan perhatian pendidikan global yang menekankan kemahiran numerasi dalam kalangan murid, adalah wajar perhatian yang sama difokuskan kepada awal numerasi (Early numeracy). Awal numerasi telah dibuktikan boleh menjadi salah satu peramal (predictor) kepada penguasaan kemahiran aritmetik di masa hadapan oleh ramai pengkaji. Perbezaan penguasaan awal numerasi seseorang kanak-kanak bermula ketika mereka belum memasuki alam persekolahan secara rasmi (Clements & Sarama, 2007). Pembentukan awal numerasi ini dikaitkan dengan pengaruh persekitaran dari rumah dan prasekolah yang dihadiri oleh seseorang kanak-kanak (Starkey and Klein 2008).

Di Malaysia, terma numerasi mula disebut dengan nyata dalam pendidikan matematik mulai tahun 2010 melalui Program LINUS (Literacy and Numeracy Screening). Melalui LINUS, definisi numerasi dinyatakan dengan jelas iaitu "Kebolehan untuk melakukan

operasi asas matematik dan memahami idea matematik yang mudah serta mengaplikasikan pengetahuan dan kemahiran matematik dalam kehidupan harian"(Kementerian Pelajaran Malaysia, 2010). Terma numerasi tidak pernah digunakan di dalam kurikulum Malaysia sebelum tahun 2010. Sungguhpun begitu, jika diteliti huraian sukatan pelajaran yang digunapakai, elemen numerasi telah didokong secara tersirat di dalam kurikulum pendidikan matematik semenjak awal lagi.

Melalui program LINUS kanak-kanak yang belum menguasai standard numerasi yang ditetapkan akan mengikuti program pemulihan seawal bulan ke dua mereka melangkah kaki ke alam persekolahan. Secara tidak langsung, ini membuktikan bahawa kurikulum Malaysia mengakui bahawa terdapat perbezaan dalam penguasaan numerasi yang dibawa oleh murid sebelum persekolahan rasmi bermula. Bagi menyokong hasrat pendidikan negara yang menetapkan bahawa semua kanak-kanak Malaysia melainkan yang berkeperluan khas menguasai kemahiran asas numerasi, tumpuan harus diberikan kepada pembentukan kemahiran ini di peringkat awal lagi iaitu awal numerasi sebelum persekolahan rasmi bermula.

B. PEMBAHASAN

1. Awal Numerasi

Banyak kajian telah dijalankan berkaitan awal numerasi di atas kesedaran ianya boleh menjanggkan kejayaan numerasi kanak-kanak di masa hadapan. Perbezaan penguasaan awal numerasi sudah dapat dilihat dengan ketara ketika kanak-kanak berumur 5 tahun lagi (Kroesbergen, Van Luit, Van Lieshout, Van Loosbroek, & Van de Rijt, 2009). Malah, kanak-kanak sudah boleh mula membilang seawal usia 2 tahun walaupun masih belum memahami konsep kesepadanan dan kardinaliti (Vandermaas-Peeler, Boomgarden, Finn, & Pittard, 2012).

Di dalam Conference on Early Math Standards, Clements (2004) menyatakan bahawa awal numerasi adalah sepadan dengan kepekaan nombor (Scott, John, & Randy, 2008). Pendapat yang serupa disetujui oleh ramai pengkaji yang lain (Methe, Hojnoski, Clarke, Owens, Lilley, Politylo, White, & Marcotte, 2011, p. 200).

Di dalam kajian Vandermass dan rakan-rakan, awal numerasi dijelaskan sebagai merangkumi kemahiran membilang, mengenalpasti nombor, membuat seriasi nombor, membandingkan kuantiti/saiz, mengenalpasti bentuk dan operasi tambah dan tolak (Vandermaas-Peeler et al., 2012)

Walaupun terma numerasi agak baru diperkenalkan dalam pendidikan matematik di Malaysia, unsur numerasi sebenarnya tersirat di dalam sukatan kurikulumnya sejak mula kurikulum matematik diperkenalkan. Kini,dengan adanya definisi yang diperkenalkan dalam Program LINUS, dapatlah numerasi dikaitkan dengan 3 bidang utama iaitu konsep nombor, operasi asas dan applikasi kemahiran matematik untuk menyelesaikan masalah.

Bersandarkan definisi ini juga, kemahiran awal numerasi dapat disenaraikan seperti di dalam jadual 1. Berdasarkan Kurikulum Standard Prasekolah Kebangsaan(KSPK) tahun 2010, kemahiran awal numerasi boleh diklasifikasikan kepada 4 bidang utama iaitu konsep pra nombor, konsep nombor, operasi nombor dan aplikasi. Kemahiran-kemahiran awal

numerasi ini perlu dikuasai ketika umur kanak-kanak 4 hingga 6 tahun, sebelum kanak-kanak memulakan persekolahan formal mereka pada umur 7 tahun.

2. Awal Numerasi Di Malaysia

Di Malaysia, Kurikulum Prasekolah Kebangsaan yang pertama telah mula dilaksanakn pada tahun 2003 . Setelah dibuat semakan semula, Malaysia menggunakan Kurikulum Standard Prasekolah Kebangsaan (KSPK) mulai 2010 di semua prasekolah kerajaan dan bukan kerajaan. Kurikulum prasekolah ini disediakan untuk kanak-kanak berumur 4 hingga 6 tahun. Bagi kanak-kanak yang berumur 4 hingga 5 tahun, peruntukan masa di prasekolah ditetapkan oleh kurikulum KSPK adalah minima 3.5 jam sehari manakala bagi kanak-kanak berumur 5 hingga 6 tahun, peruntukan masa minima adalah 4 jam sehari termasuk masa rehat.

Melalui KSPK, prasekolah menetapkan pengalaman-pengalaman awal matematik untuk dikuasai oleh semua kanak-kanak sebagai persediaan memasuki alam persekolahan formal apabila mereka berumur 7 tahun kelak. Pengalaman-pengalaman tersebut termasuklah konsep pranombor, nombor, operasi nombor yang mudah, nilai wang, konsep waktu, bentuk dan ruang.

Semua kemahiran yang dinyatakan dalam KSPK, menunjukkan ianya sepadan dengan definisi numerasi yang diperkenalkan dalam LINUS. Bersandarkan ini, dapat disimpulkan awal numerasi yang cuba diterapkan di peringkat prasekolah Malaysia adalah seperti jadual 1.

Jadual 1. Kemahiran awal numerasi prasekolah Malaysia
(kanak-kanak berumur 4 hingga 6 tahun)

Fokus	Kemahiran Awal Numerasi
Pranombor	Memadankan objek
	Membandingkan kuantiti objek
	Membuat seriasi mengikut satu ciri
	Mengecam corak berulang dan membina pola
Konsep Nombor	Memahami nombor 1-10
	Mengetahui sifar
	Memahami nombor 10-20
	Memahami nombor 10-20
Operasi Nombor	Memahami operasi tambah dalam lingkungan 10
	Memahami operasi tolak dalam lingkungan 10
Aplikasi	
Wang	Mengecam duit yang berlainan nilai
Konsep Waktu	Memahami waktu dalam konteks kehidupan seharian
Bentuk dan Ruang	Mengetahui kedudukan objek dalam ruang
	Mengetahui bentuk yang biasa dijumpai di persekitaran

3. Kepentingan Awal Numerasi

Banyak kajian telah dijalankan yang membuktikan betapa pentingnya awal numerasi untuk dikuasai oleh kanak-kank bagi memastikaan keupayaan mereka menguasai kemahiran-kemahiran matematik di masa hadapan. Perbezaan penguasaan kemahiran matematik kanak-kanak adalah rentetan daripada perbezaan penguasaan awal numerasi meraka. Dengan kata

lain, perkembangan pencapaian matematik kanak-kanak boleh dijangka berdasarkan pencapaian awal numerasi (Jordan et al., 2009).

Malah banyak lagi kajian-kajian yang telah dijalankan seiring dengan dapatan ini. Kanak-kanak yang menunjukkan masalah dalam pembelajaran matematik peringkat sekolah rendah terlebih dahulu telah menunjukkan bahawa mereka terdahulu menghadapi masalah dalam penguasaan awal numerasi (Gersten, Jordan, & Flojo, 2005). Ini jelas menunjukkan bahawa kegagalan menguasai awal numerasi telah mengganggu keupayaan kanak-kanak menguasai kemahiran matematik yang akan datang. Stock dan rakan-rakannya juga mempunyai pendapat yang sama melalui kajian yang telah mereka jalankan terhadap kanak-kanak yang berusia 7 dan 8 tahun (Stock et al., 2009).

Malah awal numerasi turut dikaitkan dengan keupayaan membaca dan pencapaian matematik di masa hadapan kanak-kanak (Duncan et al., 2007).Blevins(2008) juga menegaskan bahawa seawal umur 3 tahun lagi, persekitaran di rumah dan prasekolah akan membentuk keupayaan awal numerasi yang berbeza di kalangan kank-kanak. Dengan kata lain, awal numerasi dikatakan sebagai peramal kepada penguasaan matematik di peringkat yang lebih tinggi (McClelland, Acock, and Morrison (2006).

Sebuah kajian yang dijalankan di Finland, Italy, Germany and the USA, kemahiran awal numerasi kanak-kanak yang dimiliki semasa prasekolah dapat meramalkan prestasi matematik 3 tahun kemudiannya (Aunola et al. 2004; Jordan et al. 2007; Krajewski and Schneider 2009).

4. Penglibatan Ibubapa Dalam Pembentukan Awal Numerasi

Disebabkan minat matematik yang kurang di kalangan ibubapa, agak sukar untuk melibatkan mereka di dalam aktiviti berkaitan dengannya (Blevins-Knabe, 2008). Ibubapa sering diingatkan akan kepentingan menguasai kemahiran membaca di kalangan kanak-kanak tetapi kurang diberi penekanan akan kepentingan numerasi . Lantaran itu, fokus ibubapa juga lebih terdorong untuk mendedahkan kemahiran literasi dari peringkat awal berbanding numerasi yang sedikit diabaikan (Skwarchuk, 2009).

Ini senada dengan kajian terdahulu yang menunjukkan aktiviti-aktiviti literasi lebih mendapat perhatian di kalangan ibubapa berbanding aktiviti numerasi (Bleavins-Knabe and Musun-Miller 1996; LeFevre et al. 2002). Kajian juga menunjukkan, ibubapa sering memuatkan kemahiran-kemahiran asas sahaja di dalam aktiviti awal numerasi di rumah seperti menyebut nombor dan membilang. Sebaliknya, ibubapa jarang sekali memuatkan kemahiran-kemahiran awal numerasi yang lain yang tidak kurang pentingnya seperti perbandingan nombor, seriasi nombor, penambahan dan penolakan nombor (LeFevre et al., 2009). Antara kemahiran awal numerasi yang ada, ibubapa dilihat lebih cenderung untuk melibatkan aktiviti membilang di dalam aktiviti harian (Vandermaas-Peeler et al., 2012)

Walaupun ibubapa mempunyai peranan dalam pembentukan awal numerasi kanak-kanak, menjalankan aktiviti awal numerasi di rumah bukanlah perkara mudah. Aktiviti perlulah dikenalpasti dan dirancang dengan teliti agar ianya boleh membantu pembentukan awal numerasi kanak-kanak. (Blevins-Knabe 2008).

LeFevre et al. (2009)mengklasifikasikan aktiviti awal numerasi yang disediakan oleh ibubapa di rumah kepada 2 iaitu iaitu aktiviti numerasi langsung dan aktiviti numerasi tidak langsung. Aktiviti langsung yang dimaksudkan adalah aktiviti mengajar secara terus akan kemahiran-kemahiran berkaitan awal numerasi seperti membilang, menyebut dan membaca nombor, melakukan operasi mudah melibatkan nombor.

Aktiviti tidak langsung pula bermaksud aktiviti harian yang dijalankan dan tidak memberi tumpuan semata-mata kepada aktiviti pengajaran. Sebaliknya unsur-unsur numerasi diselitkan secara tersirat di dalamnya seperti kemahiran mengukur di dalam aktivi memasak, mengukur masa semasa melihat calendar dan jam serta menghitung ketika terlibat dalam aktiviti jual beli. Kedua-duanya, aktiviti langsung dan tidak langsung didapati memberi impak kepada penguasaan numerasi kanak-kanak (LeFevre et al., 2009).

Sebuah kajian oleh Lefevre dan rakan-rakan (2010) yang dijalankan antara 2 negara Kanada dan Greek memberikan dapatan yang agak menarik. Dalam kajian tersebut, aktiviti awal numerasi bersama ibubapa dapat diklasifikasikan kepada 3 iaitu aktiviti langsung, aktiviti tidak langsung dan aktiviti kepantasan. Dalam kajian ini, dapatannya agak berlainan dengan kajian ter Lefevre dan rakan-rakan mendapati bahawa hanya aktdahulu di manan hanya aktiviti langsung sahaja yang boleh dikaitkan penguasaan numerasi kanak-kanak . Aktiviti langsung (awal numerasi) yang dimaksudkan adalah aktiviti pengajaran yang berkaitan pernomboran seperti membilang, mengira duit, mengingat fakta asas matematik dan melakukan penambahan mudah. Dalam kajian ini juga memperlihatkan bahawa sikap, tahap pendidikan dan harapan yang didokong oleh ibubapa mempengaruhi kekerapan aktiviti awal numerasi.

Pendedahan kanak-kanak kepada aktiviti-aktiviti awal numerasi di rumah juga boleh dikaitkan dengan pengalaman berkaitan yang dimilik oleh ibubapa mereka (Huntsinger et al. 2000). Pengalaman positif ibubapa terhadap matematik dikatakan menjadi pendorong kepada aktiviti awal numerasi yang dijalankan di rumah bersama anak-anak mereka. Pencapaian numerasi ini juga dikatakan berkaitan dengan sikap ibubapa selain pengalaman ibubapa (Blevins-Knabe et al. 2000),

C. KESIMPULAN

Secara ringkasnya, awal numerasi ditegaskan mempunyai peranan yang sangat penting dalam menentukan penguasaan kemahiran matematik di masa hadapan. Kemahiran berkaitan awal numerasi haruslah dikuasai oleh setiap kanak-kanak sebagai persediaan mereka menghadapi alam persekolahan rasmi iaitu alam sekolah rendah. Bertepatan dengan kurikulum prasekolah di Malaysia, semua kemahiran berkaitan awal numerasi telah ditetapkan untuk dikuasai bermula pada umur kanak-kanak berusia 4 tahun lagi.

Namun begitu, peruntukan masa yang ditetapkan untuk kanak-kanak berada di prasekolah agak terhad iaitu antara 3.5 hingga 4 jam sahaja sehari termasuk masa rehat mereka. Ini memungkinkan limitasi dalam penguasaan awal numerasi seperti yang dihasratkan. Masa yang lebih panjangkan adalah masa kanak-kanak berada di rumah. Maka bukanlah perkara pelik apabila ramai pengkaji membuktikan bahawa aktiviti di rumah turut menyumbang kepada penguasaan awal numerasi kanak-kanak. Sehubungan dengan itu,

perhatian yang serius juga hendaklah diberikan untuk mengenalpasti atau merancang aktiviti-aktiviti di rumah yang boleh membantu kanak-kanak menguasai kemahiran awal numerasi dengan baik.

Dalam merancang dan melaksanakan aktiviti di rumah bagi membantu penguasaan awal numerasi kanak-kanak, beberapa perkara haruslah diberi perhatian. Antaranya adalah berkaitan kanak-kanak itu sendiri. Minat dan kecenderungannya harus diambikira agar aktiviti yang dirancang boleh memberi pengalaman positif kepadanya.

Selain daripada itu, jenis aktiviti yang hendak dijalankan perlu juga diteliti dengan rapi. Adakah aktiviti tersebut aktiviti langsung yang melibatkan pengajaran terus akan kemahiran-kemahiran awal numerasi? Atau mungkinkah aktiviti yang lebih sesuai adalah aktiviti tidak langsung yang mana unsur-unsur awal numerasi diselitkan secara tersirat dalam aktiviti harian? Pemilihan aktiviti ini juga sangat bergantung kepada peruntukan masa yang ada dan bahan-bahan atau alat-alat yang diperolehi.

Pemilihan kemahiran awal numerasi yang ingin dimasukkan juga menjadi persoalan yang perlu difikirkan. Daripada perbincangan kita tadi, telah dibuktikan bahawa kanak-kanak yang berpeluang mempelajarai kemahiran lanjutan dalam aktiviti di rumah menunjukkan pencapaian lebih baik berbanding dengan mereka yang didedahkan dengan hanya kemasiran asas seperti menyebut nombor, membilang nombor. Maka, pemilihan kemahiran lanjutan seharusnya menjadi pilihan dalam aktiviti di rumah sekiranya berkemampuan. Ini juga bergantung kepada keupayaan kanak-kanak dan ibubapanya.

Penglibatan ibubapa dalam pembentukan kemahiran awal numerasi sudah tidak dapat dinafikan lagi. Namun, peluang yang disediakan oleh ibubapa sangat bergantung kepada sikap ibubapa sendiri. Kajian lalu membuktikan selain daripada sikap, harapan dan pengalaman lalu juga boleh mempengaruhi peluang yang disediakan untuk kanak-kanak.

Sudah tiba masanya semua pihak membuka mata untuk sama-sama membantu meningkatkan penguasaan awal numerasi dalam kalangan kanak-kanak. Dengan peruntukan masa belajar di prasekolah yang terhad, ibubapa harus mengambil kesempatan yang ada di rumah untuk turut membantu penguasaan awal numerasi ini dari rumah.

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USING LOCAL ENVIRONMENTS IN DIRECT EXPERIENCE BASED LEARNING TO ASSESS STUDENTS ATTITUDE DIMENSION TOWARD INSECT

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Abstract

There are many factors that influence the formation of attitudes, one of the most crucial ones being education. Positive attitudes toward animals can be effectively accomplished principally by enabling students to directly experience organisms and their environments. This research used local environments in learning based direct experience to show students attitude dimension toward Insect. The stage in learning based direct experience are concrete experience, reflective experience, abstract conceptualization, and then aplicative. The following study presents the development of attitude dimension of Kellert (1985) that describe in questionaire. The attitude dimension that describe in questionaire are Scientistic, Moralistic, and Ecologistic. Result were gathered from a sample of 27 junior high school students. Result show, that students who used local environments in learning based direct experience have postive attitude toward Insect. The step of this lesson can assess students attitude dimension (Scientistic, Moralistic, and Ecologistic) Implication of the study are discussed.

Keywords: Using local environment in learning based direct experience, attitude dimension, insect, students.

A. INTRODUCTION

This study was conducted to measure the dimensions of the attitudes of students through hands on experience based learning environments that utilize local .Nasution (1985) states that the use of the environment as a learning resource can be done in two ways, namely by bringing resources from the public to or from the environment into the classroom and a way to bring students into the environment. Learning model that can be used to take advantage of the local environment is a direct experience -based learning . Learning by direct experience is also described by Edgar Dale in his research experience depicted in Edgar Dale Cone (Edgar Dale Cone of Experience, 1963). Edgar Dale cone of experience is a model that combines several theories related to the design and the learning process. According to Dale students can find out more information about what they "do". Edgar Dale also explains the direct experience is experience obtained by students as a result of its own activity. Hands-on experience -based learning is also expected to lead to an increase in student attitudes in learning objects studied. According to Berkowitz (Anwar, 1995) a person's attitude toward an object is a feeling of support (favorable) or not support (unfavorable) of the object .

Students' attitudes toward learning a dimension can also be reflected in his attitude. Kellert (Tomazic, 2011) in his study describes several dimensions of students' attitudes toward animals known as Typologi of Attitude. Aesthetic dimensions of attitude is interest in the artistic and animal characteristics symbols. Dominionistic is the attitude dimension in mastering animals and generally in sports activities. Ecologistic is the dimension of attitudes that focus on the environment as a system and the interrelationships between species and their habitats. Humanistic is particularly interested in animals as pets. Moralistic emphasize how good or bad treatment of animals. Negativistic where students express their feelings or attitudes towards animals. Naturalistic is interest in wild life. Scientistic is interest in the physical shape and function of animal biology. Utilitarian dimension of attitude is the emphasis on the value of the materials of animal or its habitat .

Biology lessons are expected to give concrete form of learning resources. One material that can used local environment in the immediate experience-based learning is a matter of diversity of living things. Learning is all the work done by an educator for a process of learning in their students. While the study is the change in attitude. Attitude change can be observed in the learning process, objectives, and consistency against something. This change is one indicator of the success of educators in implementing the learning process. Fazio and Zanna (Tomazik, 2011) states that attitudes based on direct experience will give students a persistent attitude, strong, and critically.

Experiential learning is a student-centered approach that starts with the premise that people learn from experience, and for the learning experience truly effective must use the whole learning wheel, from goal setting, observation and experimentation, recheck, and action planning. Experiential learning cycle which consists of concrete experience (concrete experience) for students who then forwarded the reflective experiences (reflective observation) and enter the abstract conceptualization stage (abstract conceptualization) and the final stage of experimenting active (active experimentation) (Kolb, 1984).

Table 1. The Activity in Each Stage of Lesson Based Direct Experience

Stage of Learning	Activity
Concrete Experience	Invites students to observe the learning environment in the school.
	Guiding students to find objects they want to learn.
	Guiding students to directly observe the object being studied.
Reflective Experience	Directing students to take of the object to be obsekanrved further.
	Divide students into groups and provide worksheets to guide students' observations.
	Ask students to observe carefully the objects that have been discovered.
	Provide an explanation of the basic concepts of grouping living things.
	Organize students to work in groups.
	Directing students to identify and classify objects in a particular group based on differences and similarities.
Abstract	Deliver information to students about the concept of a binary

Stage of	Activity
Conceptuali-zation	classification system and multilevel classification.
	Guiding students to perform binary classification and multilevel classification.
	Assimilate observations made by the students to the theories and concepts.
	Invite students to use logic to understand the experiences directly by students.
(1)	Lead students to discover the basic grouping of living things they have observed.
	(2)
Active Aplication	Revealing back problems beginning to answer some of the students.
	Encourage students to test theories and concepts they have acquired in rengka to explain new experiences.
	Test the students' understanding about the ability to provide a classification.
	Provides material, and provides the opportunity for students to ask questions about things that have not been understood during the learning process.
	Summing learning

B. METHODS
1. Questionnaire

The constructed to measure students attitude dimensions. In this part statements were used tahat according to Kellert (1985), difine scientistic, moralistic, and ecologistic. This questionaire used several statements were devide in each attitude dimensions. Items of the questionnaire were of the Likert type. Items that were scored by participants from 0 (strongly disagree) to 4 (strongly agree). Items were formulated either negatively or positively.

2. Participant

The study was conducted April 2014. Participants of the research are 27 junior high school students at one of junior haigh school in west sumatera, Indonesia.

C. RESULT

Results are presented in three sections. First, analysis of mean score of students that got learning based direct experience and without learning based direct experience . Next, descriptif analysis of independent variables effect on attitude and knowledge is presented,

Overall, there were differences between three dimensions. There are differences in the dimensions of attitudes with direct experience and attitude dimensions not get a direct experience (Table 1). The data in the following table are the average data score of each dimension of attitudes with direct experience and do not get to experience indirectly.

Table 2. Mean score distribution of sample with direct experiences and no direct experiences.
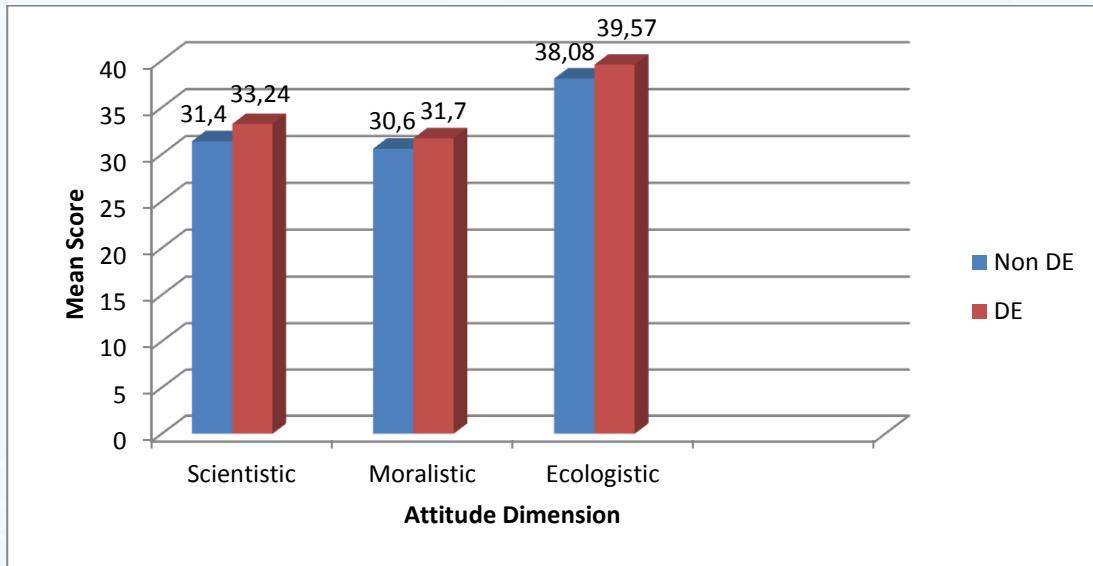
Table 3. Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
skor	54	4.71852E1	8.326077	26.000	62.000

Table 4. One-Sample Kolmogorov-Smirnov Test

		Skor
N		54
Normal Parameters[a]	Mean	4.71852E1
	Std. Deviation	8.326077E0
Most Extreme Differences	Absolute	.103
	Positive	.078
	Negative	-.103
Kolmogorov-Smirnov Z		.753
Asymp. Sig. (2-tailed)		.622

a. Test distribution is Normal.

Table 5. Group Statistics

	Kelas	N	Mean	Std. Deviation	Std. Error Mean
Skor	NoDE	27	4.60000E1	8.757414	1.685365
	DE	27	4.83704E1	7.855171	1.511728

Table 6. Independent Samples Test

		Skor	
		Equal variances assumed	**Equal variances not assumed**
Levene's Test for Equality of Variances	F	.001	
	Sig.	.981	
t-test for Equality of Means	T	-1.047	-1.047
	Df	52	51.397
	Sig. (2-tailed)	.300	.300
	Mean Difference	-2.370370	-2.370370
	Std. Error Difference	2.264018	2.264018
	95% Confidence Interval of the Difference — Lower	-6.913455	-6.914724
	Upper	2.172714	2.173983

Table 7. Frequency distribution of answer on statements about attitude dimension   toward Insect

No.	Attitude Dimension	Item	Distribution Frequency									
			Non DE					DE				
			0	1	2	3	4	0	1	2	3	4
1.	**Scientistic**	I want to study animals that have a smaller body size.	0	1	0	**15**	11	0	2	2	**12**	11
2.		I want to be observed that there are various types of insects in my neighborhood.	0	0	0	**14**	13	1	0	0	8	**18**
3.		I want to compare the difference in the form of various types of insects that exist in my neighborhood.	2	2	6	**12**	5	0	2	2	**12**	11
4.		I would like to learn more about the books of insects.	1	3	1	**14**	8	1	0	3	10	**13**
5.		I want to observe how insects breed.	0	0	1	**15**	11	3	2	1	**11**	10
6.		I want to observe the insects more closely to see the shape of her body.	1	0	5	**13**	8	2	1	3	9	**12**
7.		When finding insects in flight, I noticed the shape and color	1	2	7	**12**	5	0	1	2	9	**15**

No.	Attitude Dimension	Item	Distribution Frequency									
			Non DE					DE				
			0	1	2	3	4	0	1	2	3	4
		of its wings.										
8	(2)	I want to learn a place to live (habitat) and the environment of insects.	0	1	2	**14**	10	1	1	1	11	**13**
(1)		(3)	(4)									
9.		I want to observe the functioning of insect body parts.	0	0	5	**12**	10	0	0	4	**12**	11
10.		Although insects have a small body, but insects also have the right to live.	0	3	6	8	**10**	0	0	3	10	**14**
11		I think butterflies are beautiful and interesting animals that must be preserved.	1	0	4	10	**12**	0	2	1	6	**18**
12.	Moralistic	When finding the bees, I immediately killed him because bees are dangerous insects.	**8**	5	6	4	4	6	1	5	**8**	7
13.		I want to maintain various types of butterflies in the house as a private collection.	1	2	5	**17**	2	1	1	5	**8**	7
14.		I think the green flies in the environment I had to be killed because it is so disgusting.	5	11	6	**12**	9	5	2	6	6	**8**
15.		I do not want to hurt insects when I learn it.	0	0	6	**12**	9	1	2	3	10	**11**
16.		When I find insects and membenuhnya direct hit.	3	5	**8**	3	**8**	2	3	6	6	**10**
17.	Ecologistic	Insects are needed for the balance of nature.	0	0	3	10	**14**	0	2	5	1	**19**
18		Insects have an	0	2	7	8	**10**	0	1	2	11	**13**

No.	Attitude Dimension	Item	Distribution Frequency Non DE					DE				
			0	1	2	3	4	0	1	2	3	4
		important role in human life.										
19		After clipping insects I would return it to where I clipp it.	0	0	3	**12**	**12**	0	1	8	7	**11**
20.		Insects such as butterflies needed in the plant pollination process.	1	0	3	**12**	11	0	1	2	9	**15**

No	Attitude Dimension	Item	Distribution Frequency Non DE					DE				
			0	1	2	3	4	0	1	2	3	4
1.	Scientistic	I want to study animals that have a smaller body size.	0	3,70	0	**55,55**	40,74	0	7,40	7,40	**44,44**	40,74
2.		I want to be observed that there are various types of insects in my neighborhood.	0	0	0	**51,85**	48,14	3,70	0	0	29,62	**66,66**
3.		I want to compare the difference in the form of various types of insects that exist in my neighborhood.	7,40	7,40	22,22	**44,44**	18,51	0	7,40	7,40	**44,44**	40,74
4.		I would like to learn more about the books of insects.	3,60	11,11	3,70	**48,14**	29,62	3,70	0	11,11	37,03	**48,14**
5.		I want to observe how insects breed.	0	0	3,70	**15**	40,74	11,11	7,40	3,70	**40,74**	37,03
6.		I want to observe the insects more closely to see the shape of her body.	3,70	0	18,51	**48,14**	29,62	7,40	3,70	11,11	33,33	**44,44**
7.		When finding	3,70	7,40	25,9	**44,4**	18,5	0	3,70	7,40	33,3	**55,5**

No	Attitude Dimension	Item	Distribution Frequency									
			Non DE					DE				
			0	**1**	**2**	**3**	**4**	**0**	**1**	**2**	**3**	**4**
		insects in flight, I noticed the shape and color of its wings.			2	**4**	1				3	5
8		I want to learn a place to live (habitat) and the environment of insects.	0	3,70	7,40	**51,85**	37,03	3,70	3,70	3,70	40,74	**48,14**
9.		. I want to observe the functioning of insect body parts.	0	0	18,51	**44,44**	37,03	0	0	14,81	**44,44**	40,74
10.		Although insects have a small body, but insects also have the right to live.	0	11,11	22,22	29,62	**37,03**	0	0	11,11	37,03	**51,85**
11	**Moralistic**	I think butterflies are beautiful and interesting animals that must be preserved.	3,70	0	14,81	37,03	**44,44**	0	7,40	3,70	22,22	**66,66**
12.		When finding the bees, I immediately killed him because bees are dangerous insects.	**29,62**	18,51	22,22	14,81	14,81	22,22	3,70	18,51	**29,62**	25,92
13.		I want to maintain various types of butterflies in the house as a private collection.	3,70	7,40	18,51	**62,96**	7,40	3,70	3,70	18,51	**29,62**	25,92
14.		I think the green flies in the environment I had to be killed because it is so disgusting.	18,51	40,74	22,22	**44,44**	33,33	18,51	7,40	22,22	22,22	**29,62**
15.		I do not want	0	0	22,22	**44,44**	33,33	3,70	7,40	11,11	37,03	**40,74**

No	Attitude Dimension	Item	Distribution Frequency									
			Non DE					DE				
			0	1	2	3	4	0	1	2	3	4
		to hurt insects when I learn it.										
16.		When I find insects and membenuhnya a direct hit.	11,11	18,51	**29,62**	11,11	**29,62**	7,40	11,11	22,22	22,22	**37,03**
17.		Insects are needed for the balance of nature.	0	0	11,11	37,03	**51,85**	0	7,40	18,51	3,70	**70,37**
18.	Ecologistic	Insects have an important role in human life.	0	7,40	25,92	29,62	**37,03**	0	3,70	7,40	40,74	**48,14**
19		After clipping insects I would return it to where I clipp it.	0	0	11,11	**44,44**	**44,44**	0	3,70	29,62	25,92	**40,74**
20.		Insects such as butterflies needed in the plant pollination process.	3,70	0	11,11	**44,44**	40,74	0	3,70	7,40	33,33	**55,55**

"Scientistic" Attitudinal Dimension

Students in this study who get lesson based reported direct experience with Insect were more willing to learn about animals than students without lesson based direct experience. This could lead to greater acquisition of knowledge and more positive attitudes toward Insect, consequently leading to more appropriate behaviour (Barney et al., 2005). Reported direct experience in this study had significant effect in students of lower grades, in this study is seventh grade .The results of this study are in line with Kellert's (1985) research and later research of Prokop and Tunnicliffe (2008). Students of lower grades were more prepared to learn about animal biology espesially Insect (structure and function). It is known that an attitude based on a direct experience is more likely to affect an individual's behaviour (actual or intended) than an attitude formed on the basis of an indirect experience (Fazio & Zanna, 1981).

"Moralistic" Attitudinal Dimension

There were generally no significant differences on "Moralistic" dimension according to lesson based direct experiences toward Insect. From this it can be seen that lesson based direct experience might not influence how students perceive cruelty toward animals espwsiaaly Insect. But it must be noted that from this we cannot conclude that they both will

react inappropriately if placed in situation where they will need to react to cruelty toward animals. As Barney et al. (2005) noted, that only higher moral sensitivity will not always produce environmentally friendly behaviours. People, who react mainly on a basis on that attitude dimension, can cause more harm than people with balanced attitude and appropriate knowledge.

"Ecologistic" Attitudinal Dimension

Students   Ecologistic dimension who got lesson wh direct experience are more positive. They release that Insect is very important to nature. According frequency distribution of Questionnaire, students have positive attitude toward Insect and it function for environment.

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MENGESAN MISKONSEPSI MURID TINGKATAN ENAM DALAM GENETIK DENGAN MENGGUNAKAN UJIAN DIAGNOSIS GENETIK DUA-ARAS

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Abstract

This research was carried out to determine the understanding level of form six students of Kuala Muda / Yan district in genetics concepts. There were 79 of form six students (age from 18 years old to 19 years old) from three different schools involved in this study. The Two-Tier Genetics Test which developed by Tsui and Treagust (2010) was used in this study to evaluate the students' understanding in genetics concepts. The result showed that the students had misconception in all genetics concepts that were tested in the two-tier diagnostic test. The percentage of students who answered both tiers of diagnostic question correctly was lower than that the percentage of the students who failed to answer the one tier or both tiers correctly in all concepts that were tested in this diagnostic test. The result also showed that there was a serious misconception among form six students especially in cross-test concept, pedigree diagram, gamete formation (meiosis) and Mendel's First Law. However, the form six students had scientific understanding in dominant allele and recessive allele concepts.

Keywords: sixth form pupils, two-tier diagnostic test, misconception, genetics

A. PENDAHULUAN

Beberapa kajian antarabangsa menunjukkan prestasi murid Malaysia merosot berbanding dengan murid negara lain. Mengikut *Trends in International Mathematics and Science Study* (TIMSS) 2007, lebih kurang 20% daripada murid Malaysia gagal mencapai tanda aras minimum dalam Matematik dan Sains, berbanding dengan hanya 5% dalam Sains dan 7% dalam Matematik pada tahun 2003 (Unit Perancangan Ekonomi, 2010). Laporan TIMMS 2007 juga menyebut peratus murid Malaysia yang mencapai tanda aras tinggi untuk Sains menurun dari 28% pada tahun 2003 kepada 18% pada tahun 2007. Bagi tanda aras sederhana pula merosot daripada 71% pada tahun 2003 kepada 50% pada tahun 2007. Skor purata mata pelajaran Sains telah jatuh pada skala yang lebih besar lagi iaitu dari 471 mata pada tahun 2007 kepada 426 mata pada tahun 2011. Kedudukan Malaysia dalam pembelajaran Sains juga telah jatuh daripada kedudukan ke 21 pada tahun 2007 kepada kedudukan 32 pada tahun 2011. Penurunan ini adalah yang terbesar. Perbandingan skor pencapaian antara mata pelajaran dalam kajian TIMSS bagi tahun 2007 dan tahun 2011 menunjukkan mata pelajaran Biologi adalah yang terendah berbanding dengan mata pelajaran Fizik dan Kimia. Prestasi pendidikan yang rendah memberi kesan negatif kepada masa depan

negara memandangkan tahap pendidikan yang tinggi berkait rapat dengan kadar pertumbuhan ekonomi. Sekiranya tahap pendidikan negara tidak ditingkatkan ke peringkat piawaian antarabangsa, serta jurang pencapaian sekolah tidak dikurangkan, Malaysia akan ketinggalan dalam pendidikan dan kehilangan daya saing pada masa hadapan.

Pusat Perkembangan Kurikulum (2001) mengesan antara kelemahan dalam proses pengajaran dan pembelajaran traditional di sekolah antaranya ialah kegagalan guru untuk membantu murid mencari perkaitan antara maklumat baru dengan pengalaman sedia ada dan antara dunia sekolah dengan kehidupan seharian dan ini merupakan satu cabaran dalam pendidikan sains. Kefahaman murid menjadi kebimbangan utama dalam pengajaran dan pembelajaran sains masa kini. Menurut Treagust dan Chandrasegaran (2007), kurikulum sains masa kini menitik beratkan pelbagai aspek kefahaman murid terhadap konsep-konsep sains dan fenomena. Cabaran dalam bidang biologi hari ini ialah untuk memfokuskan kepada pembelajaran bermakna dalam konsep saintifik (Mintzes *et. al*., 2001). Dalam bidang biologi, konsep genetik merupakan konsep yang paling sukar difahami oleh pelajar malah kekal sebagai satu topik yang sangat penting dalam biologi kerana ia mempunyai hubungan rapat dengan kurikulum yang lain (Tsui & Treagust, 2010). Kajian telah menunjukkan kebanyakan guru dan murid berpendapat bahawa konsep genetik amat sukar untuk diajari dan dipelajari (Rotbain, Marbach-Ad, & Stavy, 2005). Genetik merupakan satu bidang yang penting dalam biologi yang turut menyumbang kepada tercetusnya kontroversi etika serta menjadi isu dalam perdebatan sosial dan ekonomi. Menurut Stewart dan Hafner (1994), genetik merupakan bidang ilmu yang menggalakkan penaakulan serta penyelesaian masalah malah genetik dianggap sebagai salah satu ilmu pengetahuan yang sangat penting dalam masyarakat dan setiap murid seharusnya mengetahui konsep-konsep asas tentang genetik (Hartwell *et. al*., 2000). Kepelbagaian dan aplikasi teknologi genetik seperti makanan yang diubahsuai secara genetik, cap jari DNA, saringan penyakit genetik, terapi gen, pengklonan dan lain-lain aplikasi memerlukan tahap celik sains dan kefahaman dan penguasaan pengetahuan yang tinggi (Dawson & Schibeci, 2003; Marbach-Ad, 2001).

Untuk mencapai matlamat dalam program pendidikan sains ialah mengetahui sejauh mana pelajar memahami topik dan konsep sains. Terdapat pelbagai kaedah untuk mengesan miskonsepsi pelajar dalam sains. Soalan aneka pilihan jawapan adalah sangat popular untuk mengenal pasti tahap kefahaman murid kerana kurang mengambil masa untuk membinanya dan boleh digunakan oleh guru untuk menguji sampel murid yang besar jumlahnya. Walau bagaimanapun menurut Griffard dan Wandersee (2001), soalan aneka pilihan jawapan mungkin tidak dapat membantu guru mengenalpasti kefahaman saintifik murid dengan berkesan dan tidak dapat mengesan miskonsepsi murid bagi konsep tertentu. Penggunaan ujian diagnostik dua-aras (Treagust, 1988) telah menyediakan cara yang lebih baik untuk menilai kefahaman murid tentang sesuatu konsep kerana item-item dibina khusus untuk mengenal pasti konsep alternatif dan miskonsepsi dalam konten sains yang ditentukan. Pelbagai ujian diagnostik dua-aras telah dibangunkan khusus untuk pelbagai bidang dan digunakan untuk menentukan kefahaman konsep sains (Treagust, 2006; Treagust & Chandrasegaran, 2007). Salah satu ciri yang biasa untuk ujian ini adalah item-item

dibangunkan berkaitan dengan topik yang sukar dan mengelirukan bagi murid-murid, dan yang mempunyai konsep yang paling alternatif dalam minda murid.

Objektif utama kajian ini ialah untuk mengesan dan mengenal pasti miskonsepsi murid tingkatan enam tentang konsep genetik terhadap murid tingkatan enam aliran sains sekolah menengah harian biasa di daerah Kuala Muda / Yan, Kedah. Ujian diagnostik dalam kajian ini ialah ujian Diagnostik Genetik Dua-Aras yang dibangunkan oleh Tsui dan Treagust (2010). Ujian diagnostik terdiri daripada dua bahagian sekurang-kurangnya. Bahagian pertama bertujuan untuk mendiagnosis cara murid menterjemah pengetahuan saintifik. Dalam bahagian kedua, murid diminta menyatakan sebab untuk jawapan mereka di bahagian pertama (Tsui & Treagust, 2010). Bahagian pertama ujian diagnostik adalah sama dengan soalan pelbagai pilihan jawapan. Ia terdiri daripada item soalan atau premis yang mempunyai satu set pilihan jawapan, salah satu yang merupakan jawapan yang betul dan selebihnya adalah distraktor. Apa yang membezakan ujian diagnostik daripada ujian pelbagai pilihan jawapan adalah aras kedua. Dalam soalan aras kedua, murid diminta menyatakan sebab atau alasan mereka memilih pilihan yang tertentu dalam aras pertama. Aras kedua boleh mempunyai pelbagai format pilihan dengan pilihan yang mengandungi miskonsepsi murid yang sudah dikenal pasti terlebih dahulu (Tsui & Treagust, 2010).

B. METODOLOGI

Kajian tinjaun dengan menggunakan soalan diagnostik dua aras dijalankan ke atas 79 orang murid tingkatan enam yang berusia 18-19 tahun di tiga buah sekolah di daerah Kuala Muda/ Yan. Kedah. Jadual 1 menunjukkan sekolah dan bilangan responden yang terlibat.

Jadual 1. Responden Kajian

Sekolah	Bilangan Responden
A	15
B	34
C	30

Instrumen yang digunakan untuk mengumpul data dalam kajian ini ialah Soalan Ujian Diagnostik Genetik Dua-Aras yang telah dibangunkan oleh Tsui dan Treagust (2010). Konten tentang konsep genetik dalam ujian diagnostik dua-aras ini adalah setara dengan Sukatan Pelajaran Biologi KBSM tingkatan lima di Malaysia tetapi dalam kajian ini instrumen ini digunakan untuk mengenal pasti kefahaman murid tingkatan enam tentang konsep genetik. Dalam kajian tinjauan ini penyelidik telah menggabungkan dua set soalan pra dan pasca ujian diagnostik ini menjadikan hanya satu set soalan yang berjumlah 46 soalan. Oleh sebab ujian ini mengandungi dua-aras, maka penyelidik menggabungkan setiap pasang soalan sebagai satu soalan menjadikan jumlah keseluruhan soalan sebanyak 26 soalan sahaja. Batasan isi kandungan tentang konsep genetik dalam ujian diagnosis genetik dua-aras (Tsui & Treagust, 2010) ini ditafsirkan mengikut senarai konsep seperti jadual 2 berikut:

Jadual 2. Tafsiran Item dan Konten Dalam Ujian Diagnostik Genetik Dua-Aras

Item	Konten
1,14	• Genotip diwakili oleh sepasang huruf. Huruf besar mewakili alel dominan manakala huruf kecil mewakili alel resesif.
2,15	• Genotip untuk trait dominan adalah dalam bentuk homozigot dan heterozigot
5,19	• Jika sel induk mempunyai genotip homozigot dominan ataupun genotip homozigot resesif bagi sesuatu trait, maka satu jenis gamet sahaja yang dihasilkan bagi setiap trait berkenaan. Jika sel induk mempunyai genotip heterozigot bagi sesuatu trait, maka dua jenis gamet dihasilkan iaitu gamet membawa alel dominan dan yang gamet membawa alel resesif
4,6,16,19,20	• Meiosis menghasilkan sel gamet yang mempunyai separuh bilangan kromosom daripada sel induk. Setiap gamet hanya membawa separuh bilangan kromosom daripada sel induk.
7, 21, 26	• Gen merupakan turutan kod pada DNA yang bertanggungjawab dalam sintesis protein.
8, 24, 25	• Genotip resesif diwakili oleh sepasang huruf kecil.
3,9,17,22	• Gambar rajah pedegri membolehkan seseorang memahami fenotip dan genotip setiap individu dalam setiap keturunan sama ada penyakit keturunan yang disebabkan oleh autosom resesif atau gen terangkai seks. Genotip heterozigot mempamerkan sifat dominan tetapi sifat resesif boleh diwarisi oleh generasi berikutnya jika kedua-dua induk adalah heterozigot.
11,13	• Fenotip adalah ciri yang boleh dilihat atau dikesan. Untuk fenotip dominan dipamerkan, memadai hanya satu alel dominan hadir dalam genotip.
10, 18	• Nisbah progeni hasil kacukan kacang pea yang dilakukan oleh Gregor Mendel dapat ditentukan dengan menggunakan segiempat Punnet.
23	• Kacukan uji adalah kacukan yang dilakukan untuk menentukan genotip sesuatu organisma dengan cara mengacukkan organisma yang tidak diketahui genotipnya dengan organisma yang bergenotip resesif bagi sesuatu trait yang dikaji.

C. DAPATAN KAJIAN

Ujian diagnostik dua-aras dengan pelbagai pilihan jawapan ini dianalisis secara manual melalui jadual dua baris yang menunjukkan pilihan jawapan murid bagi aras pertama dan aras kedua. Kefahaman murid dalam kajian ini dibahagikan kepada kefahaman saintifik (jika responden kajian menjawab kedua-dua aras soalan diagnostik dengan tepat), miskonsepsi (jika responden kajian menjawab satu aras sahaja dengan tepat atau kedua-dua aras soalan tidak tepat) Murid diberi skor 1 jika berjaya menjawab dengan tepat bagi kedua-dua aras soalan ujian diagnostik dan skor 0 jika hanya berjaya menjawab satu aras sahaja dengan tepat atau kedua-dua aras dijawab dengan tidak tepat. Data dianalisis dengan menggunakan perisian SPSS versi 20 untuk mendapatkan peratusan. Analisis kefahaman

murid dalam sesuatu konsep dilaporkan dalam bentuk peratusan mengikut cadangan penyelidik terdahulu (Peterson, Treagust & Garnet, 1989; Haslam & Treagust, 1987; Odom & Barrow, 1995). Peratusan dikira berdasarkan bilangan jawapan yang tepat bagi kedua-dua aras (kefahaman saintifik) dan tidak tepat bagi mana-mana aras soalan (miskonsepsi). Jadual 3 di bawah menunjukkan peratusan jawapan responden yang tepat, separa tepat dan tidak tepat langsung dalam Ujian Diagnostik Genetik Dua-Aras (Tsui & Treagust, 2010).

Jadual 3. Peratusan Kefahaman Murid Bagi Setiap Item

Item	Peratusan Jawapan Setiap Aras (%)	
	Kedua-dua Aras Soalan Dijawab Dengan Tepat (Kefahaman Saintifik)	**Satu Aras atau Kedua-dua Aras Dijawab Dengan Tidak Tepat (Miskonsepsi)**
1	79.7	20.3
2	68.4	31.6
3	19.0	81.0
4	26.6	73.4
5	54.4	45.6
6	15.2	84.8
7	21.5	78.5
8	63.3	36.7
9	13.9	86.1
10	51.9	48.1
11	21.5	78.5
12	40.5	59.5
13	67.1	32.9
14	78.5	21.5
15	68.4	31.6
16	57.0	43.0
17	19.0	81.0
18	45.6	54.4
19	22.8	77.2
20	16.5	83.5
21	17.7	82.3
22	15.2	84.8
23	1.3	98.7
24	50.6	49.4
25	63.3	36.7
26	48.1	51.9

Jadual 3 jelas menunjukkan murid mempunyai kefahaman altenatif dalam semua konsep genetik yang diuji dalam ujian diagnostik dua-aras ini. Peratusan murid yang berjaya menjawab dengan tepat kedua-dua aras soalan ujian diagnostik adalah kurang berbanding jumlah murid yang gagal menjawab walaupun satu aras dengan tepat dan gagal menjawab kedua-dua aras dengan tepat. Item-item yang menunjukkan peratusan melebihi 50% bagi ketepatan pilihan jawapan kedua-dua aras soalan ujian diagnostik ini ialah item 1, 2, 5, 8, 10,

13, 14, 15, 16, 24 dan 25 manakala item-item selebihnya menunjukkan murid mempunyai miskonsepsi tentang konsep-konsep yang diuji. Rajah 1 di bawah menunjukkan peratusan pelajar tingkatan enam yang mempunyai kefahaman saintifik dan miskonsepsi bagi setiap item yang diuji dalam ujian diagnostik dua-aras.
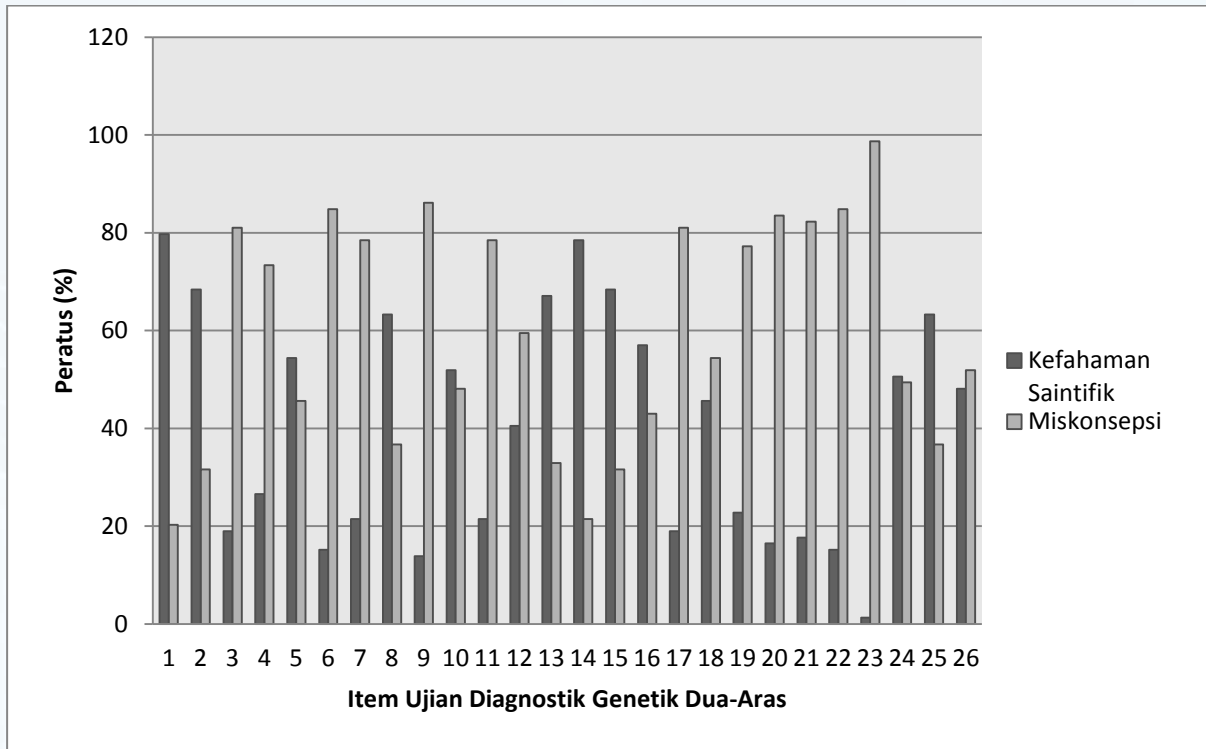
Rajah 1. Graf Peratusan Kefahaman Saintifik dan Miskonsepsi Bagi Setiap Item

Kebanyakan murid berjaya menjawab dengan tepat bagi kedua-dua aras tentang konsep alel dominan. Peratusan jawapan kedua-dua aras tepat yang tinggi iaitu sebanyak 79.7% bagi item 1 dan 78.5% bagi item 14 masing-masing. Konsep yang diuji dalam kedua-dua item ini ialah konsep alel dominan iaitu alel dominan diwakili oleh oleh huruf besar dalam genotip. Kebanyakan murid dapat mengenal pasti bahawa sepasang huruf yang terdiri dari satu huruf besar dan satu huruf kecil menunjukkan fenotip dominan. Peratusan murid yang mempunyai miskonsepsi bagi konsep ini ialah sebanyak 20.3% (item 1) dan 21.5% (item14) masing-masing. Bagi konsep alel resesif yang diuji dalam item 8 dan item 25, peratusan murid berjaya menjawab dengan tepat bagi kedua-dua aras ialah sama iaitu sebanyak 63.3% manakala peratusan murid yang menunjukkan miskonsepsi bagi konsep ini ialah 36.7%.

Alel dominan ialah alel yang boleh mempamerkan sifat yang dikawalnya sama ada dalam keadaan homozigot atau heterozigot dan konsep ini diuji dalam item 2 dan 15. Keputusan menunjukkan peratus kefahaman saintifik murid bagi konsep ini yang diuji dalam kedua-dua item 2 dan item 15 adalah sama iatu sebanyak 68.4%. Perbezaan peratusan antara kefahaman saintifik dan miskonsepsi sangat ketara bagi item 23 tentang konsep kacuk uji (*test cross*). Keputusan ujian jelas menunjukkan perbezaan yang sangat tinggi antara peratus

jawapan yang tepat dengan peratus jawapan yang tidak tepat. Peratus murid yang mempunyai kefahaman saintifik bagi item 23 hanyalah 1.3% sahaja manakala peratus murid yang mempunyai miskonsepsi pula sangat tinggi iaitu 98.7%. Rajah 2 di bawah menunjukkan carta perbezaan peratus antara murid yang mempunyai kefahaman saintifik dengan yang mempunyai miskonsepsi bagi konsep kacuk uji.
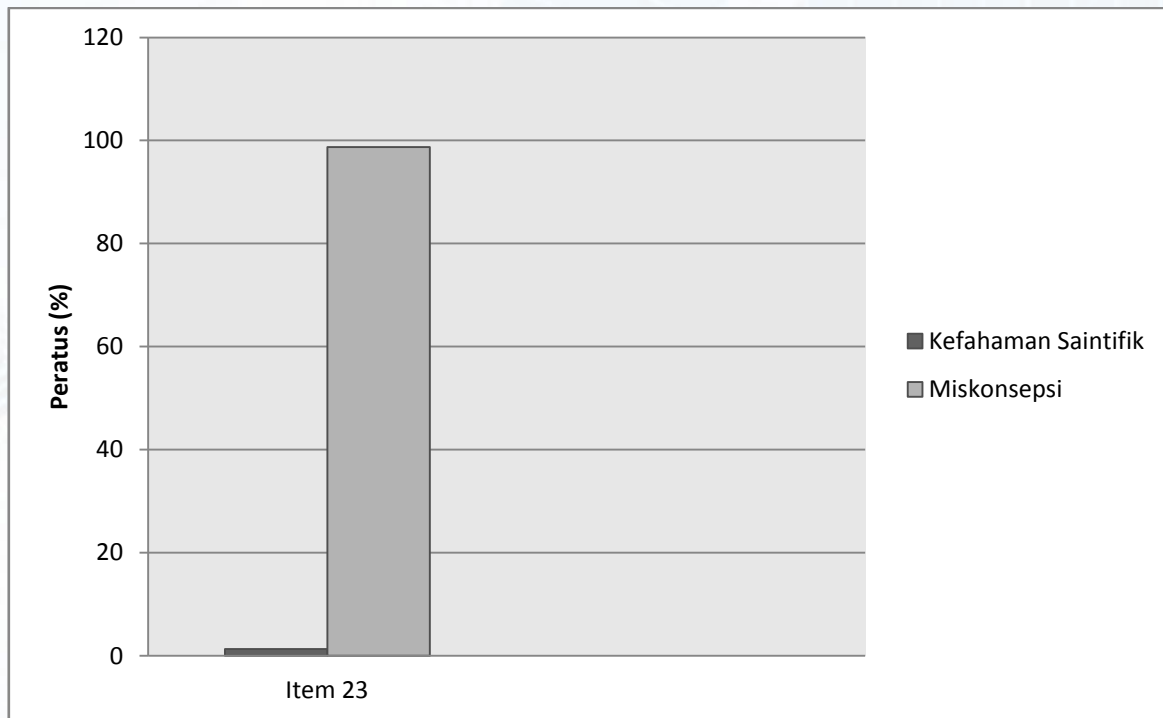
Rajah 2. Perbezaan peratusan antara kefahaman saintifik dan miskonsepsi bagi item 23

Berikut adalah soalan bagi item 23 yang mana kebanyakan murid gagal menjawab dengan tepat bagi kedua-dua aras.

23 (a) Some dogs bark when following a scent, others are silent and are called silent trackers. Barking is dominant (allele B) to non-barking (allele b). A hunter owns a barker which he wants to use for breeding purposes. However, he wants to be sure it has a genoptype of BB. What is the genotype of the bitch he should mate with this dog?
[ ] *1. BB*
[ ] *2. Bb*
[ ] *3. bb*

(b) Reason for Quesetion 23(a):
[ ] *1. If any silent tracker appears in the offspring, the hunter can be sure that his dog's genotype is Bb.*
[ ] *2. If no silent trackers appear in the offspring, he can be sure that his dog's genotype is BB.*
[ ] *3. If the dog is Bb, the chances of getting silent trackers in the offspring are zero.*

Jawapan yang tepat bagi soalan aras pertama ialah *bb* dan alasan saintifik yang sepatutnya murid pilih pada aras kedua ialah *If any silent tracker appears in the offspring, the hunter can be sure that his dog's genotype is Bb.* Menurut Hukum Mendel 1, jika kedua-dua induk mempunyai genotip heterozigot, maka kebarangkalian untuk mendapat progeni yang homozigot resesif bb adalah 25%. Untuk memastikan induk itu mempunyai baka tulen bergenotip BB, maka kacukan uji perlu dilakukan dengan induk yang mempunyai fenotip resesif. Progeni yang dihasilkan melalui kacukan ini akan menghasilkan 100% fenotip dominan maka jawapan yang tepat untuk soalan aras kedua ialah jawapan [1]. Jadual 4 di bawah menunjukkan peratusan murid yang memilih jawapan bagi setiap aras item 23.

Jadual 4. Peratusan murid yang memilih jawapan bagi setiap aras item 23

Ketepatan jawapan responden	Frekuensi	Peratus (%)	Kefahaman
Kedua-dua aras tepat	1	1.3	Kefahaman saintifik
Aras pertama tepat, aras kedua tidak tepat	5	6.3	Miskonsepsi
Aras pertama tidak tepat, aras kedua tepat	13	16.5	Miskonsepsi
Kedua-dua aras tidak tepat	60	75.9	Miskonsepsi
Jumlah	79	100	

Murid juga mempunyai miskonsepsi yang tinggi dalam menjelaskan gambar rajah pedegri yang disoal dalam item 3, item 9, item 17 dan item 22. Di bawah ini disertakan dua contoh gambar rajah pedegri yang diuji dalam item 3 dan item 22.

3(a) Which of the following best describes the trait (characteristic or feature) in the following pedigree (family tree)?

Legend:
- female without trait
- male without trait
- female with trait
- male with trait

[ ] *1. Recessive*
[ ] *2. Dominant*
[ ] *3. Cannot tell*
[ ] *4. Don't know*
Reason for Question 3(a):
[ ] *1. Only one of the three children in the second generation has the trait (characteristic or feature)*
[ ] *2. Both the female in the first generation and her son have the trait.*
[ ] *3. One male in third generation has the trait but his parents do not have it.*
[ ] *4. The trait can be either recessive or dominant*

22(a) The pedigree chart below shows the inheritance of a common genetic disease in Western Australia. Which of the following best describes the allele that gives rise to the trait?

Generations:

I Mary Paul

II Jane Luke Jill John

III Alan Peter Erica

○ female without genetic disease
□ male without genetic disease
● female with genetic disease
■ male with genetic disease
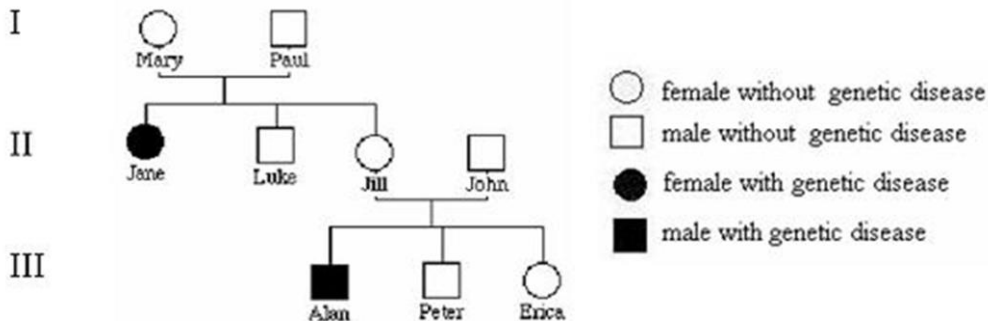
[ ]1. *Autosomal dominant*
[ ] 2. Autosomal recessive
[ ] 3. Sex-linked dominant
[ ] 4. Sex-linked recessive
Reason for Question 22(a):
[ ] 1. Because there are both female (Jane) and male (Alan) who have inherited the genetic disease.
[ ] 2. Because Jane in the second generation has the inherited the disease and her father must have one recessive allele but he is normal.
[ ] 3. Because one of the three individuals in the second and the third generation has the trait but their parents are normal.

Peratusan murid yang mempunyai kefahaman saintifik dalam konsep gambar rajah pedegri ialah 19%, 13.9%, 19% dan 15.2% bagi item 3, item 9, item 17 dan item 22 masing-masing. Peratusan miskonsepsi murid sangat tinggi bagi konsep gambarajah pedegri ini iaitu 81%, 86.1%, 81% dan 84.8% masing-masing. Peratusan murid yang menunjukkan miskonsepsi bagi konsep meiosis dan penghasilan gamet juga tinggi. Konsep-konsep ini diuji dalam item 4, item 6, item 19 dan item 20.. Berdasarkan dapatan analisis item 4, sebanyak 73.4 % murid gagal menjelaskan bahawa setiap gamet yang dihasilkan mempunyai separuh bilangan kromosom daripada sel induk dan membawa hanya satu kromosom daripada setiap pasangan kromosom dalam sel induk manakala bagi item 6, sebanyak 84.8% menunjukkan miskonsepsi dalam konsep penghasilan gamet. Bagi item 19, hanya 22.8% murid menunjukkan kefahaman saintifik manakala peratusan miskonsepsi adalah tinggi iaitu 77.2%. Konsep yang diuji dalam item 4 dan item 19 adalah setara cuma perbezaan yang dipamerkan pada saoalan aras pertama hanya pada bilangan kromosom dalam zigot lalat buah (4 pasang kromosom) dan pokok kacang pea (7 pasang kromosom) masing-masing. Item 6 dan item 20 adalah soalan yang sama. Selain itu, ramai murid gagal menentukan hasil kacukan dua induk heterozigot seperti yang diuji dalam item 11 dan 13. Di bawah ini disertakan soalan bagi item 11.

11(a) In guinea pigs, black coat colour is dominant to white. If we use "B" for the dominant gene (allele) and "b" for the recessive gene and two guinea pigs of genotype Bb were crossed to produce eight offspring. Which of the following best describes the phenotypes of the offspring?

[   ] 1. All of them are black.
[   ] 2. Most of them are white and others black.
[   ] 3. Most of them are black and others white.
[   ] 4. Don't know.

(b)Reason for Question 11(a):
[   ] 1. Half of the sperms and eggs contain the gene (allele) B.
[   ] 2. Most the sperms and eggs contain the gene (allele) B.
[   ] 3. All sperms and eggs contain the gene (allele) B.

Seramai 78.5% murid menunjukkan miskonsepsi manakala kefahaham saintifik hanya ditunjukkan oleh 21.5% murid sahaja. Keputusan in jelas menunjukkan ramai murid tidak mengetahui cara melukis gambar rajah kacukan untuk menerangkan hasil kacukan induk yang heterozigot. Induk yang heterozigot akan menghasilkan gamet yang membawa sama ada alel dominan atau alel resesif (jawapan bagi 11(b) ialah [1]) dan nisbah anak yang terhasil mematuhi Hukum Mendel I iaitu 3 dominan : 1 resesif (jawapan bagi soalan 11(a) ialah [3]).

D. PERBINCANGAN

Genetik merupakan asas dalam bidang yang berkaitan dengan perubatan seperti sains kaji hayat, veterinar dan bioteknologi. Pada separuh kedua abad ke-20, bidang genetik berkembang secara progresif bermula dengan penemuan struktur molekul DNA, pengenalan teknologi rekombinan DNA dan yang terkini ialah projek genom ganusia. Projek genom manusia berkembang dengan pesat bersama-sama dengan teknologi genomik dalam biologi molekul. Fenomena ini mencetuskan pertumbuhan yang pantas dalam maklumat biologi yang telah dijanakan oleh komuniti saintifik (Collin *et. al*, 2003). Disiplin baru dalam biologi yang dilahirkan ini memerlukan pembinaan konsep asas genetik yang kukuh bermula dari peringkat sekolah (Chattopadhay, 2012). Sekiranya konsep asas genetik tidak kukuh dan miskonsepsi tidak diperbetulkan di peringkat sekolah menengah maka tidak mustahil pelajar akan membawa kefahaman yang salah hingga ke peringkat universiti.

Dapatan kajian ini menunjukkan terdapat miskonsepsi yang serius di kalangan murid tingkatan enam terutama dalam konsep kacuk uji, gambar rajah pedigre, pembentukan gamet (meiosis) dan hukum Mendel pertama. Ramai murid tidak berupaya menganalis genotip yang ditunjukkan pada setiap generasi dalam gambar rajah pedegri berdasarkan maklumat yang diberi pada gambar rajah. Pemahaman genotip bagi setiap individu sama ada homozigot dominan atau homozigot resesif dan juga genotip heterozigot adalah penting untuk murid menganalisis genotip bagi setiap keturunan berikutnya. Kegagalan menentukan genotip menyebabkan murid gagal menetukan fenotip individu dalam gambar rajah pedigre. Peratusan miskonsepsi yang ditunjukkan oleh murid tingkatan enam dalam konsep meiosis juga tinggi. Kegagalan menguasai konsep pembahagian meiosis semasa pembentukan gamet

menyebabkan murid tidak dapat menyelesaikan masalah pewarisan mengikut Hukum Mendel Pertama. Walaupun peratusan kefahaman saintifik yang dipamerkan oleh murid tingkatan enam bagi konsep alel dominan dan alel resesif adalah tinggi namun hampir 100% responden tidak dapat mengaplikasi konsep alel resesif ini. Hampir kesemua responden tidak memahami aplikasi kacukan uji menggunakan induk bergenotip resesif untuk dikacukkan dengan induk yang tidak diketahui genotipnya sama ada homozigot dominan atau heterozigot. Kebanyakan murid tingkatan enam tiada masalah dalam memahami konsep alel dominan diwakili oleh huruf besar dan alel resesif diwakili oleh huruf kecil tetapi kefahaman mereka tentang konsep-konsep ini tidak mendalam kerana mereka gagal dalam menyelesaikan masalah yang melibatkan aplikasi konsep.

Walaupun konten item soalan diagnosis genetik dua-aras yang dibina oleh Tsui dan Treagust (2010) ini sepadan dengan sukatan mata pelajaran biologi tingkatan lima, namun masih ramai murid tingkatan enam gagal memahami beberapa konsep asas genetik. Namun demikian, kefahaman saintifik murid tingkatan enam adalah tinggi dalam memahami konsep alel dominan dan alel resesif. Dapatan kajian ini juga menunjukkan aplikasi ujian diagnostik yang mengandungi soalan dua-aras mampu mengesan miskonsepsi murid dalam konsep genetik tingkatan enam. Ujian diagnostik dua-aras ini bukan hanya untuk menganalisa pengetahuan murid semata-mata malah dapat digunakan untuk menganalisa kefahaman yang yang menjadi asas pengetahuan murid. Kefahaman yang tidak lengkap tentang konsep asas mempunyai kesan negatif terhadap keupayaan untuk mempelajari konsep-konsep seterusnya bagi topik yang berkaitan. Contohnya, sukatan pelajaran biologi tingkatan enam mempunyai topik aplikasi genetik seperti genetik populasi, mutasi, regulasi dan ekspresi gen dan teknologi moden dalam genetik. Sekiranya murid gagal memahami konsep asas dengan betul, masalah serius akan dihadapi semasa mereka mempelajari konsep-konsep aplikasi genetik tersebut. Satu langkah penting untuk meruntuhkan halangan yang menghalang pembelajaran bermakna daripada berlaku ialah dengan menentukan konsep-konsep yang sering difahami secara tidak tepat oleh murid.

Metodologi kajian ini terhad kepada penggunakan satu instrumen sahaja iaitu soalan ujian diagnostik dua-aras yang dibina oleh Tsui dan Treagust (2010) dan triangulasi dengan data-data lain tidak dijalankan. Walaupun dipercayai bahawa penggunaan ujian diagnostik dua aras bermanfaat sebagai alat untuk menilai pemahaman murid terhadap sesuatu konsep dengan berkesan namun penyelidik tidak dapat mencungkil kefahaman murid dengan mendalam. Cadangan kajian lanjutan ialah satu kajian kes dapat dijalankan supaya lebih banyak data kualitatif seperti data temu bual dapat dikumpulkan dan ditriangulasikan dengan dapatan ujian diagnostik dua-aras ini. Kajian kualitatif yang melibatkan temu bual berfokus amat sesuai untuk mencungkil kefahaman sebenar murid terhadap sesuatu konsep dan mengetahui cara penaakulan mereka dalam memahami sesuatu konsep. Seterusnya, penyelidik dalam bidang pendidikan biologi dapat meneroka mana-mana strategi pengajaran dan pembelajaran yang sesuai dengan kedudukan murid tingkatan enam sebagai pelajar pra universiti di samping dapat mengubah konsepsi mereka berkaitan konsep-konsep genetik.

E. KESIMPULAN

Kajian ini dijalankan terhadap satu kumpulan pelajar tingkatan enam di tiga buah sekolah sahaja, namun keputusan ujian diagnostik telah menunjukkan tahap kefahaman pelajar tingkatan enam dalam konsep genetik sangat rendah sedangkan konsep-konsep yang diuji adalah konsep asas genetik sahaja. Dapatan kajian ini juga membuktikan bahawa tahap kefahaman pelajar tingkatan enam perlu ditingkatkan supaya peratusan pelajar yang mempunyai miskonsepsi di peringkat universiti kelak dapat dikurangkan. Dengan itu, semakin ramai pelajar berminat untuk menceburi bidang-bidang profesional seperti perubatan, bioteknologi, veterinar dan lain-lain yang memerlukan asas genetik yang kukuh

Daripada dapatan kajian ini adalah dicadangkan agar guru-guru biologi tingkatan enam dapat membina soalan diagnostik dua-aras bertujuan untuk menilai kefahaman murid dalam konsep-kensep genetik dan konsep-konsep biologi yang lain. Penilaian dengan menggunakan ujian diagnostik dua-aras membolehkan guru menilai kefahaman murid dengan lebih berkesan (Kılıç & Sağlam, 2009). Apabila ujian diagnostik dua- aras ini digunakan dengan berkesan, ia dapat menyumbang kepada murid dalam membina pengetahuan yang mendalam tentang konsep-konsep sains (Treagust, 2006). Selain itu, guru-guru biologi tingkatan enam sewajarnya mengenal pasti pengetahuan sedia ada murid terlebih dahulu sebelum merancang strategi pengajaran genetik. Ujian diagnostik dua-aras yang diperkenalkan oleh Tsui dan Treagust (2010) ini boleh dijadikan sebagai panduan kepada guru-guru biologi tingkatan enam membina ujian diagnostik sendiri bertujuan untuk mengesan kefahaman awal murid sebelum memulakan pengajaran dan menguji semula kefahaman murid selepas pengajaran dijalankan. Strategi pengajaran dan pembelajaran mungkin perlu dipelbagaikan bersesuaian dengan keupayaan kognitif murid tingkatan enam misalnya strategi yang dapat mencabar pengetahuan sedia ada murid seterusnya membantu mereka membina pengetahuan sendiri dengan lebih bermakna.

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TRENDS OF RESEARCH METHODOLOGY OF THESIS IN VOCATIONAL EDUCATION YOGYAKARTA STATE UNIVERSITY

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Abstract

Research is the process of collecting information that aims to improve and develop knowledge through investigation. The expansion of science and technology depend on the progress of research. This indicates that the quality of research has great influence on the development of science and technology itself. One important point to produce high-quality research is a research methodology. The determination of research methodology must be based on criteria in accordance with the characteristics of the problems studied. This study aimed to describe trends regarding the use of student research methodology in Yogyakarta State University. This study is a descriptive study with a quantitative approach. Place of research is the Faculty of Engineering, Yogyakarta State University. The sampling technique used is proportional random sampling at 9 undergraduate programs of vocational education courses based on the year of manufacture thesis. The samples used were 75 reports of student thesis FT-UNY with every year is 15 reports from 2010 to 2014. Data collection technique used is the check list, observation, and additional data from the study of literature. The data analysis technique used is descriptive statistics. The research results showed that the trend of the use of the highest research approach was qualitative research approach in which the percentage was 49%. The research method frequently used was ex post facto method in which the percentage was 27%. Variables used in the study were 2 variables in which the percentage was 55%. The number of samples used were 30 -100 people in which the percentage is 54%. The sampling technique used was purposive sampling in which the percentage was 43%. Data collection technique used was a questionnaire in which the percentage was 49% and the analytical techniques used were descriptive statistical analysis techniques in which the percentage was 80%.

Keywords: research, methodology, vocational education, thesis, Yogyakarta State University

A. INTRODUCTION

Research in education is one of the most important activities. The function of the research is to answer a variety of current issues and challenges in education in accordance with the function and purpose of the study itself. The development of educational research is a key to successful education, so that the quality of educational research becomes points which are essential in order to improve the quality of education. To obtain a good quality of research results, the research must have clear objectives and focused so that the implementation of the

usefulness of research has practical and theoretical, in addition, the use of appropriate research methodology is expected to guide and direct the research process to achieve the objectives of the study presented.

Educational research has a very important role. For example, the study is expected to be solution-based education to solve problems in education. Especially in education, research is the discovery, verification, and development in general aims to improve the quality of education and to answer / solve various problems faced in planning, process, device, results, outcomes and issues. According to John W. Creswell (2008) states that "research is important for three reasons; (1) research adds to our knowledge, (2) research improves practice, research informs policy debates". It is clear that research into one of the important activities that aim to increase knowledge, improve the quality of education and serves as a conduit of information is important as a basis for decision making for policy makers in education. Therefore, the advancement of education research is essential to support the progress and development of the quality of education.

One of important parts of the process in education research is the use of research methodology. Methodology research has a very important role to guide the research process to obtain the right information, appropriate, and accountable. Using appropriate research methodology is the key to finding the actual facts and events that exist in the field. Errors in the determination of research methods can reduce the quality and confidence in the research itself. Researchers should really pay attention to research methodology in accordance with the characteristics of the problems to be studied, so as to maximize the research process. According to Singh (2006), states that "the methodology consists of procedures and techniques for conducting a study. Research procedures are of little value unless they are used properly". This indicates that the methodology of the study consisted of research procedures and techniques according to the characteristics of the problems studied. Besides Singh asserted that the research procedures will be useless if not used properly, so the planning procedure should really research carried well according to applicable regulations. "the methodology consists of procedures and techniques for conducting a study. Research procedures are of little value unless they are used properly".

According to David E. Avison (2005) stated that "the methodology is interpreted by users / analysts: The users/ analysts affect the perception of the situation and they interpret the methodology. This in effect is highlighted by professional analysts and users, where cultures, education, background, and so on, will greatly effect the interpretation of the methodology itself and the way it is used". The definition explains that the use of the methodology is based on the will of the researcher, in which perceptions, educational background, culture, and so will affect the interpretation in decisions about how and what methodology will be used in research. This is very important because the quality of research is influenced by the use of the research methodology used by the researchers. Also according to Singh (2006) stated that "The role of the methodology is to carry on the research work in a scientific, and valid manner". This indicates that the role of research methodologies make more scientific and precise. One example that has the role of education in the field of education research is vocational education.

Vocational education is education that has an important role in directing learners to develop applied skills, adapting to the specific field of work and to create job opportunities. Vocational education, especially bachelor for teacher education aims to score for vocational high school (SMK). This education level has strategic position to produce professional educators in the field of teacher in charge of educating and directing learners to vocational skills in accordance with their respective areas of expertise. In the eighth semester, students of bachelor in vocational education are required for a research and study a problem that is intended for the final project or thesis to produce an important information and to find, answer, or develop a particular topic in the vocational world.

The role of student thesis results in vocational education proved to be good for improving and developing the quality of vocational education, but the fact, there is still a lot of research that has a quality that is not appropriate for the use of research methods, sampling techniques, data collection methods, and data analysis techniques that are less appropriate. This problem is felt directly by the researchers who made observations on the results of the final project/ thesis vocational education student state university of Yogyakarta. Researchers find some unique and interesting facts to be discussed about the different uses of trend research methodology.

B. LITERATURE
1. Why is Research Important?

Borg & Gall (1983), stated that "two distinctions are apparent in these definitions of science and research. Research and science both are concerned with the discovery of facts, but in science the fact are collected to test or develop theory. Scientific investigation implies the collection of facts about basic processes in nature, while research applies facts that will serve a useful purpose. Science implies a focus on basic research, whereas research implies a focus on applied research".

Creswell (2008) defines "research is a process of steps used to collect and analyze information to increase our understanding of a topic or issue". Similarly, Neville (2007) explains that "research is process of enquiry and investigation; it is systematic, methodical and ethical; research can help solve practical problems and increase knowledge". The statement addressed Leddy (1980) that "research is a confusing term because it has so many meanings that we must understand precisely what it means in a scholarly sense". Based on the definition above it can be concluded that the research is the process of collecting and analyzing the data with appropriate methods to increase knowledge and solve problems that are difficult to understand.

According Vockel (1983), "research is performed at four levels". In this level there is a hierarchy that must be taken researchers started from the lowest level. These levels include: Level I "What is happening?"; Level II "What is Causing this to happen?"; Will the same thing happen under different cırcumstances? "; and Level IV "Is there some underlying principle at work?". In order to more easily understand these levels, the simple explanation is that Level I is the pre-research (research not all) to Consist of finding good ways to measure what is happening, Level II is finding new method is the caused the improvement, Level IV is

really an extension of level III with the results generalized at a conceptual level and much father beyond the original situation.

Research is very important in improving the quality of one's knowledge, especially in obtaining a confession. Neville (2007) explains "research can be one of the most interesting features of any degree course as it offers you a measure of control and autonomy over what you learn". If we refer to in " Tridarma Perguruan Tinggi " which has an obligation, among other things: carry out education, research and community service.

According to Walberg, Schiller, and Haertel in Borg & Gall (1983), research can improve the quality of education by producing two different things that "a positive effect on an educational outcome (e.g., student academic achievement), and negative result was a finding that the method or condition had a negative effect on a desirable educational outcome. In research which carried out by Walberg (In Borg & Gall, 1983), there were 25 results of instructional time on student learning, Ninety-six percent of the results demonstrated a positive effect; only 4 percent of the results demonstrated a negative effect.

Based on that statement it is known that to establish a high quality of education that can be affected by the research activities. The activity was initiated by the Higher Education Evaluation of three responsibilities, initiated by the lecturer to make a self-evaluation related to all activities performed well on the field; (1) education and teaching, (2) research and development of scientific work, (3) service to the community. In his role as executor of higher education, universities should provide education and teaching in order to produce graduates who are competent and character of the nation.

In the next task, the college should be able to do research that is able to establish, develop, and discover new knowledge (Sugiyono, 2013). Another task that must be carried by the college is doing community service in order to obtain factual issues facing society. If combined into a scheme will look like in the image below:
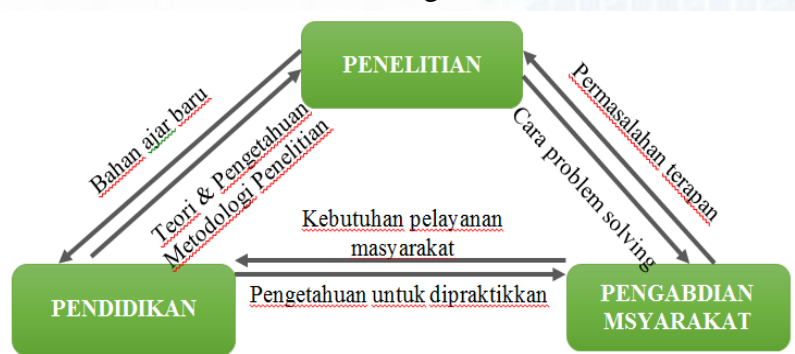
Figure 1. Relations Research, Education, and Community Services (Sugiyono, 2013)

According to Law No. 12 Year 2012 on colleges, that there are three levels of education in the college is as follows:
2.1. Undergraduate program is an academic course which is intended for graduates of secondary education or equivalent so as to practice the knowledge and technology through scientific reasoning.

2.2. Master program is intended for academic education or equivalent graduate with undergraduate program so that they can practice and develop Science and / or Technology through reasoning and scientific research.

2.3. Academic education doctoral program is intended for graduates of master degree or equivalent so as to find, create, and / or to contribute to the development and practice of science and technology through research and scientific reasoning.

The depth and breadth of the Thesis can refer to the Indonesian National Qualifications Framework (KKNI),students are graduating with a bachelor's degree at Level 7, namely: (1) capable to plan and manage resources under its responsibility, and comprehensively evaluate works by utilizing science and technology to generate measures of strategic development of the organization, (2) capable to solve problems through scientific field monodisipline approach, (3) capable to conduct research under the responsibility of expertise.

Figure 2. Research Level based on KKNI

According to "Kamus Besar Bahasa Indonesia (2008)", bachelor are undergraduate degrees that achieved by someone who has completed his education at the college level last. Based on the picture above, it can be seen that the particular received a bachelor's degree are able to practice the knowledge and technology through scientific reasoning. It means the ability to be possessed minimal S1 students are able to apply theoretical and practical knowledge of a higher level.

The end of the period of study in college students will culminate in final assignment in thesis. The final task is usually reached within 6 credits. According Muslich (2010), the thesis is that scientific papers prepared by students as one of the requirements of the final release of the program a bachelor's degree (S1). Writing a thesis is perhaps the most daunting part of graduate education. A thesis marks the culmination of thousands of hours of training, research, and writing, and it represents you for years after graduation (http://www.awc.metu.edu.tr/handouts/Thesis_Writing.pdf).

2. What is the Research Methodology?

Methodology is derived from the Greek "metodos" and "" logos, the word consists of two syllables of "metha" which means through or pass and "hodos" which means path or way.

Method means a road which traversed to reach the destination. Logos means science. While Re means again and again and 'Search' to find out means something. According to Singh (2006), the role of the methodology is to carry on the research work in a scientific, and valid manner. The method of research provides the tools and techniques by which the research problem is attacked. The methodology consists of procedures and techniques for conducting a study. Research procedures are of little value unless they are used properly. The tools and techniques will not get the work done. The proper use of research method must be learned by the researcher.

Basically the research method is divided into two, namely quantitative research methodologies and qualitative research methodologies (McMillan & Schumacher, 2001). Furthermore, Creswell (2009) adds that in the study, the method used consists of three approaches: quantitative, qualitative, and mixed methods. There are 4 paradigms in research methodology, namely: 1) positivism with quantitative methods used by way of deductive logic; 2) post positivism with qualitative methods used by way of deductive logic; 3) pragmatism with the method used qualitative and quantitative way of inductive and deductive logic; and 4) qualitative methods used constructivism by way of inductive logic. (Takashori & Teddlie (2010). Subsequently Scott (2001) simplifies, "some methodological strategies (experimental, ex post-facto, correlational and survey) have been designated as quantitative and others (ethnography and condensed case study) as qualitative. Some methods (structured interviews, postal questionnaires, standardized tests of performance and attitude inventories) have been categorized as quantitative, while others (unstructured interviews, participant observation, diary-keeping) have been categorized as qualitative".

Methodological interest in the design, process and outcomes of educational research requires that readers do more than draw conclusions on the basis of data that is provided as evidence, since it is the researcher's interpretation of what is worth knowing, how to collect the knowable, and then to interpret it, that is a core aspect of what becomes known as 'truth' (not with standing that such readings will be interpreted differently in relation to truth(s)) (Scott & Marisson, 2005). According to Creswell (2008), in conducting research there are some basic steps that must be passed by the researcher, namely: 1) identifying a research problem; 2) reviewing the literature; 3) Specifying a purpose for research; 4) collecting the data; 5) analyzing and interpreting the data; 6) reporting and evaluating research. The research methodology is one of the most important part in the research. Where in the research reports generally consist of key points such as: Approaches and Methods, Variables, Data Sampling Techniques, data collection techniques, and data analysis techniques.

3. Research Methods and Approaches

Based on the underlying approach, can be broadly divided into two kinds of research, namely quantitative and qualitative research. Both of these approaches have assumptions, goals, characteristics, and procedure, different. However, the problem is not with the advantages or weakness of each approach, but the extent to which researchers are able to be responsive by developing an appropriate design for the study (Department of National Education, 2008).

The research method is a scientific way to obtain the data for a particular purpose and usefulness. In the research method consists of selected lots of ways of doing research. Different approaches are used to answer different questions (Pring, 2000). Fraenkel & Wallen (2007) adds all these approaches suggest possible ways to proceed, but the answers they provide are not always reliable. This means that the error in determining the method can result in effectiveness and efficiency of research. Errors in effectiveness is less precise methods used to treat problems in the research problem. Errors in efficiency that use methods that do not see the actual field conditions. The proper use certainly can solve problems in research with fast, precise, and clear.

4. Variable Research

According to Ary (2010), "A variable is a construct or a characteristic that can take on different values or scores". Additionally Fraenkel (2007) explains that "a variable is a concept-a noun that stands for variation within a class object". The variables in the study include a single variable, independent variable, dependent variable, moderator variable, and extraneous variables. Independent variables are those that the researcher chooses to study in order to assess their possible effect on one or more other variables. And the variable that the independent variable presumed to affect is called a dependent.

5. Sampling Technique

Sampling technique is a technique to take sample which is taken in the population. This sampling technique is a variety ranging from probability sampling include: simple random sampling, stratified random sampling, and cluster sampling, whereas the nonprobability sampling techniques include sampling: systematic sampling, quota sampling, purposive sampling, saturation sampling, and snowball sampling. This sampling technique is influenced by the method used and the error level is used when the method used is quantitative. The level of precision may be increased by adding the number of samples, the fault may be reduced if the number of samples plus (Kerlinger, 1973).

6. Data Collecting

The other is part of the research methodology of data collection techniques. This technique is very involved at all in the study because this technique is used to collect data and research information. The collection of data is the accumulation of specific evidence that will enable the researcher to properly analyze the results of all activities by his research design and procedures (Singh, 2006). Data collection techniques common in college students during final thesis assignment was interviewing, questionnaires, observation, checklists, surveys, tests, and so forth. The next data collection techniques will be used in the next stage of the methodology of data analysis techniques.

7. Analysis of Data?

The last part of the research methodology is a data analysis technique. This technique is used to process the data obtained by collecting data on the sample / population in statistical

form. Best (1981) defines "statistic is a body of mathematical techniques or processes for gathering, organizing, analyzing, and interpreting numerical data". The data analysis technique commonly used by students S1 is descriptive statistical analysis techniques and inferential statistical analysis. Data analysis techniques can also be used in research tests, for example: testing the validity, reliability, correlation, regression, transferability test, test transferability, conformability test, test for normality, linearity test, t-test, and so on.

Quality of research most Commonly Refers to the scientific process encompassing all aspects of study design; in particular, it pertains to the judgment regarding the match between the methods and questions, selection of subjects, measurement of outcomes, and protection against systematic bias, nonsystematic bias, and inferential error (Boaz & Ashby, 2003 in Brief Technical NCDDR, 2005) . The quality of research is highly dependent points methodology described above. High weight if the level of research that examined the students included in the category of complex / difficult, such as: the methods used tend to be on a combination of methods, populations and samples used are numerous and widespread, more mature methods of data collection in the results when using in-depth interviews, and analysis techniques data up to the concluding stage for the population. Thus, "all of these researchers serve as models for all of us and, in their unique ways, have made our profession a better one"(Lodico, 2006).

8. Vocational Education

Clarke & Winch (2007) defines that "vocational education is confined to preparing young people and adults for working life, a process Often Regarded as of a rather technical and practical nature". According to Law No. 20 of 2003, Section 15 about National Education System stated that "Vocational education is higher education that prepares learners to have a job with a particular expertise applied the maximum equivalent degree program". According to Wenrich & Gallaway argued that "vocational education might be defined as a specialized education that prepare the learner for entrance into a particular occupation or family occupation or to upgrade employed workers". Based on the above description, it can be concluded that vocational education is education that prepares young men / students to enter certain jobs equivalent to a degree program. Vocational education and vocational education has a slight difference in the organization of education was held. According to Law No. 20 of 2003, Section 15 about the National Education System explained that "vocational education (kejuruan) is secondary education that prepares students primarily for work in a particular field". From the definition above we can conclude that vocational education is organized by the higher education and vocational education (kejuruan) organized by secondary education.

One of vocational education institutions are constantly developing their science especially in the field of educational research and evaluation is UNY, which is one of Lembaga Pendidikan Tenaga Keguruan (LPTK). Each graduating student graduation periods each year specifically to increase engineering students. This means that each graduation period is every 3 months to make the final project thesis students more and more. When reviewing the number of graduates would arise the question, whether they graduate with a research report legitimate / valid in accordance with the guidelines that have been made or

because of the simple thesis work to accelerate the study period or the period of study the student is going to end up (drop out). If we follow the above statements that describe the quality of student research reports each year would lead to a tendency or trend and characteristics of the study each year. This is due to the demands of the development of science and technology that gave birth to new problems which need different settlement.

C. METHODOLOGY

This study is a descriptive study with a quantitative approach. Place of research is the Faculty of Engineering, Yogyakarta State University. The sampling technique used is proportional random sampling at 9 undergraduate programs of vocational education courses based on the year of manufacture thesis. The samples used are 75 reports of Student Thesis FT-UNY with every year is 15 reports from 2010 to 2014. Data collection technique used is the check list, observation, and additional data from the study of literature. The data analysis technique used is descriptive statistics. Besides reference books related to study problems in the refinement of an information supplement.

D. FINDINGS

1. Trend of Methodology and Research Methods in Thesis Student
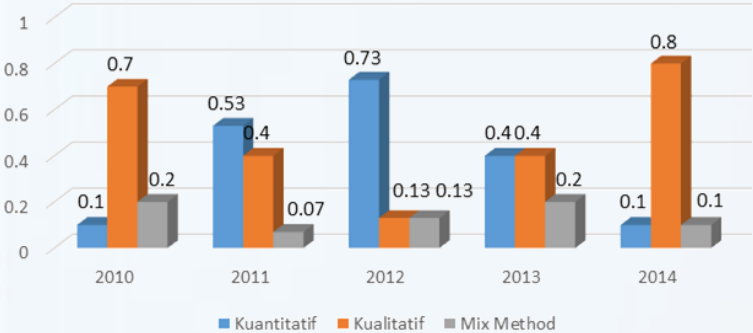
Figure 3. Trend of Methodology and Research Methods in Thesis Students

Based on the above histogram, it can be seen that the trend of 2010 research approach used by students of the Vocational Education S1 in UNY is a qualitative research approach with a score of 0.7 or 70%. In 2011 the trend on the research approach is the student used a quantitative research approach with a score of 0.53 or 53%. In 2012 the trend on the research approach is the student used a quantitative research approach with a score of 0.73 or 73%. In 2013 the trend on the research approach is the student used quantitative and qualitative research approaches with a score of 0.4 or 40%. And in 2014 the trend of the research approach is qualitative research approach students with a score of 0.8 or 80%.Mean score of each indicator research approach is a quantitative mean score was 0.37; qualitative mean score of 0.49; and a mean score of 0.14 mixed method. The results of the mean can be seen that the highest mean score of 0.49 mean qualitative scores.

To see what research methods in the approach can be seen in the following figure 04. Based figure 4, it can be seen that in 2010, the trend on the research method used by students

of the Vocational Education S1 in UNY is PTK (Classroom Action Research) with a score of 0.4 or 40%. In 2011 the trend on the research method used by students is experiment research methods and PTK (Action Research) with a score of 0.27 or 27%. In 2012 the trend on the research method used by students is ex post-facto research method with a score of 0.54 or 54%. In 2013 the trend on the research method used by students is ex post facto research method with a score of 0.4 or 40%. And in 2014 the trend on the research method used by students is PTK (Classroom Action Research) with a score of 0.4 or 40%. The results of the analysis of the mean calculations showed the highest average is the average ex post facto research method with a score of 0.27.
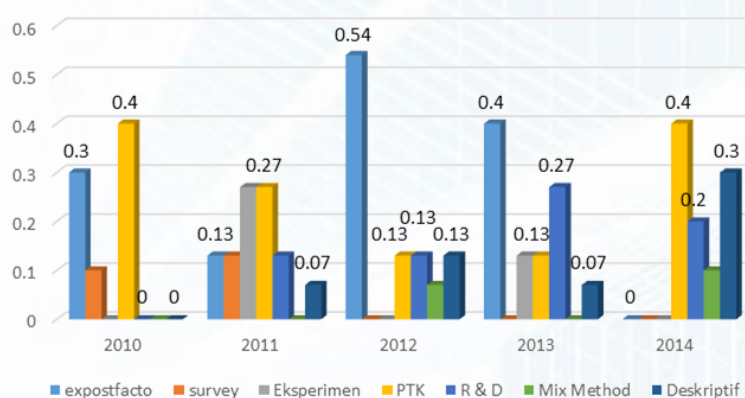
Figure 4. Trend on the Research Method Used by Students in Thesis

2. Development of Research Variables in Thesis Student
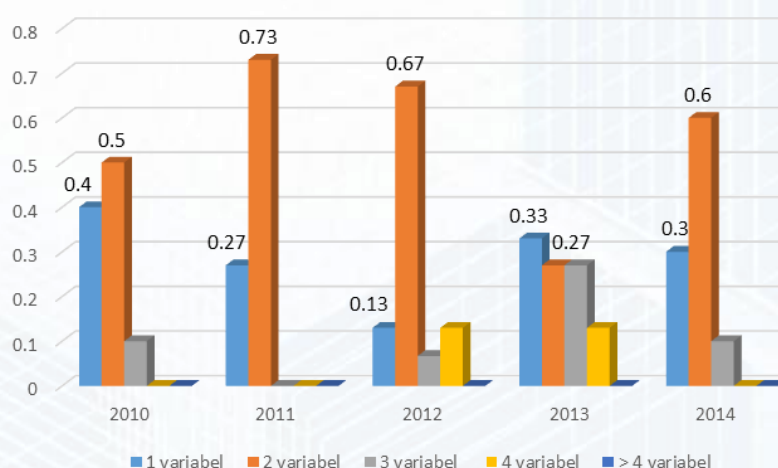
Figure 5. Development of Research Variables in Thesis Student

Based on figure 05, it can be seen that in 2010, the trend number of research variables used by students in the Vocational Education UNY S1 is 2 variables with a score of 0.5 or 50%. In 2011 the trend on the number of variables used was 2 study variables with a score of 0.73 or 73%. In 2012 the trend on the number of variables used was 2 variables research student with a score of 0.67 or 67%. In 2013 the trend on the number of variables used was

the first study variables with a score of 0.33 or 33%. And the 2014 trend of the number of variables used was 2 variables of the study with a score of 0.6 or 60%. The results of the analysis of the mean calculations showed the highest average is the average number of variables of the study 2 (two) with a score of 0.55.

3. Development of Sample and Sampling Technique Research in Thesis Student
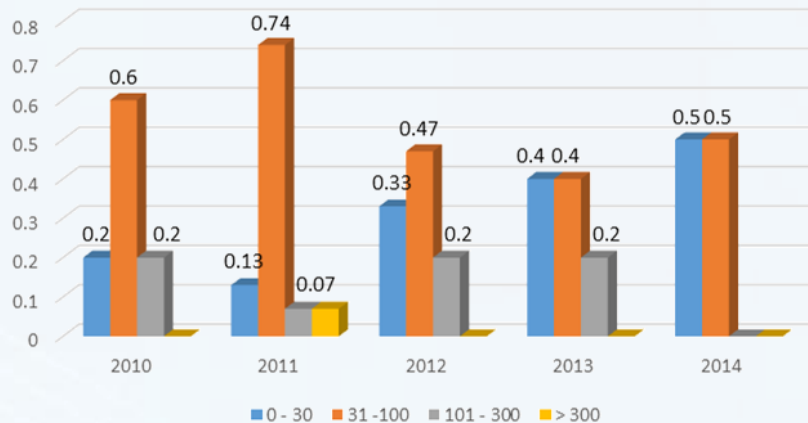
Figure 6. Development of the Number Sample Research in Thesis Student

Based on figure 06, it can be seen that the trend of the use of samples used in each year tends to use the samples from 30 to 100 samples are in the Year 2010 (score of 0.6 or 60%), in 2011 (score of 0.74 or 74%), year 2012 (score of 0.47 or 60%), in 2013 (score of 0.4 or 40%), and 2014 (a score of 0.5 or 50%). While there are similarities in the use of samples in 2013 (score of 0.4 or 40%) and 2014 (a score of 0.5 or 50%) the number of samples used is less than 30 samples. The results of the analysis of the mean calculations showed the highest average is the average use of samples between 30-100 samples with a score of 0.54. To find a sampling of research used in the study Vocational Education UNY students S1 can be seen in the image below:
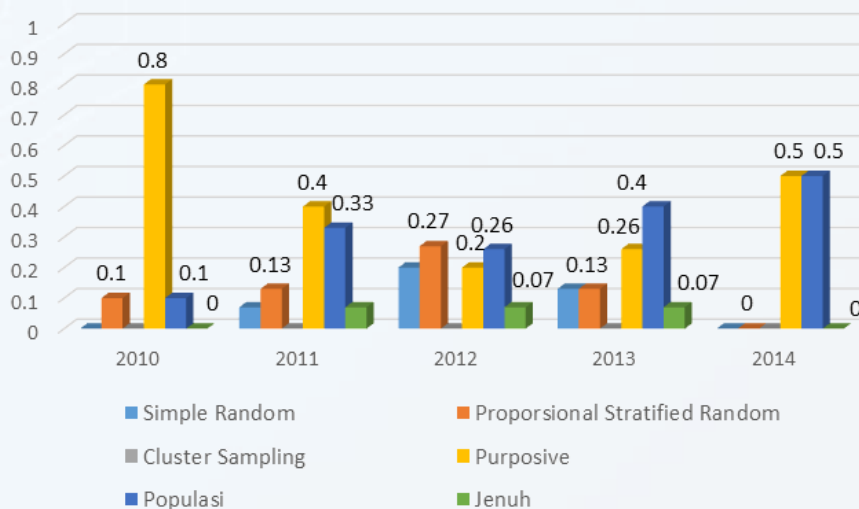
Figure 7. Development of Sampling Technique Research in Thesis

Based on figure 07, it can be seen that in 2010, a trend research sampling used by students of the Vocational Education in UNY S1 is purposive sampling with a score of 0.8 or 80%. In the Year 2011 trend research sampling is purposive sampling with a score of 0.4 or 40%. In 2012 the trend on research sampling is proportional stratified random sampling with a score of 0.27 or 27%. In the year 2013 the trend of research is sampling a population sample with a score of 0.4 or 40%. And the 2014 trend of research is purposive sampling and sample populations with a score of 0.5 or 50%. The results of the analysis of the mean calculations showed the highest average is the average sampling technique using purposive sampling with a score of 0.43.

4. Development of Collecting Data in Thesis Student
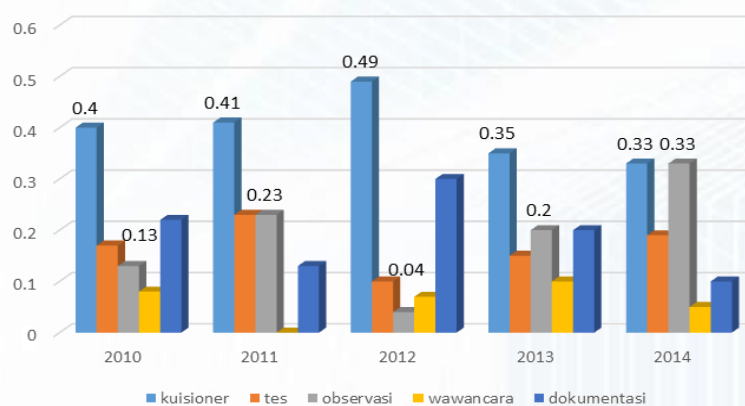
Figure 8. Development of Collecting Data in Thesis Student

Based on figure 08, it can be seen that in 2010, collecting the data was a questionnaire with a score of 0.4 or 40%. Collecting the data in 2011 is a questionnaire with a score of 0.41 or 41%. Collecting the data in 2012 is a questionnaire with a score of 0.49 or 49%. Collecting the data in 2013 is a questionnaire with a score of 0.35 or 35%. And in 2014 collecting the data was a questionnaire with a score of 0.33 or 33%. The results of the analysis of the mean calculations showed the highest average is the average of data collection techniques using a questionnaire / questionnaire with a mean score of 0.49.

5. The development of Data Analysis Research in Thesis Student
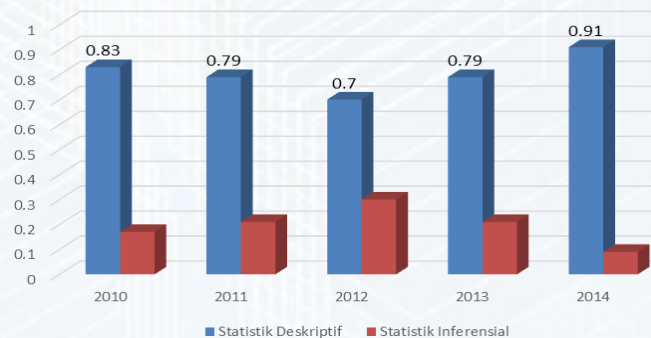
Fig 09. Development of Data Analysis Research in Thesis Student

Based on figure 09, it can be seen that in 2010, the trend data analysis is descriptive statistic. In the Year 2010 (score of 0.83 or 83%), in 2011 (score of 0.79 or 79%), in 2012 (score of 0.7 or 70%), in 2013 (score of 0.79 or 79%), and in 2011 (score of 0.91 or 91%). The highest rates of data analysis is descriptive statistical analysis techniques with a score of 0.80.

E. DISCUSSION

Based on the results obtained in the study, the discussion of which will be discussed in this report is the amount or percentage of the highest score. This score is based on the number of checklists are filled divided by the total number of each variable under study (in this case the approach and methods of the study, the number of samples used, sampling techniques, data collection techniques, and data analysis techniques).

The highest rates were obtained in the calculation of the mean trend of the chosen research approach Vocational Education student S1 UNY is a qualitative research approach. It is clear that in 2010 and 2014 leaning towards a qualitative approach. This is because many more students to research and action research and development. This trend arises because education research-oriented problem-solving class can use the in-depth qualitative approach. Other data are supported, based on the results of the study found that the widely used research methods students over a period of 5 years is ex post facto method. This method is widely used by reason of preparation and research carried out more easily and quickly in the analysis calculations. The use of this method in 2012 with the highest score of 0.54.

Trends in the use of two (2) pieces of research variables was still attached to all the students study Vocational Education UNY. It gives students the thinking paradigm settlement products quickly regardless of the number of variables used. The use of research variables over 2 variables used in the Year 2010 and Year 2014. If reading a variable direction of research in the next year, most likely designed the study variables will study at least 3 variables.

The next trend is related to the number of samples used in the student thesis student thesis. Trends indicate that use a lot of samples used between 30 to 100 people in the sample population. This study is more likely due to the method of Action Research in which each field data collection only take one or two classes of data with a minimum number of students per class of 20-36 students / class. If associated with data collection techniques, showed that the trend of a lot of data collection using questionnaires. This is because the questionnaire is an assessment of attitudes and opinions. This trend is seen, that the tendency of UNY vocational education students are collecting data using questionnaires.

Trends in student thesis research from Year 2010 to 2014 tended to descriptive statistical data analysis techniques. This is because this statistical technique is the basis for expressing the mean, median, mode, and so on so that it can be seen as a simple data analysis. This trend was elected due consideration of students in terms of convenience and practicality in data analysis. However, if the results of these studies used for the population, then the student must perform inferential data analysis techniques.

F. CONCLUSION

Trends in student thesis research trends from year 2010 - 2014 can be concluded that the tendency of research methodology used was the qualitative approach. The method used in the ex post facto inclined. The number of variables used 2 variables of research and data collection techniques are widely used questionnaire. And data analysis techniques are widely used descriptive statistics.

Based on these conclusions, the obtained recommendations for improving the quality of student thesis research, as follows: (1) the methodology used is mixed method; (2) the number of variables that are used more than 2 variables, (3) data collection techniques that are used to support each other and the number of samples used on a larger scale, and (4) data analysis techniques are used more weight.

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PENGESANAN TINGKAH LAKU AGRESIF MENCURI BERASASKAN POLIGRAF (LIE-DETECTOR) DALAM KALANGAN REMAJA JUVANA BERESILIENSI RENDAH DI MALAYSIA

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Abstract

Kajian ini ialah untuk mengesan tingkah laku agresif iaitu mencuri berasaskan poligraf (lie-detector) dalam kalangan remaja juvana yang beresiliensi rendah di Malaysia. Tingkah laku agresif boleh dianggap sebagai salah satu masalah yang kritikal dalam sesebuah masyarakat (Baumeister, Bushman & Campbell, 2000) dan (Anderson, 2004). Flight dan Forth (2007) berpendapat remaja agresif sukar untuk meluahkan maklumat secara menyeluruh dan mereka bercenderungan untuk berahsia kerana khuatir akan ancaman terhadap mereka sendiri. Peterson et al. (2007) menjelaskan remaja agresif yang menggunakan teknik lapor kendiri (self-report) kebiasaannya tidak bersikap jujur dan data yang diperolehi berkemungkinan kurang tepat atau kurang manifestasi dari segi pendedahan diri (self-disclosure). **Soalan kajian** adalah "Sejauhmanakah perubahan fisiologikal tingkah laku agresif dalam kalangan remaja juvana berkategori resiliensi rendah yang tinggal di salah sebuah sekolah juvana terlibat disahkan benar atau tidak dalam kes mencuri dengan menggunakan poligraf?" Dari segi **literatur**, kajian kes yang dilakukan oleh Adler (1992) mendapati sesetengah remaja mengalami gangguan Asperger di mana wujud hubungan antara yang schizoid psikopati dalam masa kanak-kanak dan kelakuan-kelakuan mencuri yang berlaku di zaman remaja. **Metodologi** kajian melibatkan penggunaan poligraf bagi menjawab soalan kajian di atas. Secara operasionalnya, poligraf adalah peralatan yang digunakan untuk mengesan, memeriksa dan juga merekod perubahan fungsi fisiologi remaja juvana seperti kadar denyutan jantung dan pernafasan, pemeluhan kalenjar (skin resistance) dan tekanan darah (blood pressure) yang merupakan reaksi-reaksi fisiologi tidak terkawal yang wujud pada badan remaja juvana tersebut terhadap soalan-soalan yang dikemukakan kepadanya oleh pemeriksa poligraf dalam ujian poligraf. Validiti poligraf ialah 98% berasaskan pemeriksa yang berketrampilan (Furedy & Heslegrave, 1988). Populasi kajian terdiri daripada 50 lelaki yang menjalani hukuman tahanan semaksimum selama tiga (3) tahun di salah sebuah sekolah juvana di Pulau Pinang dan yang diskrinkan ialah seramai lima (5) remaja ataupun bersamaan 10 peratus (Bell, 1993) mempunyai tahap resiliensi yang terendah dan dipilih untuk pemeriksaan poligraf tersebut. **Dapatan** membuktikan poligraf telah mengidentifikasikan "Significant Responses" (SR), iaitu remaja juvana terlibat gagal lapan (8) kali dan lulus tujuh (7) kali dalam pemeriksaan tingkah laku mencuri. Juga, alat ini juga mendapati remaja juvana terlibat bertingkah laku jujur dan didapati tidak mencuri dalam pemeriksaan poligraf dari bulan Jun hingga Disember 2013 semasa berada dalam tahanan. **Cadangan** daripada kajian ini antaranya ialah perlu

adanya satu sistem tertentu yang dapat mencegah dan memantau tingkah laku remaja juvana di tempat tahanan mereka dengan penggunaan poligraf.

ANALYSIS MISCONCEPTIONS ON SYSTEMS OF LINEAR EQUATIONS IN TWO VARIABLES IN SMPN 14 BENGKULU

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Abstract

This research used a qualitative approach with descriptive methods. The phenomenon examined in this research is regarding the shape and the cause of misconceptions in Systems of Linear Equations in Two Variables (SLETV). The main instrument in this study is that researcher guided by data collection equipment or facilities such as diagnostic tests, interviews, and documentation. Thus, this is found that the average of misconceptions percentage on SLETV of diagnostic test results experienced by students is 68.19 %. Interviews in this study conducted on each concept of SLETV on diagnostic tests by taking one of several students. The shape of misconceptions found in the form of the assumption that Linear Equations in Two Variables (LETV) is a linear equation with the same number of variables as much as two; LETV must have two variables and the variables do not need to be seen as the similar variable, if there are two variables equally, it is still counted two; determine an equation is Linear Equations in One Variable (LEOV) or LETV is seen from the coefficients in the variables; the assumption that "pq" is equal to the variable p and q, so that the SLETV still have two variables, namely p and q. This happens because the students are confusion in differentiating definitions/examples of concepts and those which are not the concept. Thus, to overcome misconceptions, the teacher attempted to perform a cognitive conflict strategy in the form of counter examples of SLETV.

Keyword: misconceptions, systems of linear equations in two variables (SLETV)

A. INTRODUCTION

Primary and secondary education curriculum includes mathematics as one of the subjects that must be studied in Indonesian schools (Kemendiknas, 2003). Characteristics of the subjects mathematics is an abstract object, therefore many students have difficulty in learning mathematics. Nurmaini (2010) explains that misconception is one of the difficulties in learning mathematics. Students can not grasp the concept correctly, so they still face some difficulties in solving mathematical problems. A longstanding misconceptions and lack of understanding of the basic concepts in mathematics are identified to be one of causes of math learning difficulties (Daryanti, 2007).

Mathematics is interrelated learning materials and sustainable. As a result, an incorrect understanding of the concept on a particular matter will continue to the next matter. The importance of knowing the shape and the cause of misconceptions to facilitate the

process of understanding a concept of the next material. Systems of Linear Equations in Two Variables (SLETV) is the material that will be used in the next course materials and an advanced material of Systems of Linear Equations in One Variable (SLEOV). Information obtained from mathematics teacher SMPN 14 Bengkulu, explained that SLETV is one subject that is difficult to be learnt by the students. In the implementation of learning math on this subject, students often have misconceptions in making and completing mathematical models of the problems associated with SLETV. Even though the understanding of the concept of SLETV is very useful for studying the some essential subjects such as Linear Functions and Linear Program.

Based on the explanation above, the objectives of this research are: (1) to describe the shape of misconceptions that may occur in SLETV by SMPN 14 Bengkulu students, (2) to describe the cause of misconceptions that may occur in SLETV by SMPN 14 Bengkulu students.

B. LITERATURE REVIEW

There are many definitions of "concept" explained in many books of psychology and and education. Some definitions emphasize on the nature, characteristics, common attributes of objects or events with the same characteristics identified in the same category and labeled or a similar name for the concept. The concept of learning is learning about what something really is. The concept can be viewed as an abstraction experience involving examples of the concept of something (Widdiharto, 2008). For example, the concept of "number" is not merely taught by defining the numbers. Of the learning experience count, children understand the meaning of numbers. They can differentiate the categorization of numbers.

After learning about a concept is done, the possibilities that can happen is not failed to understand the concept, vaguely understand the concept, soon completely forgotten or even partially forgotten the learned concept. That means that every single person has the difference capacity to understand the concept. The right and true interpretation of the concept is defined as the conception, but when the interpretation goes wrong, it is called as the misconceptions (Berg in Adisendjaja, 2007: 4). Misconceptions can be interpreted as a conception which is not in accordance with the scientific understanding or definition accepted by scientists (Alexander, 2008). Students' misconceptions can be obtained through a learning process on previous learning experience including education.

SLETV is one of the compulsory subjects in the concept of learning in Indonesia (Kemendiknas, 2006). Many concepts are related in SLETV, such as the concept of variables, coefficients, constants, equations, etc. However, the concepts SLETV studied were: (1) Linear Equations in One Variable (LEOV), which is a kind of mathematical equations with variables, expressed in the form of $ax = b$ or $ax + b = c$ with a is the coefficient, a and b is a constant; $a \neq 0$; and x is variable (Agus, 2008; Nuharini & Wahyu, 2008); (2) Linear Equations in Two Variables (LETV), which is a mathematical equation with two types of variables, expressed in terms of $ax + by = c$ with $a, b, c \in \Re$; $a, b \neq 0$; and x, y is a variable (Agus, 2008; Nuharini & Wahyu, 2008); (3) SLETV, which is the mathematical

equations that more than one form of a system with two types of variables rank one and has a set completion (Agus, 2008).

C. METHODOLOGY

This research used a qualitative approach with descriptive methods. The phenomenon examined in this research is regarding the concept and the cause of misconceptions in SLETV. The subjects were eighth grade students at SMPN 14 Bengkulu who have been categorized as low achiever students in mathematics subject, and they still have motivation and interest in learning mathematics. The number of research subjects was taken based on students' records, information, and consideration of teacher on the mathematics subject. Thus, 36 students were chosen as the research sample and they were taken from three different classes. To accurately determine the shape and the cause of misconceptions committed students in understanding the concepts of SLETV, then the subject is taken from several students who were incorrectly answer the items based on the rest it of "paper and pencil" technique.

The main instrument in this research is the researcher her self who is guided by the data collecting equipment or facilities such as diagnostic tests, interviews, and documentation. Diagnostic tests to test the validity and reliability before being tested to research subjects. The form of the test is a short description test, so that the misconceptions when the students do the problems can be diagnosed clearly. Interview on this research done on each concept of SLETV existing material in diagnostic test questions by taking several students. Documentation used in this research uses the form of images and writing documentation. All events during the research are documented in the form of films, photographs, or sound recording in order to make the result of research to be more credible (Sugiyono, 2010).

The data collected will be analyzed with the following steps: (1) Check the students' answers, tabulate the correct and incorrect answers then describe the results obtained from the student's work, (2) Analyze the answers of students based on the description of the results of the percentage of incorrect answers to obtain information about misconceptions students in understanding a concept, (3) Determine interviewees subject as much as some students for every matter pertaining to a concept, where they have incorrect answer, (4) Perform triangulation techniques to data that have been obtained, (5) Determine the shape and look for the cause of students' misconceptions conducted through interviews and compared with the results of diagnostic tests and documentation (triangulation techniques).

D. FINDINGS

The average percentage of misconceptions in SLETV based on the results of diagnostic test experienced by students is 68.19%. Furthermore, the interview was done on each concept of SLETV on diagnostic test by taking some students who incorrect answer each item on this test. Thus, subject interviewees were only 17 people from 36 research subjects diagnostic tests, and they have answered the questions on their own diagnostic tests. The questions are posed to each student interviewed vary depending item incorrect

answer. The subject of interviewees is called Respondent (R) and had been named based on the serial number.

Tentukan persamaan berikut termasuk PLSV atau PLDV. Berikan alasan berdasarkan konsepnya!

14. $2b + 3 - 5b = 0$

> *Jawaban:*
>
> $2b + 3 - 5b = 0$ adalah PLSV, karena sesuai konsep memiliki satu variabel, yaitu b.

Figure 1. The Question and Answer Key of Number 14

Jawaban:

☼ PLDV, karena mempunyai 2 variabel yaitu b di 2 dan b di 5

Figure 2. Incorrect Answer Done by (R-5)

The question in figure 1 is related to the concept of LEOV. The incorrect answer commonly happens are being not able to determine and to provide the exact reason that the equation on the matter included in LEOV. The shape of mistake is the assumption that there is equality in the matter of 2 variables, namely the variables in 2 and the other variables in 5. According to (R-5), variable of b in 2 and variable of b in 5 are the same. Only just a different position, so that the variable still computed exist 2.

Tentukan persamaan berikut termasuk PLSV atau PLDV. Berikan alasan berdasarkan konsepnya!

15. $ak + bl = m; k, l \in \Re$

dimana: a dan b adalah koefisien; k dan l adalah variabel; dan m adalah konstanta.

> *Jawaban:*
>
> $ak + bl = m; k, l \in \Re$ adalah PLDV, karena sesuai konsep memiliki dua variabel, yaitu k dan l.

Figure 3. The Question and Answer Key of Number 15

Figure 4. Incorrect Answer Done by (R-1)

The question in figure 3 is related to the concept of LETV. The incorrect answer commonly that are not able to determine and to provide the exact reason that the equation on the matter included in LETV. The shape of mistake is the assumption that the coefficient k is 1, which means that the equation is LEOV. Likewise if $2k$, then its equation is LETV, because the coefficient of k is 2. This shows that (R-1) defines a linear equation includes one variable or two variables by looking at the coefficient.

Figure 5. The Question and Answer Key of Number 16

Figure 6. Incorrect Answer Done by (R-24)

The question in figure 5 is related to the concept of SLETV. The incorrect answer commonly that are not able to determine and to provide the exact reason that the equation in question is not SLETV. The shape of mistake is the notion that pq in $\left.\begin{array}{c} 2p + 3q = 8 \\ pq - 2q = -3 \end{array}\right\}$ is equal to the variable of p and variable of q, SLETV still have two variables, namely p and q. It also suggests that an understanding of the concept of similar tribes that owned (R-24) is still lacking.

E. DISCUSSION

The incorrect answer that occur in figure 2 is closely related to understanding the concept of LEOV. From the results of diagnostic tests and interview, there is a misconception by (R-5) in question as described in figure 1, because according to (R-5), LETV must have two variables and the variables do not need to be seen as the similar variable. If there are two variables, namely *b* as in the matter, it is still counted two. This occurs because the student was confuse in distinguishing definitions/examples of LEOV and LETV. Thus, to overcome misconception, the teacher attempted to perform a cognitive conflict strategy in the form of counter examples of LEOV (Mariawan, 1997).

The incorrect answer that occur in figure 4 is closely related to understanding the concept of LETV. From the results of diagnostic tests and interviews, there is a misconception by (R-1) in question as described in figure 3, because (R-1) determine an equation is LEOV or LETV viewed of the coefficient on the variable, instead of seeing the number of variables, such as *k* and *l* that the coefficient of 1 means including LEOV, as well as *2k* and *2l* which means including LETV. This occurs because the student was confuse in distinguishing definitions/examples of LEOV and LETV. Thus, as to overcome misconception, the teacher attempted to perform a cognitive conflict strategy in the form of counter examples of LETV (Mariawan, 1997).

The incorrect answer that occur in figure 6 is closely related to understanding the concept of SLETV. From the results of diagnostic tests and interview, there is a misconception by (R-24) in question as described in figure 5, because (R-24) has experienced misconception of like terms on variable of *pq*. This occurs because the student was confuse in distinguishing definitions/examples of SLETV and not SLETV. So as to overcome misconception, the teacher attempted to perform a cognitive conflict strategy in the form of counter examples of SLETV (Mariawan, 1997).

F. CONCLUSION

A. *The Misconceptions of LEOV and LETV*

The shape of misconceptions found in the form of the assumption is the misconcpetions that LETV is a linear equation with the same number of variables as much as two; LETV must have two variables and the variables do not need to be seen as the similar variable, if there are two variables equally, it is still counted two; determine an equation is LEOV or LETV based on the coefficient on the variable. The cause of misconceptions is because the students were confuse in distinguishing definitions/examples of LEOV and LETV. Therefore, to overcome misconception, the teacher attempted to perform a cognitive conflict strategy in the form of counter examples and LETV and LEOV.

2. *The Misconceptions of SLETV*

The shape of misconceptions found in the form of the assumption that *pq* in $\left.\begin{array}{l} 2p + 3q = 8 \\ pq - 2q = -3 \end{array}\right\}$ is equal to the variables *p* and *q,* so that the SLETV still have two

variables, namely p and q. The cause of misconceptions is because students were confuse in distinguishing definitions/examples of SLETV and not SLETV. Therefore, as to overcome misconception, the teacher attempted to perform a cognitive conflict strategy in the form of counter examples of SLETV.

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ADDITION AND SUBTRACTION NUMBERS UP TO 10 THROUGH PMRI FOR SD/MI LEVEL STUDENTS

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Abstract

The aim of this study is implementing PMRI in teaching process using a special game which is popular called Snakes and Ladders. This game acts as a media for helping students in learning addition and substraction numbers up to 10. Design research is used as appropriate means to achieve the aim; conducted in three phases: preliminary design, teaching experiment (first and second cycle), and retrospective analysis. This study enables students to work with contextual situations within integer numbers properties; uses media tool (snakes and laders). Pendidikan Matematika Realistik Indonesia (PMRI) underlies the design of the context and the activities. Sample of population is students from Madrasah Ibtidaiah Negeri 1 Palembang. This study involves first grade students, 4 students in first cycle and 44 students in second cycle (4 students were analyzed in detail). The result of this study could show that the activities could bring students' learning from the contextual situation to more formal situation. The activities within this study have been succeed to be implemented in this school so that these activities could be used for the others.

Keywords: numbers, addition and substraction up to 10, design research, Pendidikan Matematika Realistik Indonesia

A. INTRODUCTION

1. Background

Observation was done in MIN 1 (Madrasah Ibtidaiyah Negeri 1) which has already applied PMRI for five years. Kamaliyah and I observed the first grade collaborated with Mrs. Tartilah, the classroom teacher. The week before, Mrs. Tartilah and us had discussed about what context and what models we will use. Then we decided to use "Snakes and Ladders" game for the context and a big colorful carton of the game for the model, including student worksheet. Since they already knew about PMRI, the situation supported us well.

Figure 1. Classroom situation

This class was actually two classes but they were merged into one class because of the school renovation. That is why it seemed too crowded. PMRI adapted from RME is a theory of domain-specific instructional, which is preserved a guidance as instructional aiming for instruction that aims to support students in building or recreate mathematics based problem-centered interactive teaching

(Gravemeijer, 1999). This theory is strongly influenced by Hans Freudenthal concept of "mathematics as a human activity". Therefore, many opportunities are given by their teachers for the students so that their students can build their understanding of themselves.

RME was first developed by the Freudenthal Institute in the Netherlands in 1971. RME philosophy is founded on the ideas explored and developed by Hans Freudenthal in Zulkardi (2002), there are two important insights, such as: (1) mathematics must be connected to reality; and (2) mathematics as human activity ". Meanwhile, there are three principles of learning proposed by Freudenthal RME (in Gravemeijer, 1994) and can be used as a reference for instructional design research, namely: (1) Guided reinvention and progressive mathematizing, (2) Didactical phenomenology, and (3) Self-developed models.

Designing a process of learning activities starting from the experience is inspired by the real events of the five characteristics of a "five tenets" RME by Treffers (in Bakker, 2004), namely: (1) Phenomenological exploration, (2) Using models and symbols for progressive mathematization, (3) Using students' own construction and productions, (4) Interactivity, and (5) Intertwinement.

2. Goal

From this observation we wanted to see if the students can add and subtract numbers up to 20 with 'Snakes and Ladders' game.

3. Observation Questions
1. How to introduce numbers up to 20 to the students?
2. Are the students able to add and subtract numbers up to 10 with different kinds of questions?

B. RESEARCH METHOD

This research used design research as a research method. There are three phases in the conduct of design research, such as:

1. Preliminary Design

In the preliminary design, a wide variety of ideas and literature review performed. Design of Hypothetical Learning Trajectory (HLT) was developed based on the literature and adapted to the actual learning during the teaching experiment.

2. Teaching Experiment

Teaching experiment contained learning activities that will be tested, revised, and designed every day. In this study, there were two learning activities in each cycle. And at the end of each learning activity, teachers and researchers made reflection in order to improve the activities that have been designed.

3. Retrospective Analysis

In the retrospective analysis, all the data collected during the experiment teaching in further analysis. In accordance with the text above, this study conducted in two cycles of treatments, as follows:

a. There is one group of students which is consisting of four students gathered from another class (not from the class of second cycle), the group of students who take the learning process in cycle 1. Researcher acted as a teacher here.

b. In second cycle, the researcher acted as an observer and classroom teachers or tutors who provide the material. This cycle happens in a large class, the class 1A.

C. DATA DESCRIPTION

The topic was about adding and subtracting the number from 1-10. At first, students were asked about their daily habit that related to this topic, for example when they took a bath? The students answered that they did it in the morning and in the afternoon. Then another question was given; how many times they took a bath in a day? They could directly answer that they usually did it twice a day. We continued to something that exists around them at that time. They were asked to count how many pencils teacher held, they could answer it quickly. From these three questions, we could see that they had basic concept of number.

Right after that, students were divided into 2 groups consists of 30 members. They were asked to play 'snakes and ladders' game which could attract them to know the numbers up to 20 that had been learned in the last meeting.

Here is the Snakes and Ladders game:

They seemed interested in this kind of game which they had known before, because it was daily game for them. However, the game had been modified with some problems in each box. When they reached a box, they picked a card that corresponds to the number. Each of it consists of 5 addition and subtraction problems which had to be solved. For solving the problem, they automatically used their fingers to help them get the answer.

Figure 2. Snakes and Ladders game

Figure 3. Student with "The Game"

After finishing the game, we moved to the next level of PMRI. The students divided into 10 smaller groups of 6 students. They had known about numbers up to 20 and right after that they were asked to do the worksheet in a group.

There were more addition and subtraction problems were given to them.

Figure 4. Students with worksheet

They were doing one worksheet together and made a little discussion among them. Some of the group did their worksheet one after another and sometimes they asked the teacher if they couldn't understand the worksheet's problem.

In these worksheets, students were given several problems from the real one to abstract. When they worked with simple problems they easily got the correct answer by counting the picture one by one. They faced a difficulty when they came to the 3rd number. In this number, they were given a subtraction problem in addition model. The difficulty became bigger when they faced the 6th number which is a word problem. Some students still couldn't read well, but the major problem was inability to translate the problem into formal mathematical form.

Finally, students were asked to present their results in front of the class.

Chances also given to students who wanted to argue their friends opinion. From this activity, they could learn about addition and subtraction correctly in an interesting way.

Figure 5. Students' presentation

D. ANALYSIS

Here it is one of the students' worksheet:
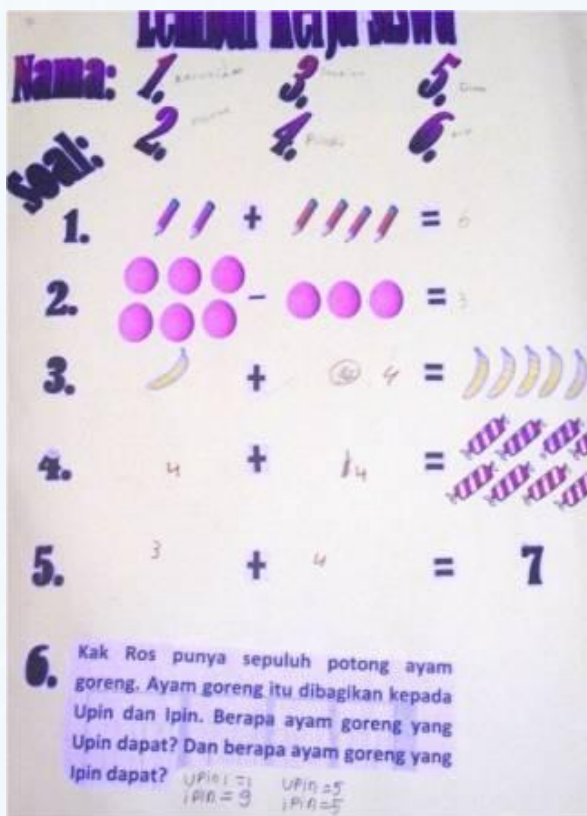
Figure 6. The students' worksheet

Actually, the 4th number is an open-ended problem which has several correct answers, but all students had the same answer. The mathematical form of this is $(…) + (…) = 8$. They just divided the candies into 2 groups of 4 because they saw 8 candies were arranged into 2 rows and each row consists of 4 candies. Students were not accustomed with this kind of problem yet. They were afraid if they had different answer from others.

Stated before, the 6th number also made them confused. We had to read the question for them because they were still unable to read it by themselves. Some students were eager to know the right answer and kept asking us the right way. Some of them didn't do it because they couldn't understand the problem. Students' thinking was unpredictable. Here the teacher as a facilitator has to concern how to make them understand all the problems has given.

1 2 3 4 .... 18 19 20

7 = 3+4 / 7 = 5+2 / 7 = 1+6

E. CONCLUSION

From this activity we can conclude that daily life problems really affected students in learning mathematics especially in this topic. They cannot solve the abstract thing before understand the concept of it. When we used the game, the students were enjoying the learning process and wanted to keep learning more and more. In the beginning, students knew nothing about addition and subtraction. Soon after they were taught with this media, they found the concept of this topic. Dividing them into groups was an important thing that can make them learn from each other. Teacher also has a very important role to guide their students not to make mistake in understanding the concept.

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THE IMPLEMENTATION OF PREDICT- OBSERVE- EXPLAIN- WRITE (POEW) LEARNING MODEL BY GIVING CONSTRUCTIVE FEEDBACK TO MAINTAIN STUDENT'S RETENTION OF SENIOR HIGH SCHOOL TENTH GRADE

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Abstract

This study focuses on the implementation of predict-observe-explain-write (POEW) learning model by giving constructive feedback to maintain student's retention about heat concept. The methodology of this study is quasi experiment by randomized control group post test only design. There are two classes in this study, they are experiment class (the class which implements POEW learning model by giving constructive feedback) and control class (the class which implements POEW learning model without giving constructive feedback). Collecting data is done by giving post test three times in every subject of heat for getting the description about student's retention. The result of this study shows that the implementation of POEW learning model by giving constructive feedback can be further aided to maintain student's retention about heat concept compared the implementation of POEW learning model without giving constructive feedback.

Key words: predict-observe-explain-write (poew),constructive feedback, retention

A. INTRODUCTION

Science learning emphasizes students to find the facts and analyze the facts. This was confirmed by the Depdiknas (2008) which states that "the process of science learning emphasizes on giving direct experiences to develop competencies that learners explore and understand the universe around scientifically". Science learning is directed to seek out and doing so can help students to gain a deeper understanding of the nature around.

Based on observations taken at one high school in the city of Padang, it was found that the concept of physics obtained by the student without going through the process of discovery made by the students themselves have an impact on student's retention durability of the lessons they have learned the material. It is evident from the interview that has been done on the physics teacher who stated that when the teacher asks at the beginning of the learning apperception no students were able to answer correctly in accordance with the wishes of teachers. Students easily forget the lessons they have learned the material.

Based on the above issues need to be pursued innovations in learning models. The expected learning should be more actively involve students in learning and involves many senses of students. The more students are involved in the learning process and the more

senses involved students, is expected to last more retention (memory) of the students learned the material.

One model of learning that can be viewed assist students in maintaining student retention is a POEW learning model (Predict - Observe - Explain - Write). The Predict - Observe - Explain - Write (POEW) learning model is a learning model that was developed from the Predict - Observe - Explain (POE) learning model and Think - Talk - Write (TTW) learning strategy. The model consists of four stages POEW core activities, namely (1) Predict, students make a conjecture; (2) Observe, students make observations; (3) Explain, students give an explanation of the discrepancy between predictions and observations; (4) Write, students write a summary of the student's own language (Kala, 2012). POEW learning model allows students actively in the learning process, provides the opportunity for students to construct knowledge, students use a variety of senses, communicates his thoughts and write down the results of the discussion so that students can remember the older physics concept.

Associated with student resources, knowledge discovered by students need to be defined further. Strengthening of the knowledge that has been gained by the student in the learning process needs to be done so that the memory of the material physics students increasingly survive. This is supported by Hattie (2007) who explains that giving constructive feedback to improve students' recall of information. Giving constructive feedback to students can maintain memory of the material physics students.

Constructive feedback is a gift that builds information given by the teacher to the student about the student's understanding of the skills (Hattie, 2007). Constructive feedback is composed of two types, namely positive feedback and negative feedback. Positive feedback is to provide input regarding the efforts made by the students with positive sentence which aims to provide improvements to the student. Negative feedback is to provide information about the efforts that need to be improved with negative sentences so that students experience a setback in their learning (Joyce, 1980).

Type of constructive feedback is positive feedback used. Nicol (2008) explains that the form of positive feedback can be written feedback, verbal feedback, and computerized feedback. Nicol (2008) also confirms the results of research that has been done which states that written feedback is better than verbal feedback and computerized feedback. This is because written feedback can be more focused on improving the quality of student assignments, and students gain a clear relationship between teacher comments and tasks they have done. Form of positive feedback that is used is written feedback. Written feedback can be given the form of comments and suggestions on the work of students (Nicol, 2008). Comments and suggestions are given to the summary that was created by students at the write phase and the individual tasks that have been done by the students. Individual tasks are given to students in the form of questions which are conceptual. Comments and suggestions are given to the wrong things that happen to students.

Based on the description of the background, the authors are interested in conducting research entitled "The Implementation of Predict- Observe- Explain- Write (POEW) Learning Model By Giving Constructive Feedback To Maintain Student's Retention Of Senior High School Tenth Grade".

B. LITERATURE REVIEW

1. Poew Learning Model

POEW model developed from Predict-Observe-Explain (POE) learning model and Think-Talk-Write (TTW) learning strategy. The learning model is an acronym POE learning syntax. Learning model POE stands for prediction, observation, and explanation (Liew, 1998). This is consistent with Kearney (2001) which describes the steps POE learning model is:

a. Prediction, It involves students predicting the result of a demonstration and discussing the reasons for their predictions
b. Observation, Observing the demonstration
c. Explanation, Explaining any discrepancies between their predictions and observations.

In the prediction activities, students made allegations against a physical event. In the observation, students make observations of what is happening. The central question is whether the observation prediction is occurring or not. In the explanation, the students gave explanations about the suitability or unsuitability of the allegations (prediction) with really happened.

One of the learning strategies in mathematics which has similarities with the POE is Think-Talk-Write (TTW) Strategy. TTW strategy was first introduced by Huinker and Laughlin (1996), learning activity in TTW is basically built through thinking, speaking, and writing. Chronology of progress think-talk-write start of student engagement in thinking or dialoguing with himself after the reading, then speak and share ideas with friends before continuing with the activity of writing.

By combining the stages of POE learning model and TTW learning strategy, it can be arranged in detail as follows:

a. Predict
   1) The teacher presents a problem/ issue physics.
   2) Students are asked to make a conjecture. In making the allegations, students were asked to think about the reasons alleged or predictions made.

b. Observe
   1) Students are invited to make observations / practicum associated with physical problems or issues presented.
   2) Students observe what happens. Students can also take measurements if necessary and record the results of experiments.
   3) The most important of this second step is to test the truth of the allegations made while students.

c. Explain

If the prediction or conjecture that the students exactly what happened in the experiment, the students explained that the allegations that have been made in accordance with the observations. But if the allegations of the students did not occur in the experiment, the students were also able to provide an explanation of the discrepancy between predictions and observations that have been made by students.

d. Write

Writing activity as the TTW rated excellent strategies applied in learning physics. Writing can help realize one of the goals of learning, namely the student's understanding of the material he learned.

2. Feedback and Constructive Feedback

Hattie (2007) which states that "feedback is conceptualized as information provided by an agent (eg, teacher, peer, book, parent, self, experience) regarding aspects of one's performance or understanding". Feedback is the provision of information by the teacher to the students about the skills and understanding of students. Feedback can also maintain student retention. This was confirmed by Hattie (2007) who explains that the feedback given to students to maintain memory information about a student. Feedback is able to provide long-lasting memories of students in its memory.

Feedback can take the form of constructive or destructive, depending on the needs of the recipient or the feedback giver needs feedback. Constructive feedback is a feedback that provides the things necessary to the development of one or more people. Constructive feedback is most effective when used in interpersonal communication (Joyce, 1980). As for giving constructive feedback (constructive feedback) aims to provide information that will provide improvements / progress towards students and will create better results. Constructive feedback (constructive feedback), there are two types, namely:

a. Positive feedback, is information or feedback to someone about a business that has done that aim to deliver improvements.

b. Negative feedback, is information about the business to someone who needs to be improved to negative sentences, so that a person suffered a setback in its performance.

If constructive feedback is given to students who aim to build and provide information that will provide improvements, should be given a positive feedback (positive feedback). So in this study, researchers gave a positive feedback (positive feedback) using sentences that build (constructive).

Nicol (2008) explains that positive feedback has three forms, namely:

a. Written feedback, namely the provision of feedback to provide comments and suggestions on the work of students in written form in the student worksheet

b. Verbal feedback, namely providing feedback on student work orally to the students about the improvements that need to be done by students.

c. Computerized feedback, namely the provision of computer-assisted feedback on student's work.

3. Retention

Retention is derived from the English language, which means the memory retention or storage (Echols, 2005). According to Zaidi (2006) retention is the ability to remember the material in a certain time interval. Meanwhile, according to Pranata and Rose (2007),

retention is the amount of knowledge learned by students that can be stored in long term memory and can be re-expressed in a certain time interval.

Based on the definition of retention according to some experts above, is closely related to the retention of the memory system. System memory can be divided into three systems, namely sensory memory system, short-term memory system, and long-term memory system. The third memory system known as Attkinson and Shiffrin memory model that has been refined by Tulving and Madigan (Bhinnety, 2008). The memory system is presented schematically in Figure 1.
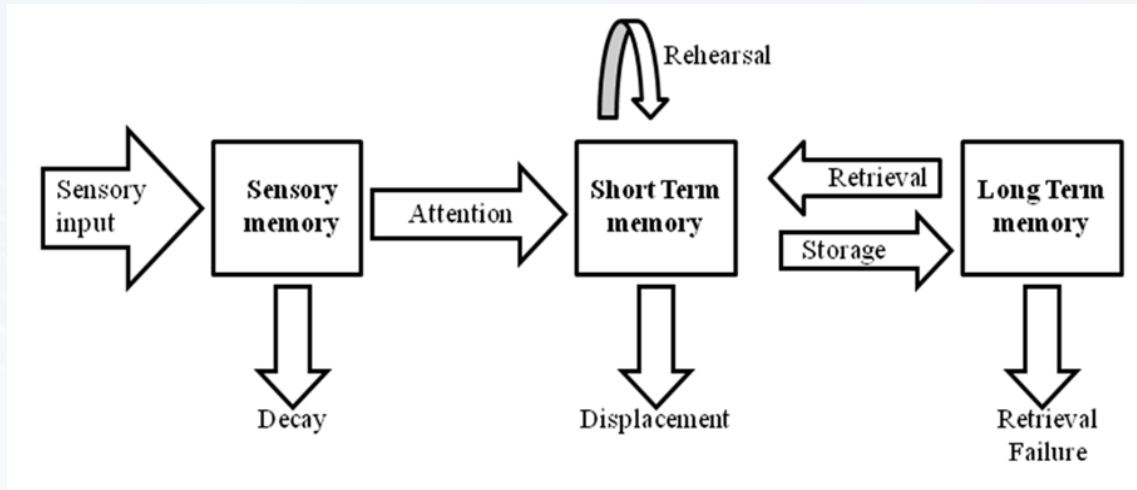
Figure 1. Schematic System Memory

Memory or retention of information over time involving the storage, encoding and recall of information (Santrok, 2008). It is closely related to attention. Attention is important, because if you do not give attention to something, we do not like to remember (Joyce, 1980). In fact, there are things that are so quickly forgotten. There is also a new thing, after a while it appeared again in memory. Whiterington (in Makmun, 2007) briefly reported some of the results of studies that show that things that are rote (substantial-material) is easy to quickly be forgotten compared to the results of mental processes (functional structural) higher, or the results of the practical experience meaning (meaningful). In other words, this memory which allows us to store information actively.

De Porter and Hernacki (2000) revealed that we would remember information best when the information is characterized by the following qualities:
a. The existence of associations senses especially the sense of sight. Experience involving sight, sound, touch, taste or movement is generally very clear in our memory.
b. Emotional contexts such as love, happiness, and sadness.
c. The quality that stands out and is different.
d. Association intense.
e. The things that have personal merit.
f. Things that are repeated.

C. METHODOLOGY

The method used in this study is a quasi-experiment with randomized control group post test only design. The study was conducted on two classes of experimental class and control class. POEW learning model by giving constructive feedback on experiment class and POEW learning model without giving constructive feedback on control class. After completion of learning, both of classes are given a final test (post test) for each sub-material three times to determine the durability of student's retention of physics concept.

Table 1. Study Design

Class	Treatment	Post test
Experiment	X_1	T_1, T_2, T_3
Control	X_2	T_1, T_2, T_3

Description

T_1 : First post test to measure student's understanding of concepts in both classes

T_2 : Second post test to measure student's understanding of concepts in both classes

T_3 : Third post test to measure student's understanding of concepts in both classes

X_1 : The treatment given to the experimental class (POEW learning model by giving constructive feedback)

X_2 : The treatment given to the control class (POEW learning model without giving constructive feedback)

The population in this study were high school students Class X in second semester which consists of eight clusters. The sample was chosen by random cluster sampling technique. The data used in this study is posttest heat conceptual understanding data which got three times in every heat material. Analyzing the student's retention durability is by giving score on post test 1, post test 2 and post test 3 with the formula $S = \sum R$, determining the average score post test 1, post test 2 and post test 3 with the formula $\bar{X} = \dfrac{\sum X}{N}$, and then making a comparison chart between the average score of the post test 1, post test 2, and post test 3 in experimental class and control class.

D. FINDING

Retention referred to in this study is the number of knowledge learned by the students of heat that can be stored in long term memory and can be re-expressed in a given period of time. Student's retention about heat concept was assessed using a test that is equivalent to test understanding of the concept. This test is performed three times for each sub material after being given treatment (post test 1, post test 2, post test 3). Average score of post test 1, post test 2 and post test 3 students obtained for each sub-material heat in the experimental class and control class can be seen in Table 2.

Table 2. Recapitulation Average Score Post Test 1, Post Test 2 and Post Test 3 Conceptual Understanding Students in Each Heat Sub Material in Experiment Class and Control Class

Class	Sub Material	Test	X ideal	X min	X max	$\overline{X}$	The Decrease in Retention
Experiment	Temperature and Expansion	Post test 1	3	2	3	2.84	0.29
		Post test 2	3	1	3	2.71	
		Post test 3	3	1	3	2.55	
Control		Post test 1	3	2	3	2.83	0.6
		Post test 2	3	1	3	2.57	
		Post test 3	3	1	3	2.23	
Experiment	Heat and Matter Phase Change	Post test 1	10	6	10	8.45	1.58
		Post test 2	10	5	9	7.42	
		Post test 3	10	4	9	6.87	
Control		Post test 1	10	6	10	8.50	3.23
		Post test 2	10	4	9	6.70	
		Post test 3	10	2	8	5.27	
Experiment	Heat Transfer	Post test 1	5	3	5	4.39	1.68
		Post test 2	5	2	5	3.84	
		Post test 3	5	1	5	2.71	
Control		Post test 1	5	3	5	4.40	2.30
		Post test 2	5	1	5	3.17	
		Post test 3	5	1	4	2.10	
Experiment	Black Principle	Post test 1	2	1	2	1.84	0.52
		Post test 2	2	1	2	1.81	
		Post test 3	2	0	2	1.32	
Control		Post test 1	2	0	2	1.60	0.73
		Post test 2	2	0	2	1.27	
		Post test 3	2	0	1	0.87	

Based on Table 2, it is seen that the student's understanding of the concept for the experimental class and the control class in each sub material decline in post test 2 and post test 3 based on post test 1 in each classes. This suggests that the retention of students in the experimental class and the control class decreased in interval of two weeks, but a large decline is different. To be more clear, comparative decrease in retention between these two classes of heat in the material can be seen in Figure 2.
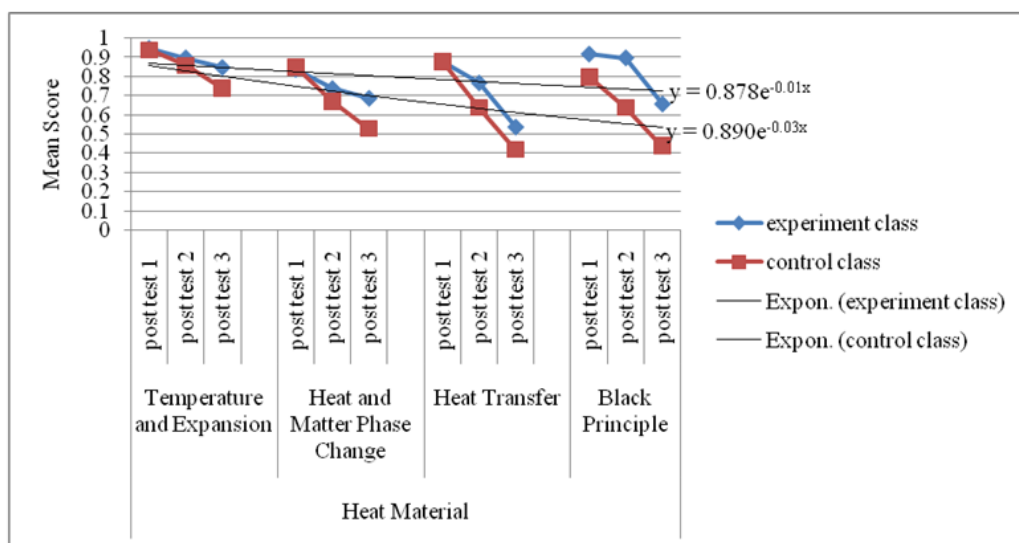
Figure 2. Comparison of Student's Retention decline each post test on Heat Material

Figure 2 shows that the equation of the exponential function on the material of heat for the experimental class and the control class is $y = e^{-0,01x}$ and $y = e^{-0,03x}$. The decrease in the retention of students in the experimental class for material heat is more slowly than the control class. The graph obtained in the experimental class is more slope slightly than the graph obtained in the control class. It is clear that overall the students who applied POEW learning model by giving constructive feedback is better maintain his memory to heat material than students who applied POEW learning model without giving constructive feedback.

E. DISCUSSION

Student's retention (memory) about the heat material was assessed using a test that is equivalent to test understanding of the concept. This test is performed three times after treatment (post test 1, post test 2 and post test 3) for each sub-material.

Based on the results of data processing, the heat conceptual understanding of experimental class and control class has decreased on the post test 2 and post test 3 based on post test 1. This suggests that the retention of students in the experimental class and control class decreased. The decrease in retention experienced by students in the experimental class relatively slower than the decline experienced by the retention of students in the control classes. The application of POEW learning model by giving constructive feedback can better maintain student's retention than POEW learning model without giving constructive feedback.

Excess POEW learning model by giving constructive feedback to maintain student's retention can be explained by the stages of learning model itself. In POEW learning model by giving constructive feedback, there are some fundamental steps that require students perform recognition or recall the knowledge they have gained and requires students to repeat concepts that have been learned. The stage is when the students write a summary of the knowledge

they have gained from the explain activity. Students recall the results of each stage of the learning that has been done before.

The next stage that maintaining student's retention is when students get constructive feedback given by the teacher. Students can better maintain her memory to the heat concept that has been studied previously with read and understand the comments and suggestions given by the teacher to each student. Students can read the comments and suggestions repeatedly. Each meeting students always gain constructive feedback about their conclusions and post test results.

Both of stages are what causes the student's retention in the experimental class are more sustainable than the control class. It is also in accordance with the description in the literature review, that we will remember very well informed if the information is characterized by the following qualities (De Porter and Hernacki, 2000):

a. The existence of associations senses especially the sense of sight. Experience involving sight, sound, touch, taste or movement is generally very clear in our memory.
b. Emotional contexts such as love, happiness, and sadness.
c. The quality that stands out and is different.
d. Association intense.
e. The things that have personal merit.
f. Things that are repeated.

F. CONCLUSION

Based on the study and analysis of data concerning the application of predict-observe-explain-write (POEW) learning model by giving constructive feedback on the heat material, it is concluded that the application of POEW learning model by giving constructive feedback can better maintain student's retention on the heat concept than the application of POEW learning model without giving constructive feedback.

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THE EFFECT OF LEARNING WITH ABDUCTIVE-DEDUCTIVE STRATEGY TOWARDS THE ACHIEVEMENT OF REASONING ABILITY IN SENIOR HIGH SCHOOL STUDENTS

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Abstract

The purpose of this study was to investigate the effect of learning with abductive-deductive strategy towards the achievement of mathematical reasoning abilities of high school students. Research carried out an experimental pretest-posttest design and the control group was not randomized in class XI student at one high school in Pati, Central Java, Indonesia. Data analysis was conducted quantitative research based on early mathematical ability categories (KAM) and overall. The results showed that the achievement of mathematical reasoning abilities that students acquire learning abductive-deductive strategy better than students who received the expository learning. In more detail of KAM categories, only middle category that show achievement of mathematical reasoning abilities better. While in upper and under categories have the same reasoning abilities achievements. This research is expected teachers can encourage students to do abduction and deduction in the learning achievement of students' mathematical reasoning abilities.

Keywords: abductive-deductive strategy, achievement, reasoning

A. INTRODUCTION

Mathematical reasoning ability is the main characteristic that can't be separated from the activities of studying and developing or solving mathematical problems (Ansjar & Sembiring, 2000). In fact, the implementation of learning that emphasizes the existence of reasoning is very recommended (NCTM, 2000). However, many studies show that the reasoning ability of students in Indonesia is still low (Rahayu, 2013). Though reasoning ability is needed in the mastering and solving of mathematical problems (Wahyudin, 1999). But this reasoning ability is often overlooked in learning (Nizar, 2007: 74). Therefore, in learning mathematics mathematical reasoning ability need attention given to be able to solve a math problem required students' reasoning abilities.

Report the results of other studies, showed similar findings. Reasoning ability which a part of high order mathematical thinking abilities (Sumarmo, 2013). Study reports Henningsen & Stein (1997), Mullis, et al (2000), Suryadi (2005) and Murni (2013) show that learning mathematics is generally not focused on developing high order mathematical thinking abilities. Student more dominant solve problems from the textbook and get less non-routine problems that can train this high order mathematical thinking abilities. Thus the need

for efforts to develop mathematics learning oriented to the development of high order thinking abilities.

Based on a preliminary analysis of reasoning ability is necessary to develop a learning that can improve the understanding of essential concepts. As a general framework in solve a problem in mathematics is the ability to identify the given facts (data) and formulate what is asked in the problem (final target). In determining the final target is based on data provided, it is necessary to elaborate the ability to apply the essential concepts that are relevant with the given data to obtain intermediate target before finding the answer to the final target. Not a few problems in mathematics can be more easily solved by adding a condition (intermediate target) that is based on a concept relevant essential to arrive at the final target in question.

General framework as described above has been developed at the research Kusnandi (2008) in a learning with abductive-deductive strategy (PSAD). Abductive is a mathematical thinking skills (reasoning) that can't fully answer the problem but the process of offering a reason as the basis for a specific action (Aliseda, 2007). This general framework was originally developed to develop the proving ability the beginner student learning of proof. The results showed that student who learn with abductive-deductive strategy have the proving ability better than students who learn with conventional learning. Possible application of this strategy has been reviewed by Sun, et al (2005) for the problem of reasoning and problem solving ability. The possibility of applying this framework to the wide range problems (mathematical literacy) for students in secondary schools has also been studied theoretically (Shodikin, 2013).

Based on the notion of learning with abductive-deductive strategy (PSAD), in this study developed learning syntax abductive-deductive strategy (PSAD) more operational as shown in Figure 1 below.
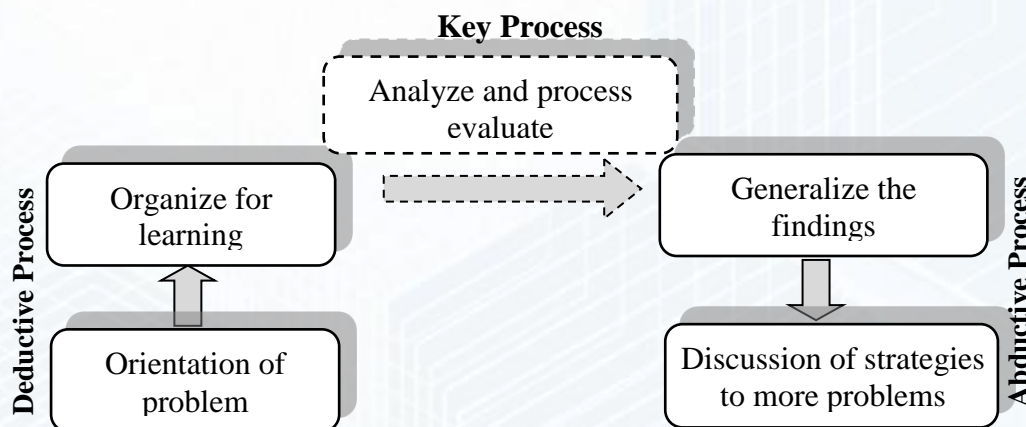
Figure 1. Schematic of Learning with Abductive-Deductive Strategy

Stages of learning with abductive-deductive strategy above in more detail is shown in Table 1 below.

Table 1. Syntax of Learning with Abductive-Deductive Strategy

	Phase	Teacher Behavior
Phase 1	Orientation of problem	• Teacher discusses the problem of learning objectives • Teachers describe various important logistics needs • Teachers motivate students to be directly involved in learning activities • Teachers provide apperception
Phase 2	Organize for learning	• Teachers help students to define and organize the tasks of learning and information related to the problem
Phase 3	Analyze and process evaluate	• Analyze and evaluate the teacher directs students to find their own solutions from information already possessed by students • Teachers encourage students to do transactive reasoning as to criticize, explain, clarify, justify and elaborate a proposed idea, either initiated by students and teachers • Teachers assist students in planning and preparing materials for presentations and discussion • Teachers help students to reflect on the investigation process and other processes used in solving problems
Phase 4	Generalize the findings	• Teachers help generalize the findings obtained
Phase 5	Discussion of strategies to more problems	• Teachers assist students in finding strategies to the problems are much more • Teachers provide training and evaluation

To be involved in transactive discussion, early mathematics ability (KAM) student plays a very important, where an idea that appears to develop gradually so as to build a comprehensive mathematical concept of information obtained. The KAM students are categorized into three categories: upper, middle and under. This grouping is used to see if there is mutual effect between the learning is done with early mathematics ability of the students' reasoning abilities. Besides that, it can be obtained more detail the effect of learning in each category of early mathematical ability.

Based on the background and formulation of the problem described above, this study aims to investigate the influence learning abductive-deductive strategy towards the achievement of high school students' mathematical reasoning abilities.

B. METHODOLOGY

The method applied in this study is experimental with pretest-posttest design and the control group was not randomized. With this design, subjects initially performed pretest, and then treated with a form of learning abductive-deductive strategy and then performed post-test

to measure students' mathematical reasoning abilities in polynomial of matter. This design is chosen according to the purpose of research to show the effect of the application of learning with abductive-deductive strategy towards the achievement of students' mathematical reasoning ability. In the chart of design used are presented in Figure 2.

Experiments Class	O pretest → X₁ treatment → O posttest
Kelas Kontrol	O pretest → X expository → O posttest
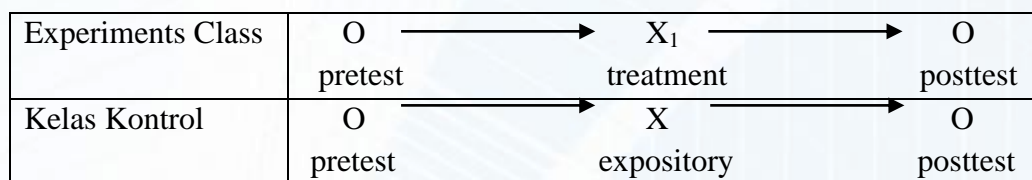
Figure 2. Design Research

The study was conducted at one high school in Pati, Central Java, Indonesia academic year 2013/2014. The samples have been two classes that have the same initial capabilities of the eight classes by purposive sampling, each totaling 34 students. Grouping students by category early mathematical ability (KAM) is obtained from the average value of two daily tests, mid semester test and semester test. The weight of each of these values respectively 20 %, 30 % and 50 %.

C. FINDINGS

The selection of the class which is used as a sample study in addition seen early mathematical abilities seen from the initial reasoning abilities of students obtained from the pretest scores, both overall and by category KAM. It has been shown that the students is learning with abductive-deductive strategies and students learning expository no difference in early mathematical ability of reasoning, both in terms of overall and by category KAM (upper, middle, under).

Achievement of mathematical reasoning ability obtained through posttest scores. Based on calculations, the achievement of mathematical reasoning abilities obtained an average value based on class research (experimental and control) and KAM (upper, middle, under) are presented in the following bar chart.
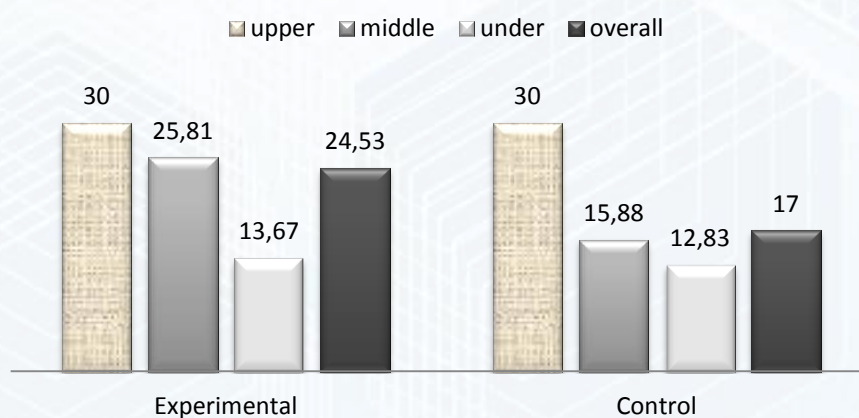
Figure 1. Bar Chart of Reasoning Ability Achievement Score

Figure 1 show that the students who received learning with abductive-deductive strategy (experimental class) shows the overall average achievement of mathematical reasoning abilities greater than students who received the expository learning (control class). Judging from KAM category is upper the level students' KAM, greater the average achievement of mathematical reasoning ability.

To find out the reasoning abilities of learning achievement of which one is better, do mean difference test. Before the test the average difference, the normality test and homogeneity tests. Mean difference test used the t-test for normally distributed data and homogeneous. While the pair is not normally distributed data were analyzed using Mann-Whitney U non-parametric test. Results mean differences test are presented in Table 3 below.

Table 3
Test Results Mean Differences Pos-test Score Mathematical Reasoning Ability

KAM	Comparison of average (E:K)	t	Mann-Whitney U	Sig. (2 tailed)	Sig. (1 tailed)	Ho
Upper	30.00 : 30.00	0.000	-	1.000	0.500	Accept
Middle	25.81 : 15.88	-	130.5	0.006	0.003	Reject
Under	13.67 : 12.83	0.166	-	0.871	0.435	Accept
Overall	24.53 : 17.00	-	304.5	0.001	0.000	Reject

Ho: The average student achievement reasoning abilities experimental class lower or equal to the control class in terms of KAM (upper, middle, under) as well as overall.

Table 3 above shows that the mathematical reasoning ability students acquire learning with abductive-deductive strategy (experimental class) better than students who acquire expository learning (control class). Seen more detail from the KAM category, only in the middle category, achievement of students' mathematical reasoning ability that acquire learning with abductive-deductive strategy better than students who acquire expository learning. But in the upper and under category of KAM, the achievement of mathematical reasoning ability students acquire learning abductive-deductive strategy (experimental class) is lower or equal to the students who acquire learning expository (control class). After seeing the average achievement, the upper and under category gained an average the experimental class greater than average control class, so concluded the achievement of mathematical reasoning abilities that students acquire learning with abductive-deductive strategy (experimental class) equals students who acquire the expository learning (control class).

D. DISCUSSION

Specifically indicator mathematical reasoning ability as measured focused on three skills namely (1) make logical conclusions; (2) estimate answers and solution processes; and (3) use patterns and relationships to analyze mathematical situations.

It has been shown that the students who acquire learning with abductive-deductive strategy and expository learning no difference in mathematical ability early of reasoning, both in terms of overall and by category KAM (upper, middle, under). This is normal, because both classes have not been subjected to different learning.

Achievement of mathematical reasoning ability students who acquire learning with abductive-deductive strategy is better than students acquire expository learning. These results are consistent with the hypothesis proposed previously and showed that indeed the phases of learning with abductive-deductive strategy to support and facilitate the improvement of students' reasoning abilities. The results of this study as well as the findings of the study Mayadiana (2011) which states that students who acquire learning with the mathematical process thinking has the reasoning abilities (inductive and deductive) better than conventional learning. Although the research conducted at the different levels of students and inductive approach, but its similarity to learning with abductive-deductive strategy is equally a kind of learning that emphasizes the mathematical process thinking.

Average achievement scores (post-test) on the reasoning abilities of students acquire learning with abductive-deductive 24.53 of the ideal 40 score. From this data it can be concluded that the reasoning ability in students who acquire learning with abductive-deductive still less than optimal. The reason for this is related to adjustments in thought relatively difficult students. In fact, think hard into the main capital in constructing knowledge in view of constructivism based learning (Ormrod, 2008). Another reason is a test that is used in this study was relatively difficult. It is recognized by some of the current students do interviews, that the test items in this study is more difficult than the usual questions given by the teacher in the learning prior to the study. Recognition of students is in line with the test results that the questions used most difficult category. Whatever the reason is related to the achievement of the results are still far from optimal, it is of the low mathematical reasoning ability high school students based on this sample.

Descriptions make it clear that high order mathematical thinking ability (reasoning) is not an easy job. However, it is undeniable that the students who acquire learning with abductive-deductive strategy is able to demonstrate better achievement than students who obtain expository learning. This indicates that if the learning abductive-deductive strategy consistently applied it is possible to increase students' reasoning abilities optimally.

Reviewed in more detail by category KAM, only in the middle category that shows achievement of mathematical reasoning ability students acquire learning with abductive-deductive strategy better than students who acquire the expository learning. While the upper and under category achievement same ability. This suggests that learning with abductive-deductive strategy has been facilitated by both students with middle categories so as to improve mathematical reasoning ability. While the student with upper categories, similarity results obtained in improving the ability of reasoning is possible for the students have been great motivation and ability to accept the learning that have been good too, so despite the lack of supporting learning though still able to obtain good results. Not much better reasoning ability enhancement students acquire learning with abductive-deductive strategy compared with expository learning does not mean that students do not improve or not facilitated above, but with both of these learning both increased and facilitated. Similarly, the students with under categories, similarity results obtained in improving reasoning ability in learning with abductive-deductive strategy and expository learning because the students with under category have motivation and ability to accept the lesson less, so that although the learning

support though still obtain less results. Based on that, in general learning with abductive-deductive strategy has been able to facilitate the achievement of better reasoning ability.

The following description seems to reinforce reasons the learning with abductive-deductive strategy has been able to facilitate the achievement of mathematical reasoning ability students better than the students who received learning expository. The following reasons are described by indicators measured reasoning ability.

Indicators (1) make logical conclusions. This indicator, in learning with abductive-deductive strategy facilitated the phase generalize the findings obtained. Learning activities that encourage students to generalize the findings obtained from the problems or the data obtained, was to familiarize and understand students to be able to make conclusions from a logically statement. This is in accordance with the opinion of Vygotsky (John & Thornton, 1993), which is the process of improving the understanding and reasoning on students occurred as a result of learning. While the ability to generalize the findings needed reasoning abilities. In other words, the phase generalize the findings obtained in learning with abductive-deductive strategy has been able to facilitate the indicators make logical conclusions. If compared to expository learning, as experienced students the opportunity to learning with abductive-deductive strategy tends to be less. This is because the characteristics of expository learning that make it so.

Indicators (2) estimate answers and solutions process in the learning with abductive-deductive strategy greatly facilitated in analyze and process evaluate phase. Stages of this phase, the teacher directs students to find their own solutions of the information that has been owned by the student. Teachers encourage students to do transactive reasoning as to criticize, explain, clarify, justify and elaborate a proposed idea, either initiated by students and teachers. Teachers assist students in planning and preparing materials for presentations and discussions. Teachers help students to reflect on the investigation process and other processes used in solving the problem of habituation to give students the ability to estimate answers and solution processes. Compared with expository in every phase of learning where the teacher presents the material in a way giving a lecture or reading material that students were prepared from a textbook or instructional materials are less certain to develop the ability to estimate answers and solution processes. This is supported by learning theories expressed by Peaget, where knowledge is not passively received. Mathematical knowledge is constructed by the children themselves should not be given in the form of so. It should students become active seekers and processors of information, not a passive recipient (Schunk, 1986; Davis & Murrell, 1994). In other words, students are given the opportunity to learn independently and connect the concepts that have been previously owned, and become involved in meaningful learning. Opportunity to explain the idea also be one of the factors supporting the increase in students' reasoning ability (Baig & Halai, 2006). This is the value given to learning with abductive-deductive strategy compared with expository learning.

Indicators (3) use patterns and relationships to analyze mathematical situations in learning with abductive-deductive strategy facilitated in discussion of strategies to more problems phase. Activities of the students in finding strategies to the problems that require more students to see patterns and relationships between a problem with another problem.

Students will construct a new mathematical knowledge through reflection on actions undertaken both physically and mentally. They made observations to find patterns and relationships, and forming generalizations and abstractions (Dienes, 1969: 181). With the investigation of the objects, comparison and analysis of the similarity systemic or non-similarity (pattern) will enhance the students' reasoning ability (Christon & Papageorgion, 2006). Therefore, this phase is very help familiarize students use patterns and relationships to analyze mathematical situations.

Seeing the advantages of learning with abductive-deductive strategy than expository learning in facilitating the development of students' mathematical reasoning ability as described above reinforce that learning with abductive-deductive strategy better than expository learning in the achievement and improvement of students' reasoning abilities.

E. CONCLUSION

Based on the finding of research and discussion, it was stated conclusion that the achievements of mathematical reasoning ability students acquire learning with abductive-deductive strategy better than acquire expository learning an overall. Seen more detail by category KAM, only in the middle category that showed an achievements of mathematical reasoning abilities students better. While the upper and under categories, both of learning show the achievement of mathematical reasoning ability students is same.

Recommended for teachers used learning with abductive-deductive strategy in materials with abductive-deductive characteristics to improve mathematical reasoning ability. Further research needs to be done for the development of learning with abductive-deductive strategy on other materials in accordance with the characteristics of abductive-deductive such linear program, logarithmic, and trigonometric. There should also be extended to the level of its application such as vocational schools and junior high schools. Extended of study and research for the improvement of the other mathematical ability to use learning with abductive-deductive strategy can also be done. For comparison also necessary to do research on the comparison with the strategy of inductive, deductive, inductive-deductive or other extension.

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EFFECTS OF ONLINE PROJECT-BASED LEARNING ON ATTITUDES, KNOWLEDGE AND BEHAVIOUR OF STUDENTS TOWARDS RENEWABLE ENERGY

Abd Hadi Bin Hurun

Abstract

This study was aimed to examine the effect of Project-Based Learning Online (e - PBP) on Form Four science students' attitudes, knowledge and behavior towards renewable energy (RE). This study applied a quasi-experimental method with "A Design Group Pre Test - Post Test". The sample consisted of 48 Form Four students who received the e - PBP treatment which also acting as the experimental group. The impact of e - PBP on three variables, attitudes towards RE, knowledge towards RE and behavior towards RE were measured three times through a pre-test, post-test and post-test extension. ANOVA with Repeated Measurements were used for quantitative data analysis. Findings indicate that the use of e - PBP was found to have a significant impact in improving students' attitudes, knowledge and behavior towards RE. The study suggests that project-based learning for RE is suitable to be implemented online because it makes easier for students to interact without limitations of time and location.

A. PENDAHULUAN

Tenaga merupakan sumber asas kepada pembangunan sebuah negara dan berperanan penting dalam isu-isu semasa sosiosaintifik seperti bekalan tenaga, penghantaran tenaga, penggunaan tenaga, pemeliharaan dan pemuliharaan tenaga dan juga sumber perkembangan ekonomi (Hinrichs & Kleinbach, 2006; Papadouris, Constantinou & Kyratsi, 2008). Menurut Yusof dan Kamaruzzaman (2006), tanpa tenaga tidak mungkin berlaku sebarang aktiviti dalam kehidupan seharian sehinggakan ilmu fizik, satu ilmu asas dalam ilmu sains tabii, tidak akan bangun dan berkembang sekiranya tenaga tidak menjadi satu daripada mauduknya yang penting. Runtuh ilmu sains dan teknologi sekiranya tenaga diabaikan. Oleh itu penggunaan tenaga amat penting dalam setiap aktiviti yang dilakukan oleh manusia dan tenaga yang digunakan ini berhubungkait dengan alam semulajadi dan saling bergantungan antara satu sama lain (K-12 Energy Education Program, KEEP, 2003; Zint, 2002).

Menurut Zografakis et al. (2008), pendidikan berperanan penting untuk membentuk sikap pelajar sama ada di peringkat sekolah rendah atau menengah dan masyarakat terhadap penggunaan tenaga. Sokongan pedagogi dan teknikal yang mantap dengan tersedianya jaringan komunikasi yang kukuh dapat membantu proses pengajaran guru dan pembelajaran pelajar dengan berkesan (Liu et al., 2010). Perkembangan ini telah mengubah paradigma cara P&P dan merupakan satu cabaran kepada guru dan pelajar di abad ke-21 dalam pemerolehan dan aplikasi pengetahuan secara kreatif dan inovatif dalam kehidupan seharian dan persekitaran teknologi (Naismith, Lonsdale, Varoula & Sharples, 2004). Proses pembelajaran

kini adalah melampaui ruang fizikal bilik darjah (Kukulska-Hulme & Traxler, 2005), bersifat global dan berorientasikan pembelajaran sepanjang hayat (Sharples, 2000; 2006). Dalam mengharungi cabaran pembelajaran tentang tenaga pada abad ke-21, pelajar bukan sahaja belajar tentang isi kandungan dalam bilik darjah tetapi berfokus kepada penjanaan ilmu pengetahuan dan cara penyelesaian masalah secara inkuiri melalui interaksi dengan amalan dunia sebenar untuk menyelesaikan masalah tenaga yang berlaku (Everston, 2006; The Buck Institute for Education, BIE, 2005; Colley, 2008).

1.1 Pernyataan Masalah

Satu kajian awal yang dijalankan di Malaysia bagi meninjau pengetahuan dan kefahaman pelajar terhadap tenaga oleh Ahmad Nurulazam dan Fauziah (1998) mendapati bahawa pelajar-pelajar Ijazah Sarjana Muda Pendidikan Sains Fizik di sebuah institusi pendidikan tinggi mempunyai pengetahuan yang rendah terhadap TD. Selain itu, pelajar juga mempunyai konsep alternatif berkaitan tenaga. Dapatan kajian tersebut juga mendapati bahawa pelajar mempunyai sikap yang negatif untuk mencari sumber maklumat berkaitan tenaga dalam meningkatkan pengetahuan mereka. Dapatan kajian Ahmad Nurulazam dan Fauziah (1998) adalah selari dengan kajian Hashimah Mohd Yunus et al. (2008) yang mendapati pengetahuan, sikap dan kesedaran pelajar terhadap TD amat rendah walaupun mereka pernah mempelajari topik tersebut.

Sejak bertahun-tahun lamanya, banyak kajian dilakukan untuk menilai tahap pengetahuan dan kesedaran tenaga dalam kalangan pelajar dan masyarakat. Dapatan empirikal menunjukkan pengetahuan, sikap dan tingkah laku pelajar terhadap TD amat rendah (Bittle et al., 2009; Curry et al., 2007; DeWaters, 2011; Hilal Aktamis, 2011; Lawrenz, 1985; NEETF, 2002; NOWCAST, 2005; Manville, 2008). Berdasarkan kajian yang dilakukan oleh *The National Environmental Education and Training Foundation,* 'NEETF' (NEETF, 2002), mendapati pengetahuan berhubung penjimatan penggunaan tenaga dan pendidikan tenaga amat rendah sekali. Berdasarkan satu kajian tinjauan yang dilakukan Bittle et al. (2009) mendapati, 40% daripada jumlah responden tidak dapat menyatakan sumber bahan api fosil dan juga sumber tenaga diperbaharui. Paling ketara 66% responden tidak tahu dari mana sumber tenaga petroleum diperolehi dan 56% menyatakan bahawa pemanasan global berpunca dari tenaga nuklear sahaja. Dalam satu kajian lain, Halder et al. (2010) mendapati, 92% responden yang terdiri daripada pelajar sekolah gred sembilan tidak mempunyai pengetahuan berkaitan sumber tenaga biojisim. Dari keseluruhan pelajar yang berpengetahuan rendah tersebut, 60% menyatakan bahawa mereka tidak pernah mendengar tentang tenaga biojisim. Dapatan kajian tersebut adalah selari dengan dapatan kajian oleh pengkaji-pengkaji lain (Askew, 2006; BERR, 2008).

1.2   Kepentingan Kajian

Perkembangan teknologi maklumat dan telekomunikasi kini telah memberi cabaran baru dalam dunia pembelajaran dalam kalangan pelajar (Moursund, 2003). Ledakan teknologi maklumat dan telekomunikasi ini menjadi cabaran kepada pelajar apabila mereka perlu menguasai kemahiran menggunakan teknologi terkini dalam proses pembelajaran yang

sememangnya penting pada abad ke-21 kini. Usaha-usaha harus dijalankan agar pelajar dapat mempertingkatkan kemahiran menggunakan teknologi terkini dalam proses pengajaran dan pembelajaran. Ia bertujuan untuk melahirkan pelajar yang dapat memanfaatkan revolusi teknologi terkini seiring dengan perubahan pesat teknologi agar proses pembelajaran dapat menarik minat pelajar di samping melahirkan pelajar kreatif dan inovatif sejajar dengan kepentingan kemahiran ICT abad ke-21 (KPM, 2010).

Memandangkan masalah tenaga yang berlaku hari ini melibatkan masalah global, sumber bahan rujukannya juga terhad dan kebanyakannya hanya boleh dicapai secara atas talian melalui laman web di samping memerlukan komunikasi secara berterusan menggunakan teknologi IT terkini (Energy Quest, 2012; ASE, 2012; PLT, 2012; FSEC, 2012; ScienceNetlink, 2012; ORACLE ThinkQuest, 2012). Justeru itu, untuk mengorak langkah pelajar menuju ke hadapan, kaedah pembelajaran secara atas talian (e-PBP) menggunakan web 2.0 berupaya menjadikan pelajar seorang yang celik IT agar dapat mengakses sumber bahan rujukan dari pelbagai pautan laman web TD dan berkomunikasi dengan pakar tenaga di segenap pelusuk dunia untuk menyelesaikan permasalahan tenaga yang dihadapi (Moursund, 2003; O'Sullivan, 2003; Helle et al., 2006). Kaedah e-PBP memberi ruang kebebasan kepada pelajar membina pengetahuan secara global (Liu et al., 2010) bukan sekadar terikat dengan kandungan silibus dalam buku teks sahaja (Isahak Haron, 2005).

Melaui e-PBP, pembelajaran yang dilaksanakan lebih berkonsepkan kolaboratif dan kaedah ini boleh membantu meningkatkan hasil pembelajaran pelajar melalui interaksi yang berlaku dalam kumpulan dan menepati ciri-ciri pembelajaran konstruktivisme (Belland, Ertmer & Simons, 2006; Lightner, Bober & Willi, 2007). e-PBP menjadikan pelajar lebih aktif, bekerja secara berpasukan, berpengetahuan luas dan mempunyai kemahiran berfikir aras tinggi (Arnold & Ducate, 2006; Guiller, Durndell & Ross, 2008; Vaughn, 2007). Kaedah ini menyediakan suasana persekitaran pembelajaran yang luas, di mana pembelajaran yang berlaku mempunyai perkaitan dengan permasalahan dunia sebenar (Silander, 2004). Menurut Barab dan Luehmann (2002) pendekatan yang digunakan ini meliputi aktiviti kognitif peringkat tinggi, menyokong penggunaan sumber yang berbeza, kemahiran sosial dan kemahiran hidup, menggunakan teknologi dan pengaplikasian penggunaan komputer.

Pembelajaran secara atas talian membolehkan pelajar untuk berkongsi maklumat antara pelajar dari serata dunia menerusi laman sosial, ruangan forum, e-mel, sidang video dan chat (Zaini dan Supyan, 2006). Hasil kerja projek tenaga pelajar yang dimuat naik ke atas talian akan mendapat maklum balas dari pengunjung laman web tersebut. Pelajar boleh menilai komen yang diterima untuk mempertingkatkan hasil kerja mereka. Melalui perbincangan secara atas talian ini, pelajar juga dapat menjana idea-idea baru dan proses ini dapat memperkembangkan pengetahuan pelajar (Murphy, Gazi & Cifuentes, 2007). Menurut Merillat dan Holvoet (2008), laman sosial yang terdapat dalam web merupakan ruang untuk pelajar melakukan komunikasi dan menjadikan pembelajaran lebih interaktif dan efektif.

1.3 Teori Konstruktivisme

Teori pembelajaran dan pendekatan pembelajaran di alaf baru harus melakukan anjakan paradigma daripada pembelajaran berpusatkan guru kepada pembelajaran berpusatkan pelajar seperti yang dicadangkan oleh ahli-ahli psikologi konstruktivis. John Dewey seorang konstruktivis percaya bagaimana kefahaman pelajar mengenai sesuatu maklumat dibina melalui proses penerokaan dan kajian pelajar mengenai sesuatu konsep dan mereka juga mengaplikasi kemahiran berfikir seperti menganalisis, mengintegrasi dan membuat refleksi serta membentuk kefahaman baru mengenai sesuatu konsep dengan mengintegrasi pengetahuan sedia ada dengan pengetahuan baru (Douglas et al., 2005). Konsep penting ini menggalakkan pelajar agar terlibat secara aktif dalam pembelajaran (Field, 2005; Wilson & Liepolt, 2002).

1.4 Teori Konstruktivisme Sosial

Perkara yang penting dalam teori konstruktivisme sosial ialah pengetahuan yang dibina adalah hasil interaksi sosial di antara individu dengan individu lain atau dengan masyarakat (Atherton, 2005; Doise & Mugny, 1984). Interaksi individu dalam persekitaran sosial dapat membina satu pengetahuan yang baru. Pengetahuan ini akan berpindah ke persekitaran sosial yang lain untuk mewujudkan interaksi yang lebih baik dan menghasilkan pengetahuan yang lebih efektif dan kreatif (Dillenbourg, et al., 1999; Guerra, 2004). Pada dasarnya, kerjasama dari interaksi sosial merupakan satu kunci untuk pembangunan diri setiap individu.

B. REKA BENTUK KAJIAN

Kajian ini berbentuk eksperimen kuasi yang dapat menyepadukan kedua-dua pendekatan penyelidikan kuantitatif dan kualitatif. Kajian ini menggunakan kumpulan pelajar sedia ada di Tingkatan Empat aliran sains tulen.

Reka bentuk eksperimen kuasi, yang akan dilaksanakan adalah berbentuk satu kumpulan ujian pra – ujian pos pengukuran berulang terhadap pemboleh ubah bersandar (Campbell & Stanley,1963; Cohen, Manion & Morrison, 2001; Heward et al., 2005). Pengukuran berulang dilakukan untuk memperbaiki kelemahan dalam reka bentuk kajian yang tidak mempunyai kumpulan kawalan dan gagal membentuk keseimbangan kumpulan kawalan (Best & Kahn, 2008). Ketidak serataan responden dalam kumpulan adalah fenomena biasa dalam kajian kerana amat sukar untuk mendapat sampel kajian yang setara secara sempurna kerana setiap pelajar mempunyai tahap pengetahuan yang berlainan. Reka bentuk yang digunakan adalah seperti yang ditunjukkan dalam Rajah 3.1. Hal ini beerti kesemua pelajar perlu menjawab ujian pra dan ujian pos yang sama bagi tujuan melihat kesan e-PBP ke atas sikap, pengetahuan dan tingkah laku pelajar terhadap TD. Seterusnya kumpulan ini akan melalui ujian pos 2 (lanjutan) bagi mengenal pasti pengekalan terhadap kaedah e-PBP.

Kumpulan	Intervensi			
Rawatan	O_1	X	O_2	...............O_3

Rajah 3.1. Reka Bentuk Eksperimen Kuasi Satu Kumpulan Ujian Pra - Ujian Pos
(Campbell & Stanley, 1963)

Di mana:

X = Pembelajaran berasaskan projek secara atas talian
O_1 = Ujian pra, O_2 = Ujian pos 1, O_3 = Ujian pos 2

Instrumen Sikap, Pengetahuan dan Tingkah Laku Pelajar Terhadap TD

Instrumen ini digunakan untuk mengukur sikap, pengetahuan dan tingkah laku pelajar terhadap tenaga diperbaharui hasil dari penggunaan kaedah e-PBP. Instrumen baru dibina dengan mengadaptasi instrumen asal *A Broad Assessment of Energy-related Knowledge, Attitudes and Behaviors* yang dibina oleh DeWaters (2009).

C. ANALISIS DATA

Tujuan kajian ini adalah untuk mengkaji kesan penggunaan e-PBP ke atas sikap, pengetahuan dan tingkah laku pelajar Tingkatan Empat aliran sains tulen terhadap tenaga diperbaharui. Sampel kajian sejumlah 48 orang pelajar menerima rawatan e-PBP dan bertindak sebagai kumpulan eksperimen. Kajian ini menggunakan kaedah eksperimen kuasi dengan reka bentuk kumpulan eksperimen tunggal tanpa kumpulan kawalan. Kesan e-PBP dilihat terhadap tiga pemboleh ubah besar iaitu sikap TD, pengetahuan TD dan tingkah laku TD. Sikap TD, pengetahuan TD dan tingkah laku TD diukur sebanyak tiga kali (pra, pos dan pos lanjutan). Perisian *Statistical Package for Sosial Science* (SPSS) versi 20.00 digunakan untuk menganalisis data.

3.1 Analisis Statistik Min Skor Soal Selidik Pra, Min Skor Soal Selidik Pos dan Min Skor Soal Selidik Pos Lanjutan Sikap TD

Dapatan kajian pada bahagian ini ialah untuk menjawab persoalan pertama dan kedua berikut:

i. Adakah e-PBP memberi kesan yang signifikan ke atas sikap TD terhadap sampel kajian ?

ii. Adakah e-PBP memberi kesan yang signifikan ke atas pengekalan sikap TD terhadap sampel kajian ?

Bagi menjawab persoalan ini, analisis statistik deskriptif dilakukan bagi mengenalpasti nilai min, sisihan piawai, nilai minimum dan nilai maksimum soal selidik pra dan soal selidik pos sikap pelajar terhadap TD yang mengikuti e-PBP. Seterusnya, analisis statistik inferensi dilakukan bagi menguji hipotesis-hipotesis kajian berikut;

Hipotesis utama yang diuji ialah:

H_{o1}: Tidak terdapat kesan utama yang signifikan oleh waktu ujian (pra, pos, pos lanjutan) terhadap min skor soal selidik sikap TD dalam kalangan pelajar yang mengikuti e-PBP.

Secara spesifiknya sub hipotesis - sub hipotesis yang diuji adalah seperti berikut:

H_{o1a}: Tidak terdapat perbezaan yang signifikan pada min skor soal selidik pra dan min skor soal selidik pos sikap TD dalam kalangan pelajar yang mengikuti e-PBP.

H_{o1b}: Tidak terdapat perbezaan yang signifikan pada min skor soal selidik pos dan min skor soal selidik pos lanjutan sikap TD dalam kalangan pelajar yang mengikuti e-PBP

3.1.1 Analisis Statistik Deskriptif Min Skor Soal Selidik Pra, Min Skor Soal Selidik Pos dan Min Skor Soal Selidik Pos Lanjutan Sikap TD

Pada asasnya, bagi tujuan memastikan sama ada taburan data kajian yang dikumpul adalah normal, dua kaedah telah digunakan iaitu secara statistik deskriptif melalui nilai pencongan *skewness* serta *kurtosis* dan juga secara analisis grafik. Nilai pencongan *skewness* menunjukkan simetri penyebaran, manakala nilai *kurtosis* menunjukkan *peakedness* penyebaran. Nilai pencongan positif bermakna skor-skor terkumpul di sebelah kiri pada nilai-nilai rendah dalam graf. Manakala, nilai pencongan yang negatif pula menunjukkan skor-skor berkumpul di sebelah kanan pada nilai-nilai yang tinggi dalam graf. *Kurtosis* yang positif menunjukkan penyebaran agak tajam yang mewakili skor-skor berkumpul di tengah-tengah (Babbie et al., 2012). Dalam kajian ini, taburan normaliti data juga disemak berdasarkan analisis grafik iaitu melalui semakan graf plot normal Q-Q serta semakan nilai *kurtosis* dan pencongan.

Berpandukan julat nilai antara -1 hingga +1 yang ditetapkan oleh George dan Mallery (2003), didapati nilai *skewness* dan *kurtosis* dianggap menghampiri nilai sifar yang membawa kepada rumusan bahawa bentuk taburan min skor soal selidik pra sikap TD, min skor soal selidik pos sikap TD dan min skor soal selidik pos lanjutan sikap TD cenderung menghampiri bentuk normal (Lampiran J). Bahkan, keputusan ujian statistik *Shapiro-Wilks* yang tidak signifikan ($p>0.05$, Jadual 3.1) menunjukkan bahawa taburan min skor tertabur secara normal (Lampiran M). Dapatan ini disokong oleh penelitian terhadap plot normal Q-Q taburan min skor soal selidik pra sikap TD, soal selidik pos sikap TD dan soal selidik pos lanjutan sikap TD (Lampiran M) iaitu titik-titik menghampiri garisan lurus plot normal Q-Q.

Jadual 3.1. Ujian Kenormalan Berasaskan Statistik *Shapiro-Wilks* Sikap TD

Sikap TD	*Shapiro-Wilk*		
	Statistik	Darjah Kebebasan	Signifikan
Soal selidik pra	0.940	48	0.062
Soal selidik pos	0.966	48	0.175
Soal selidik pos lanjutan	0.979	48	0.541

Didapati min skor soal selidik pos sikap TD (M=43.50, S.P.=6.13) secara relatifnya adalah lebih tinggi berbanding min skor soal selidik pra sikap TD (M=38.85, S.P.= 6.28) (Jadual 3.2 dan Rajah 3.1). Namun begitu secara relatifnya juga didapati min skor soal selidik pos lanjutan (M=48.39, S.P.=5.76) lebih tinggi berbanding min skor soal selidik pos (M=43.50, S.P.=6.13) (Jadual 3.2 dan Rajah 3.1).

Jadual 3.2: Deskripsi Min, Sisihan Piawai, Minimum dan Maksimum Secara Keseluruhan Soal Selidik Pra, Soal Selidik Pos dan Soal Selidik Pos Lanjutan Sikap TD

	Soal Selidik Pra	Soal Selidik Pos	Soal Selidik Pos Lanjutan
N	48	48	48
Min	38.85	43.50	48.39
Sisihan Piawai	6.28	6.13	5.76
Minimum	26.00	31.00	36.10
Maksimum	50.00	56.00	61.10
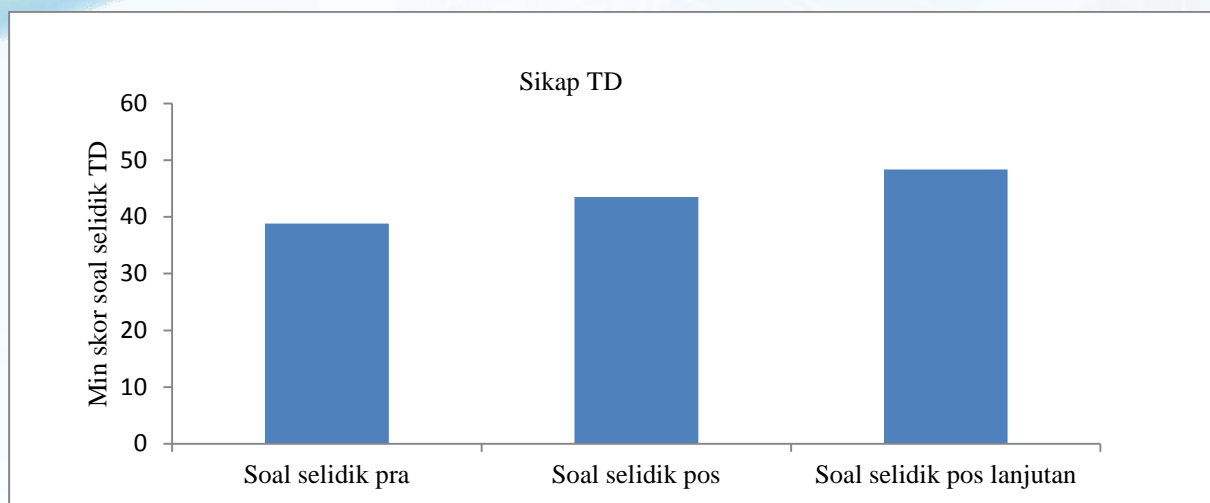
Rajah 3.1: Carta Palang Min Skor Soal Selidik Pra, Min Skor Soal Selidik Pos dan Min Skor Soal Selidik Pos Lanjutan Sikap TD

3.1.2 Analisis Statistik Inferensi Min Skor Soal Selidik Pra, Min Skor Soal Selidik Pos dan Min Skor Soal Selidik Pos Lanjutan Sikap TD

Ujian ANOVA dengan Pengukuran Berulang pada aras signifikan $p = 0.05$ dijalankan bagi mengesan sama ada wujud perbezaan yang signifikan pada min skor soal selidik pra, min skor soal selidik pos dan min skor soal selidik pos lanjutan sikap TD. Berikut adalah hipotesis kajian yang digunakan terdiri dari satu hipotesis utama dan dua sub hipotesis yang diuji. Hipotesis utama yang diuji ialah:

H_{o1}: Tidak terdapat kesan utama yang signifikan oleh waktu ujian (pra, pos, pos lanjutan) terhadap min skor soal selidik sikap TD dalam kalangan pelajar yang mengikuti e-PBP.

Secara spesifiknya sub hipotesis – sub hipotesis yang diuji adalah seperti berikut:

H_{o1a}: Tidak terdapat perbezaan yang signifikan pada min skor soal selidik pra dan min skor soal selidik pos sikap TD dalam kalangan pelajar yang mengikuti e-PBP.

H_{o1b}: Tidak terdapat perbezaan yang signifikan pada min skor soal selidik pos dan min skor soal selidik pos lanjutan sikap TD dalam kalangan pelajar yang mengikuti e-PBP.

Secara keseluruhannya, ujian ANOVA dengan Pengukuran Berulang dijalankan untuk menentukan kesan utama waktu ujian terhadap pemboleh ubah bersandar iaitu sikap terhadap TD. Waktu ujian dikategorikan sebagai pemboleh ubah dalaman (*within variable*) yang digunakan bagi melakukan ujian ANOVA dengan Pengukuran Berulang. Berdasarkan perspektif ujian ANOVA dengan Pengukuran Berulang (Hair et al., 2009), sesuatu pemboleh ubah kajian dianggap sebagai pemboleh ubah dalaman apabila pemboleh ubah berkenaan diukur berulang kali pada sampel yang sama. Dalam konteks kajian ini, waktu ujian merujuk kepada sikap terhadap TD yang diukur berulang kali terhadap sampel kajian iaitu pada sebelum rawatan (soal selidik pra), sebaik sahaja selepas rawatan (soal selidik pos) dan setelah jangka waktu tertentu selepas tamat rawatan (soal selidik pos lanjutan). Justeru, tujuan menguji kesan utama pemboleh ubah dalaman iaitu waktu ujian terhadap pemboleh ubah

bersandar iaitu sikap TD ialah bagi mengetahui sama ada terdapat perubahan signifikan min skor soal selidik sikap TD berdasarkan kepada pengukuran berulang sikap terhadap TD sebanyak tiga kali iaitu pada masa sebelum rawatan (soal selidik pra), sebaik sahaja selepas rawatan (soal selidik pos) dan setelah jangka waktu tertentu selepas tamat rawatan (soal selidik pos lanjutan). Keputusan ujian *multivariate* (Jadual 3.3) menunjukkan kesan utama waktu ujian terhadap sikap TD adalah signifikan, Wilks' Lambda= 0.435, F(2, 46)= 29.859, p= 0.000, η^2 = 0.565 dan kuasa cerapan bernilai 1.000.

Jadual 3.3. Keputusan Ujian *Multivariate* untuk Min Skor Sikap TD

Kesan		Nilai	F	Darjah Kebebasan Hipotesis	Darjah Kebebasan Ralat	Sig.	Eta Separa Kuasa Dua	Kuasa Cerapan
Sikap TD	Wilks' Lambda	0.435	29.859	2.000	46.000	0.000	0.565	1.000

Keputusan ujian *multivariate* disokong dengan dapatan ujian *univariate* untuk pemboleh ubah dalam subjek dipersembahkan pada Jadual 3.5. Namun, bagi memilih ujian *univariate* yang bersesuaian (Jadual 3.5), andaian kesferaan diperiksa terlebih dahulu menggunakan keputusan ujian *Mauchly* (Jadual 3.4).

Jadual 3.4. Keputusan Ujian Kesferaan *Mauchly* Sikap TD

Kesan dalam tempoh masa	Mauchy's W	Khi Kuasa Dua	Darjah Kebebasan	Sig.	Epsilon Greenhouse-Geisser
Sikap TD	0.967	1.562	2	0.458	0.968

Keputusan ujian kesferaan *Mauchly* menunjukkan nilai p yang diperoleh adalah 0.458 iaitu lebih besar dari 0.05 (Jadual 3.4). Berdasarkan nilai yang diperoleh, ini menunjukkan bahawa andaian kesferaan matriks varian kovarian dipatuhi (Howell, 2009). Berdasarkan keputusan ujian *univariate* yang bersandarkan andaian kesferaan (Jadual 3.5), di dapati kesan utama waktu ujian yang signifikan bagi sikap terhadap TD, F= 35.965, p= 0.000, η^2 = 0.433 dengan kuasa cerapan 1.000. Keputusan ujian *multivariate* (Jadual 3.3) dan ujian *univariate* (Jadual 3.5) adalah signifikan dan ini bermakna terdapat sekurang-kurangnya satu pasangan ujian yang mempunyai perbezaan min skor soal selidik sikap TD yang signifikan iaitu sama ada pasangan:

i. min skor soal selidik pra sikap TD dengan min skor soal selidik pos sikap TD

ii. min skor soal selidik pos sikap TD dengan min skor soal selidik pos lanjutan sikap TD

iii. min skor soal selidik pra sikap TD dengan min skor soal selidik pos lanjutan sikap TD

Jadual 3.5. Keputusan Ujian *Univariate* Sikap TD

Sumber		Jumlah Kuasa Dua Jenis III	Darjah Kebeba-san	Kuasa Dua Min	F	Sig.	Separa Eta Kuasa Dua	Kuasa Cerap-an
Sikap TD	Andaian Kesfera-an	2183.617	2	1091.809	35.965	0.000	0.433	1.000
	Green house-Geissser	2183.617	1.935	1128.26	35.965	0.000	0.433	1.000

Berdasarkan keputusan ujian *Bonferroni* (Jadual 3.6), didapati terdapat perbezaan yang signifikan ($p < 0.05$) pada pasangan berikut:

i.   min skor soal selidik pra sikap TD dengan min skor soal selidik pos sikap TD

ii.   min skor soal selidik pos sikap TD dengan min skor soal selidik pos lanjutan sikap TD

iii.   min skor soal selidik pra sikap TD dengan min skor soal selidik pos lanjutan sikap TD

Jadual 3.6. Keputusan Ujian *Bonferroni* Sikap TD

Sikap TD		Perbezaan Min	Darjah Kebebasan Ralat	Sig.
Soal selidik pra	Soal selidik pos	-4.646	1.086	0.000
	Soal selidik pos lanjutan	-9.573	1.222	0.000
Soal selidik pos	Soal selidik pra	4.646	1.086	0.000
	Soal selidik pos lanjutan	-4.892	1.059	0.000
Soal selidik pos lanjutan	Soal selidik pra	9.537	1.222	0.000
	Soal selidik pos	4.892	1.059	0.000

Bagi melihat pola perubahan ini, nilai *estimated marginal means* sikap TD yang diperoleh digunakan bagi melihat pola perubahan min skor bagi pencerapan setiap ujian yang dilakukan. Dapatan menunjukkan min soal selidik pra sikap TD ialah 38.85 manakala min soal selidik pos sikap TD ialah 43.50 (Jadual 3.7). Terdapat peningkatan min skor soal selidik sikap TD dari sebelum rawatan ke selepas rawatan. Dapatan ini disokong oleh dapatan Jadual 3.6 yang menunjukkan terdapat perbezaan yang signifikan pada pasangan min skor soal selidik pra sikap TD dengan min skor soal selidik pos sikap TD. Justeru, dapat disimpulkan bahawa pembelajaran secara atas talian memberi kesan yang signifikan ke atas peningkatan sikap TD yang positif dalam kalangan sampel kajian.

Jadual 3.7. Keputusan Ujian *Estimated Marginal Means* Sikap TD

Sikap Tenaga	Min	95% Selang Keyakinan	
		Had Bawah	Had Atas
Soal selidik pra	38.85	37.03	40.67
Soal selidik pos	43.50	41.72	45.28
Soal selidik pos lanjutan	48.39	46.72	50.07

Seterusnya dapatan juga menunjukkan min skor soal selidik pos lanjutan sikap TD ialah 48.39 manakala min skor soal selidik pra sikap TD ialah 38.85 (Jadual 3.7). Perbezaan min skor soal selidik pos lanjutan sikap TD berbanding min skor soal selidik pra sikap TD sejumlah 9.54 bermakna terdapat peningkatan min skor soal selidik sikap TD sebelum rawatan dan selepas rawatan. Dapatan ini disokong oleh dapatan Jadual 3.6 yang menunjukkan terdapat perbezaan yang signifikan pada pasangan min skor soal selidik pra sikap TD dengan min skor soal selidik pos lanjutan sikap TD. Justeru, dapat disimpulkan bahawa e-PBP memberi kesan yang signifikan ke atas peningkatan sikap TD yang positif dalam kalangan sampel kajian.

Akhir sekali, dapatan min skor selidik pos lanjutan sikap TD yang diperoleh ialah 48.39 manakala min skor soal selidik pos sikap TD ialah 43.50 (Jadual 3.7). Perbezaan min skor sejumlah 4.89 bermakna terdapat peningkatan min skor daripada keputusan ujian pos sikap TD kepada ujian pos lanjutan sikap TD. Dapatan ini disokong oleh dapatan Jadual 3.6 yang menunjukkan terdapat perbezaan yang signifikan pada pasangan min skor soal selidik pos sikap TD dengan min skor soal selidik pos lanjutan sikap TD. Justeru, dapat disimpulkan bahawa terdapat kesan yang signifikan dalam pengekalan sikap TD menerusi peningkatan daripada keputusan soal selidik pos sikap TD kepada soal selidik pos lanjutan sikap TD pada sampel kajian.

D. RUMUSAN PERBINCANGAN

Kajian ini mendapati pendekatan penggunaan e-PBP dalam pembelajaran mampu memberikan impak yang positif ke arah meningkat sikap, tingkah laku dan pengetahuan pelajar terhadap TD.

Kajian ini juga mendapati penggunaan peralatan atas talian dalam e-PBP menjadikan pembelajaran pelajar lebih menarik dan menyeronokkan. Pelajar terlibat secara aktif dalam semua aktiviti pembelajaran dan mereka diberi kuasa autonomi untuk membuat keputusan, menentukan matlamat mengikut keperluan mereka. Tanpa ada sekatan, pelajar menjelajah seluruh dunia menggunakan peralatan atas talian dalam e-PBP untuk mendapatkan pelbagai maklumat berkaitan TD samada dalam bentuk teks atau video. Pencarian dan penyaluran maklumat boleh dilakukan dengan mudah dan masalah tenaga yang kompleks dapat diselesaikan dengan cepat. Corak pembelajaran yang berterusan ini berupaya meningkat dan mengekalkan sikap pelajar terhadap TD. Kaedah pembelajaran ini juga dapat mengubah tingkah laku pelajar terhadap keperluan penggunaan TD selari dengan perkembangan teknologi terkini.

Aktiviti pembelajaran e-PBP dilakukan secara *hand-on* dan penyiasatan berasaskan projek memerlukan pelajar untuk belajar menggunakan konsep sains dan konsep praktikal. Kajian ini mendapati penggunaan kaedah e-PBP di dalam topik tenaga adalah releven dengan kehidupan pelajar di luar sekolah terhadap tenaga dan isu-isu berkaitan tenaga. Hubungan yang terbina ini dapat memantapkan lagi teori yang dipelajari di dalam kelas dan lebih cenderung untuk meningkatan lagi pengetahuan pelajar terhadap TD. Projek TD yang dibina dapat mengeratkan lagi hubungan pelajar dengan isu-isu dan masalah tenaga yang dihadapi di luar. Pelajar perlu memahami dengan jelas permasalahan tenaga yang berlaku di sekeliling agar projek yang dilakukan dapat menyelesaikan masalah yang berlaku. Proses pembinaan projek TD ini meninggalkan kesan yang mendalam terhadap tingkah laku pelajar terhadap TD dan minat yang tinggi ditunjukkan pelajar sewaktu melaksanakan kerja projek TD menunjukkan sikap positif pelajar terhadap kerja TD yang dilakukan.

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THE INFLUENCE OF COOPERATIVE LEARNING TYPE GROUP TO GROUP EXCHANGE AND JIGSAW TOWARD THE IMPROVEMENT OF THE STUDENTS' MATHEMATICAL UNDERSTANDING ABILITY

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Abstract

This paper reports the findings of a quasi-experimental design and pretest-posttest control group. The purposes of this study are to determine the difference of mathematical understanding ability and the improvement of mathematical understanding ability among the students who got cooperative learning type Group to Group Exchange in the first experimental group, those who got Jigsaw cooperative learning in the second experimental group and they who got conventional classroom learning control . The population is the students of class VII SMP 46 Bandung, while the sample in this study is VII-B, VII E and VII-F. The instrument used is test of the students' mathematical understanding ability and the scale of students' attitude toward the learning activity in the experimental group. To Analyze the data obtained ANOVA and t-test path are used. The results of this study are: (1) there are differences in students' mathematical understanding ability in the first and second experimental group compared to the control one; (2) the improvement of students' mathematical understanding ability in the experimental group is 0.6741, while the second one is 0.6318 and control group is 0.5046, the improvement of those three group belong to the medium category; (3) there are differences between the students who got the cooperative learning type Group to Group Exchange and those who got Jigsaw cooperative learning. The attitude of the students learning by cooperative learning type Group to Group Exchange is more enthusiastic than the attitudes of those learning by the Jigsaw cooperative learning type.

Keywords: ability understanding mathematics, cooperative learning type group to group exchange, cooperative learning jigsaw

A. INTRODUCTION

Learning by Sudjana (2010: 5) is a process characterized by a change in a person. The results of this changes in the learning process can be demonstrated in a variety of forms such as changing the knowledge, understanding, attitudes and behaviors, skills, habits, and changes in other aspects existing in the individual learning. Thus, learning is basically a process of changing behavior relating to the understanding of learning itself.

One of the subjects taught to students is mathematics. According to the National Education Standards (2006: 346) the aim of mathematics is to make the learners have cognitive abilities which one of them is to understand the mathematical concepts, explain the

relationship between concepts and apply the concepts or algorithms flexibly, accurately, efficiently and appropriately in solving the problems. Therefore, students' understanding of mathematics is essential to produce a good student learning outcome.

From the observations, in the process of learning mathematics in the seventh class of SMP 46 Bandung shows that the teachers in implementing instructional still convey information from the teacher to the student. In this learning, only students with high academic ability who can accept the material presented well, while the low academic level students can not accept the material well, this situasion makes the students passive in the learning activity. The teacher explains the learning materials, giving example problems then providing exercises and homework to students. The teachers do not organize the students to discuss in heterogeneous groups, so that the interaction and the communication among the students in the learning activity do not carry out well and the students' understanding of the subject matter is not exhaustive.

Based on the problems above, to improve students' understanding of mathematics in seventh class of SMP 46 Bandung, two types including the cooperative learning on teaching peers *(Peer Teaching)* are applied. Those are *Group to Group Exchange* and *Jigsaw* cooperative learning types developed by Melvin L. Silberman in the book *Active Learning* (2009: 165-170). The conventional learning type which is commonly applied by the teachers is also used in this research.

B. LITTERATURE REVIEW
1. Understanding of Mathematical Ability

Understanding is one of the of Bloom's Taxonomy aspects. Ruseffendi (2006: 221) states that there are three kinds of understanding, namely the conversion *(translation),* giving meaning *(interpretation),* and the making the extrapolation *(extrapolation).* In mathematics, for example able to change *(translation)* about the words into mathematical symbols and vice versa, is able to interpret *(interpretation)* a similarity, is able to predict *(extrapolate)* a tendency of the diagram.

In understanding process, the students not only have to understand the information but also understand the objectivity, the attitude and the meaning of information. In other words, a student can change the information in his mind into another form that is more meaningful. The process of change is greatly influenced by the students' understanding ability on such information. In addition, he can also transmit the information to his friends so that it can be understood by his friend.

Mathematical understanding is important to study mathematics meaningful, the teachers expect the understanding achieved by students is not limited on the connecting understanding. Meaningful learning occurs if the information which will be learned by the students prepared based on the cognitive structure of the students so that the students can relate the new information to the cognitive structure owned. This means that students can relate between their prior knowledge and another condition so that they can learn by understanding.

Mathematical understanding of the students in question in this research is the ability of students' understanding of mathematics is not only limited to the ability of the instrumental understanding of relational understanding but reach capabilities, with indicators adapted to the understanding of learning quadrilateral junior high school students of class VII, namely: the ability to restate the concept that has been studied, the ability of apply the concept in the algorithm, the ability to associate a variety of mathematical concepts and ability to apply concepts in a variety of forms of representative math.

2. Types of Cooperative Learning Group to Group Exchange

Cooperative learning (Suprijono, 2010: 54) is a broader concept covering all types of group work including more forms led by a teacher or directed by the teacher. In general, cooperative learning is considered to be more directed by the teacher, in which teachers assign tasks and questions and provide materials and information designed to help learners to solve the problem in question. Teachers usually assign specific form of the exam at the end of the task. One model of cooperative learning is the *Group to Group Exchange.*

In the Group to Group Exchange's strategy, the different tasks given to different groups of students. Each group was "taught" to other students what he learned. Group learning procedure to Group Exchange, as follows (Silberman, 2009: 178):

a. Choose a topic that includes ideas, events, opinions, concepts, or a different approach. In math, the topics chosen cover different mathematical concepts. Topics that should be the topic that endorse the opinions or information exchange.

b. Divide students into groups according to the number of tasks assigned. In general, this activity is suitable for two to four groups. Give sufficient time for each group to prepare the way they present the topic assigned to p exist their respective groups, to later be presented to the other groups.

c. When the preparatory phase has been completed, instruct the group to choose a spokesperson. Invite each spokesperson to give presentations to other groups.

d. After a brief presentation, encourage students to ask questions or offer their own opinion to the renderer material (spokesperson). Give a chance the other members of the group spokesperson to respond.

e. Continue presentations of other groups so that each group had the opportunity to provide information and answer and respond to questions and comments of other groups. The comparison and perbedakan opinions and information exchanged.

f. Variations can be done by asking each group discussions prior to the presentation and discussion of shared use for each sub-group presentations.

3. Jigsaw Cooperative Learning Type

Jigsaw was first developed and tested by Elliot Aronson and his colleagues (Slavin, 2010: 236). Jigsaw (Isjoni, 2007: 22) is an attractive strategy to use if the material to be studied can be divided into several parts and the material does not require delivery sequence. Learning the Jigsaw cooperative learning model is in principle the same as the Group to Group Exchange, but there is one important difference that each student teaches something.

This is an interesting alternative when learning materials that can be segmented or divided and when parts must be taught sequentially. Each student has two groups and group learning in the classroom "learning jigsaw", where the "jigsaw learning" is made up of representatives of each "group learning" in the classroom. Giving different materials given to each study group were subsequently they will teach members of the group "Jigsaw Learning" her. Each student studying something that when combined with the material being studied by other students will form a coherent body of knowledge.

The learning procedures with the Jigsaw cooperative learning type are as follows (Silberman, 2009: 180):

a. Choose learning materials that can be broken down into several sections.
b. Calculate the number of parts to be studied and the number of students. Share fairly a variety of tasks to different groups of student learning.
c. After completion of study time, form groups *"Jigsaw Learning"*. The group consists of representatives of each "group learning" in class.
d. Instruct members of the *"jigsaw"* to teach each other what they have learned.
e. Instruct students to return to its original position in order to address the question that remains to ensure accurate understanding.
f. Variations can be made to give new tasks such as answering the question depends on the accumulated knowledge of the group members of the jigsaw.

C. METHODOLOGY

The research method is experimental method is taken, it is necessary to study the 3 groups. Students who use cooperative learning model to Group Exchange Group as the first experimental group, students who use the Jigsaw cooperative learning model as both experimental and conventional group as a control class.

The study design used is the design of the control group pretest - posttest. In visualization can be described as follows:

$$
\begin{array}{cccc}
A & 0 & X1 & 0 \\
A & 0 & X2 & 0 \\
A & 0 & & 0
\end{array}
$$

(Ruseffendi, 2005 : 50)

Description:
A: classes taken at random   0: = pretest posttest
X1: Group to Group Exchange   X2: Jigsaw

D. FINDINGS

1. Understanding Differences of Mathematical Ability

The results of the pretest after the data is processed turns out there is no difference mathematical comprehension of the third class. Then further processed by using the data posttest ANOVA one track to test whether there are differences in the ability of students' understanding of mathematics learning of the three groups after sebeumnya assumptions of

normality and homogeneity of data was filled. ANOVA one lane will be done using SPSS. SPSS data processing results are as follows:

Table 1 Results of One Way ANOVA Data posttest

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3440.104	2	1720.052	10.559	.000
Within Groups	19059.570	117	162.902		
Total	22499.674	119			

From Table 1 above is known that F count was 10,559 with a probability of 0.000. Therefore probability value <0.05 then Ho is rejected or there are differences in the ability of students to use mathematical understanding using cooperative learning model to Group Exchange Group, Jigsaw and conventional.

Further study will look different and not different from using Bonferroni analysis and the Tukey Post Hoc Test which will be presented in Table 2 below.

Table 2. Results of Post Hoc Test Data Test posttest

	(I) Pembelajaran	(J) Pembelajaran	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Tukey HSD	Group to Group Exchange	Jigsaw	2.81250	2.85396	.587	-3.9626	9.5876
		Konvensional	12.50000*	2.85396	.000	5.7249	19.2751
	Jigsaw	Group to Group Exchange	-2.81250	2.85396	.587	-9.5876	3.9626
		Konvensional	9.68750*	2.85396	.003	2.9124	16.4626
	Konvensional	Group to Group Exchange	-12.50000*	2.85396	.000	-19.2751	-5.7249
		Jigsaw	-9.68750*	2.85396	.003	-16.4626	-2.9124
Bonferroni	Group to Group Exchange	Jigsaw	2.81250	2.85396	.979	-4.1195	9.7445
		Konvensional	12.50000*	2.85396	.000	5.5680	19.4320
	Jigsaw	Group to Group Exchange	-2.81250	2.85396	.979	-9.7445	4.1195
		Konvensional	9.68750*	2.85396	.003	2.7555	16.6195
	Konvensional	Group to Group Exchange	-12.50000*	2.85396	.000	-19.4320	-5.5680
		Jigsaw	-9.68750*	2.85396	.003	-16.6195	-2.7555

*. The mean difference is significant at the 0.05 level.

To better determine the sequence of the three learning is then calculated by finding the average difference was significant abbreviated MCC. The results are presented in Table 3 below

Table 3. Average Difference Posttest Data

	Group to Group Exchange	*Jigsaw*	**Conventional**
Group to Group Exchange	**XXXX**	2,8125	12,5
Jigsaw	2,8125	**XXXX**	9,6875
Conventional	12,5	9,6875	**XXXX**

To determine its effectiveness, compare all the differences of each two average values in the table above with the PKS.

If the average difference between groups is greater than the value of the MCC, the difference can be said to be significant. If the average difference between groups is less than or equal to the PKS, then the effectiveness of both learning together.

From the above data can be sorted:

1st: cooperative learning model to Group Exchange Group and Jigsaw.

2nd: Conventional Learning Model

2. Improved Understanding of Mathematical Ability Students

Based on calculations using the formula normality gain obtained results as shown in Table 4 below.

Table 4 Calculation Results of Normality Test

Kemampuan	**Kelas Eksperimen I**	**Kelas Eksperimen II**	**Kelas Kontrol**
Indeks Gain	0,6741	0,6318	0,5046
Peningkatan	67,41 %	63,18 %	50,46 %
Kategori	Sedang	Sedang	Sedang

3. Analysis of Student Attitudes Scale

After the assumption of normality of data and homogeneity of variance of the three groups met, further tests will be carried out Independent Sample T Test to test whether there are differences in attitudes of both groups of students are learning.

Based on Independent Sample T test with SPSS Test results obtained as shown in Table 5 below:

Table 5. Test Results of Independent Sample T Test Data Attitude Differences

	Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
	F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper

	SikapSiswa								
Skor Siswa	Equal variances assumed	2.449	.124	2.083	48	.043	6.36000	3.05330	.22092	12.49908
	Equal variances not assumed			2.083	45.114	.043	6.36000	3.05330	.21076	12.50924

Guidelines for decision-making:

If the probability Sig (2-tailed) <0.05 then H 0 is rejected

If the probability Sig (2-tailed)> 0.05 then H0 is accepted

Based on independent test sample T Test on the table 3:15 SPSS obtained significant value 0.043, because the probability value <0.05 then H 0 is accepted, then there is a difference between students' response to learning using cooperative learning model to Group Exchange Group and cooperative learning model Jigsaw

To determine which student responses keals better than the mean can be seen in Table 6 above.

Table 6 *Group Statistics* Student Attitude Differences

	SikapSiswa	N	Mean	Std. Deviation	Std. Error Mean
SkorSiswa	*Group to Group Exchange*	25	1.3252	12.08346	2.41669
	Jigsaw	25	1.2616	9.33042	1.86608

Seen that the mean response of students with cooperative learning model to Group Exchange Group is 1.3252 while the mean response of students to the Jigsaw cooperative learning model is 1.2616. Because the mean group cooperative learning model to Group Exchange bigger it can be concluded that students 'response to learning with cooperative learning model to Group Exchange Group is better than learning on students' response to the Jigsaw cooperative learning model.

E. DISCUSSION

In general, the learning process in the experimental class I and class II experiment be fun and not boring for them. The student activity makes students better understand the material and the ability of students' mathematical understanding in this quadrilateral matter because what looks good to discuss with other students and what students are taught with the other, causing him to gain an understanding of how to learn and master. In addition, more students master the material because he was able to teach other students. This is not considered in the conventional learning process.

Learning Group to Group Exchange and Jigsaw there is no difference because the steps in cooperative learning model to Group Exchange Group and Jigsaw are almost the same. It can be known at the beginning of the second step of the study, namely from the students formed study groups and students are given a different material on each of the study groups. After that, the students learn the material in each study group by doing worksheets according

bahasannya material. Step that differentiates the two models is the description of the material being studied stage each study group.

If the Model Group to Group Exchange, an explanation of material in each study group represented by one spokesperson for each group studied. A spokesman for the discussion on the charge of presenting the material in front of the class study groups by means of a presentation followed by a question and answer session. While the Jigsaw model, students learn the material description on the study groups, they teach to the jigsaw group. At the jigsaw groups, all representatives of each group to learn to teach each other different materials on a jigsaw group. In closing these two models of learning, students are given LTS (Student Task Sheet) to be done individually. Therefore, the learning outcomes with the model group to the Group Exchange and Jigsaw in this study there was no difference.

F. CONCLUSION

Based on the results of research on the effects of the use of cooperative learning model *to Group Exchange Group* and *Jigsaw* to the increased ability of students' mathematical understanding on the subject quadrilateral implemented in SMP 46 Bandung outline can be concluded:

1. Artifacts differences in the ability of students to use mathematical understanding cooperative learning model *to Group Exchange Group, Jigsaw* cooperative learning model and conventional. Based on the average of final grades students 'understanding of mathematics ability, then the sequence of learning that can improve students' understanding of mathematics on the subject of the quadrilateral is a cooperative learning model *to Group Exchange Group, Jigsaw* cooperative learning model and conventional.

2. After the *pretest* and *posttest* data analysis seen an increase in the ability of understanding by finding the value of the gain normality of the third class, an increased understanding of the ability of students to class k matemati first experiment that uses cooperative learning model *to Group Exchange Group* 741 of 0.6, the experimental class II using *Jigsaw* cooperative learning model for 0, 6318 and grade control the use of conventional 0.5046. classification of normality gain the third class is being.

3. There is a difference in attitude between students who learn to use cooperative learning model *to Group Exchange Group* and *Jigsaw* cooperative learning model. The attitude of students learning with cooperative learning model *to Group Exchange Group* is more enthusiastic than the attitudes of students who study the *Jigsaw* cooperative learning model. But in general the students enthusiastic about cooperative learning model *to Group Exchange Group* and *Jigsaw* cooperative learning model.

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IMPLEMENTATION OF *NUMBERED HEAD TOGETHER* TYPE COOPERATIVE LEARNING WITH ANIMATION TOWARDS STUDENTS' HYDROCARBON CONCEPT MASTERY

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Abstract

This research aims to know the difference between hydrocarbon concept mastery through NHT type learning with animation and NHT without animation. Sampel used is 35 students of class X_1 as experiment class I and 35 students of class X_3 as experiment class II in SMA Taman Siswa. This research was experimental with M-G pattern (Matched Group Design). The result shows : (1) there is difference between hydrocarbon concept mastery through NHT type learning with animation and NHT without animation (2) the average of hydrocarbon concept mastery through NHT type learning with animation is higher 54,85 than NHT type learning without animation 34,00.

Keywords: Cooperative learning NHT Type with animation, mastery of concepts, animations, worksheets, hydrocarbons.

A. INTRODUCTION

Hydrocarbon concept was very wide, abstract and correlating to other concepts, so that in learning it needs integration. This makes hydrocarbon concept hard to understand by students. Learning hydrocarbon material needs good and appropriate learning model to motivate students. Besides, teachers also have to create learning condition that makes students active in constructing or building their own knowledge so their knowledge about hydrocarbon will be more memorable.

Based on the result of interview and observation with chemistry teacher of class X SMA Taman Siswa, information shows the average score of students' mastery concept in hydrocarbon material academic year 2008-2009 is 55,51. Students get score ≥ 62 are only 47,93 %. In 2009-2010, the average score of students' mastery concept in hydrocarbon is 52,61. Percentage of students get score ≥ 62 only reaches 48,33%. That score has not reach minimum mastery criterion (KKM) which is applied in SMA Taman Siswa; 100% students should reach score ≥ 62. From data given, it shows students have difficulty in understanding main material of hydrocarbon.

Data also reflects that learning needs to be emphasized by giving direct learning experience with molymood as helping tool to tell the information needed. To make students more active in learning, easier to comprehend the material and the understanding more memorable in their memory needs Students' Working Sheet (LKS) as a learning media. Furthermore, the most important, implementation of cooperative learning is regarded to be

able to teach students coordinating skills in group or teamwork. One of cooperative learning types is NHT.

The increasing technology usage like computer as learning media is also considered to be able to increase students' understanding in learning concept. Previous researches done by Bambang Surya (2010), Yuni Wulandari (2010) portrays that learning by using computer animation could be taken to tell idea, concept, and abstract process to the students include hydrocarbon.

From that fact, research using NHT type with animation in main material of hydrocarbon is very appropriate and needs to do. How far difference between concept mastery in hydrocarbon through NHT type learning with animation and without animation could be known through this research. Cooperative learning is chosen according to the idea of *homo homini socius* and also as a learning constructivism based. Many experts have tried to explain the definition of cooperative learning.

Slavin in Nurulita (2008:4) says that cooperative learning refers to all kinds of learning methods where students work in small groups to help each other in learning a lesson. While Lie (2007:12) says that cooperative learning or *gotong royong* learning is a teaching system that gives chance to students to work together in structured task where the teacher in the system acts as a facilitator.

From those definitions, it is seen clearly that students are trained to work together and help each other in comprehending, caring and respecting so that students got used to live in society based on their nature as social beings who need each other. It is also expected that students more active in discussing concept about their lesson. Students who work in cooperative learning are encouraged to work together to reach an award together.

Steps in cooperative learning based on Ibrahim, and friends. 2000:10 is shown in Table 1 as follow:

Table 1. Six Steps /Phases in cooperative learning model

Phase	Teachers' Act
a. Phase 1 Tell the goal and motivate students	Teacher tells all the learning goals need to reach in the lesson and motivate students to learn
b. Phase 2 Present the information	Teacher presents information to the students by demonstrating or through
c. Phase 3 Organize students in study groups	Teacher explains to the students how to make study group and help every study group to do transition efficiently.
d. Phase 4 Guide learning groups work and learn	Teacher guides study groups when they do the tasks .
e. Phase 5 Evaluation	Teacher evaluates learning result that has been studied/each study group presents his work.
f. Phase 6 Gives award	Teacher finds way to appreciate either effort or learning result of individual and group.

NHT type cooperative learning is one of types that emphasizes on special structures designed to influence students' interaction patterns in aiming to improve academic content mastery. This type is developed by Kagen in Ibrahim (2000:28) by involving students to analyze material covered in a lesson and check their understanding towards the content of that lesson.

Implementation of NHT type cooperative learning refers to Spencer's concept in Ibrahim (2000:28), to involve more students in analyzing material covered in a lesson by checking their understanding towards the content of that lesson. As substitutive direct question towards the whole class, teacher uses four steps; (a) Numbering, (b) Proposing question, (c) Thinking together, (d) Giving answer.

Major part of learning material studied in school consists of concepts. The more concepts owned by someone are, the more alternatives chosen to solve the problems are. Concepts got from facts, events, generalization experience and abstract thinking, the usage of concept to explain and predict. Sagala (2003:71) says Concept is a result of someone or group's thinking stated in definition so it produces product of knowledge that covers law principle of a theory.

Learning media used here is Students' Working Sheet (LKS). Sriyono (1992:12) says LKS is a form of program based on task that needs to do and functions as tool to take knowledge and skill to fasten students' interest grow in participating learning process.

In learning process, LKS used as learning media to guide students deepen main material or sub material in a lesson that has been done or is going on. Through LKS students have to express idea and be able to take a decision.

Computer animation is a visual picture series that gives illusion movement on the computer screen (Burke, Greenbowe, dan Windschitl, 1998:9). Some animation functions are able to use to direct students' attention on important aspect from material studied; to teach procedural knowledge, support students learn in doing cognitive process.

Students who have low prior knowledge needs animation as they are not able to do *internal mental simulation* based on static picture. While for students who have high prior knowledge, animation can be used as media to take more attention to learn. Rieber (1990:22) says that animation has three functions in learning; (1) take attention, (2) presentation, and (c) practice.

B. METHOD

Population in this research is students class X in even semester, six classes in SMA Taman Siswa Bandar Lampung academic year 2010-2011. Sampling technique used is *purposive sampling* also known as *consideration sampling*, taking sample done based on consideration of individual or researcher. Sample consists of two classes, according to chemistry teacher. Class X1 as experiment I and class X3 as experiment II. Total students are 70 representing the population.

This research is experimental with M-G pattern (*Matched Group Design*), by having condition balance towards two groups (experiment I and experiment II). M-G pattern uses score average comparison technique in pretest of experiment I and experiment II before doing next treatment or experiment. Scheme of research is explained in this table below:

Table 2. Scheme of Research

```
                         ┌─────────────────┐
                         │   Prior Study   │
                         └────────┬────────┘
              ┌───────────────────┴───────────────────┐
    ┌─────────▼──────────┐                  ┌──────────▼──────────┐
    │ Organize Instrument│                  │  Grouping Students  │
    │  (LKS and          │                  │                     │
    │  pretest, posttest)│                  │                     │
    └────────────────────┘                  └─────────────────────┘
              ┌───────────────────────────────────────┐
    ┌─────────▼──────────┐                  ┌──────────▼──────────┐
    │ Experiment Class II│                  │ Experiment Class I  │
    └─────────┬──────────┘                  └──────────┬──────────┘
    ┌─────────▼──────────┐                  ┌──────────▼──────────┐
    │      Pretest       │                  │       Pretest       │
    └─────────┬──────────┘                  └──────────┬──────────┘
    ┌─────────▼──────────┐                  ┌──────────▼──────────┐
    │ Using NHT type     │                  │ Using NHT type      │
    │ Cooperative        │                  │ Cooperative Learning│
    │ Learning without   │                  │ with Animation      │
    │ Animation          │                  │                     │
    └────────────────────┘                  └─────────────────────┘
                         ┌─────────▼────────┐
                         │     Posttest     │
                         └────────┬─────────┘
                         ┌────────▼─────────┐
                         │   Analyze data   │
                         └────────┬─────────┘
                         ┌────────▼─────────┐
                         │   Conclusion     │
                         └──────────────────┘
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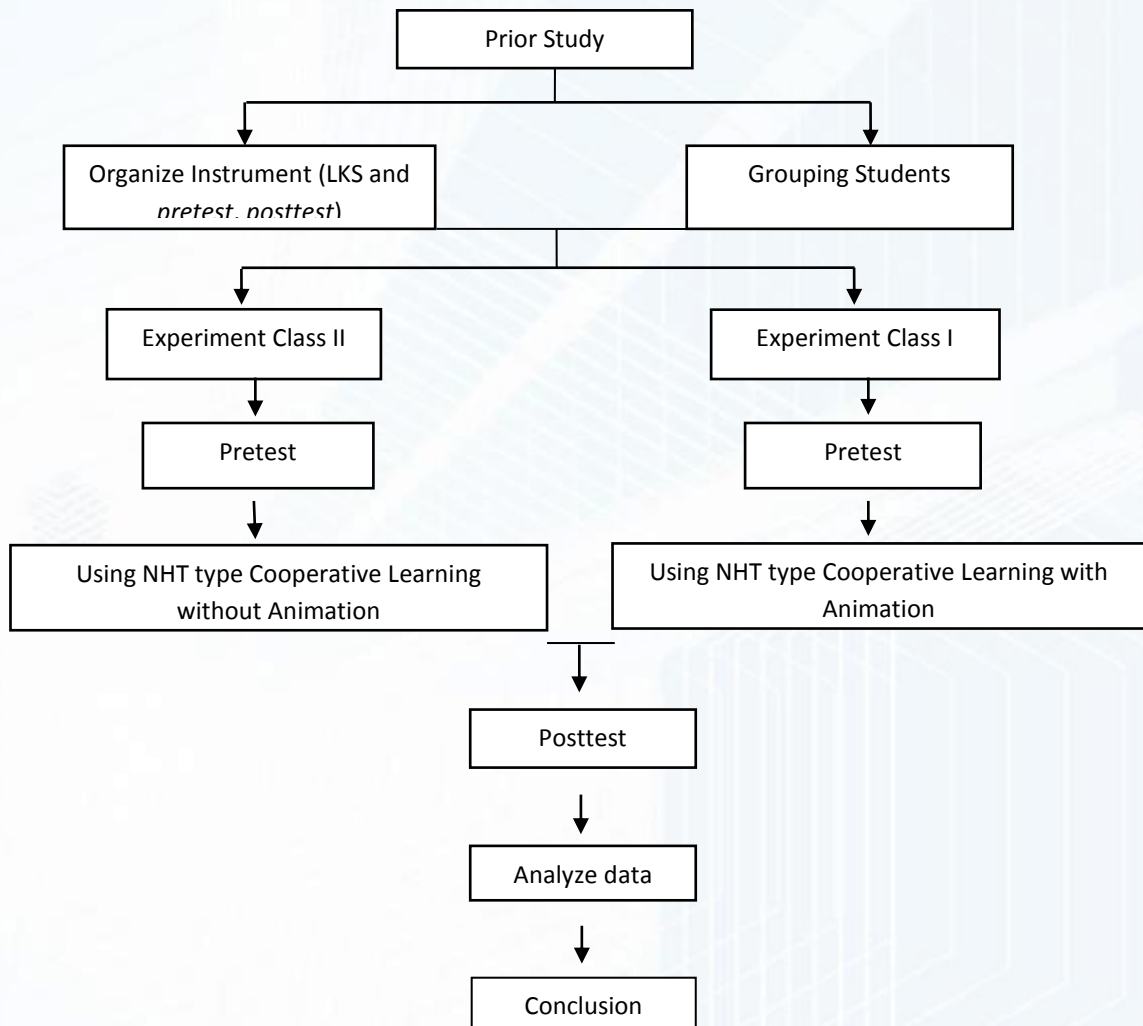
C. RESULT AND DISCUSSION

From the research conducted, data shows score in class of experiment I and II increases in posttest. Students' mean of increasing gain score in experiment class I is bigger than in experiment class II. In posttest, there is increase (gain) of concept mastery from pretest to posttest in both experiment classes.

Data of pretest and posttest is found mean and deviation standard to see achievement mean from both classes as a hypothesis measurement point. Average of gain in experiment class I is higher, 54,85 (SD = 10,181) than in experiment class II, 34,00 (SD=12,414). To see this difference statistically, t-test was done towards both means above.

Statistical analysis shows experiment class I gets score *Sig.* = 0,78 (*Kolmogorov-Smirnov*) and *Sig.* = 0,94 (*Shapiro-Wilk*). Both these scores *Sig* are bigger than α = 0.05, means that data of gain distributed normally. Homogeneity test of data gain from both those classes was measured and continued by testing the same of those two means. The result shows

that significant in column *Levene's Test for Equality of Variances* is bigger than 0,05 (0,281 > 0,05), it can be concluded that data is homogen.

For t-test, if score $t_{measure}$ is bigger than t_{table}, it means there is difference of mean. Score $t_{table} = 1,67$ and score $t_{measure} = 7.685$. Because score $t_{measure}$ is bigger than t_{table} (7. 685>1,67) so H_1 is accepted and Ho is rejected, this means there is difference of mean between kelas class of experiment I and experiment II (H_1 ; $\mu_1 \neq \mu_2$). The last is testing second hypothesis. Value $t_{0.95}$ with df = 68 from distribution list t_{table} is 1,67and in fact $t_{measure} > t_{table}$, it is 7,685 >1,67 so H_0 is rejected and H_1 is accepted, it means the average hydrocarbon concept mastery using NHT type with animation is higher than the average hydrocarbon concept mastery using NHT type without animation.

Increase of students' gain score can be seen as increase of hydrocarbon material concept mastery but the average of students' hydrocarbon material concept mastery using NHT type learning with animation is higher than the average of students' hydrocarbon material concept mastery using NHT type learning without animation. This difference is believed because of learning model used. Learning in experiment class I is NHT type with animation. In experiment class II with NHT type without animation.

In learning process, each class uses LKS as one of alternative learning media to direct students' constructing concept. The using of LKS in learning would make teacher easier give the lesson and manage time efficiently, also create interaction between teacher and student in learning process.

Learning process with NHT type with animation shown through LCD projector is a new thing for students. Animation is media that can increase students' interest in learning, so it makes learning process more attractive and fun. By this, students can have deeper understanding in mastering hydrocarbon concept and very good posttest score.

It is inevitably that students' concept mastery in experiment class II also increases, but this is logical because there is learning process in increasing understanding. It is shown in increase of score pretest to posttest. NHT learning model in experiment class II done continually without animation seems monotone.

D. CONCLUSION

Based on the result and discussion, it can be concluded that (1) there is mean difference of hydrocarbon concept mastery between NHT type learning with animation and NHT type without animation and (2) the average of hydrocarbon concept mastery by using NHT type with animation is higher, 54,85, than the average of hydrocarbon concept mastery by using NHT type without animation, 34,00.

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THE ENHANCEMENT OF METACOGNITIVE ABILITY THROUGH *OPEN-ENDED* LEARNING APPROACH

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Abstract

Developments in science and technology demanding reform efforts especially in the process of learning mathematics. The various steps and strategies can be done, one of them including a review of mathematical abilities in accordance with the demands of the curriculum. Metacognitive become one of the competencies required by students after participating in learning mathematics. Metacognitive that investigates "think how think" can be fasilitated by using open-ended learning approach. This research aimed to compare the enhancement of metacognitive ability of junior high school student in a mathematical prior knowledge (high, medium, and low). This research is a quasi experimental design with pretest-posttest control group. Population of the research are junior high students in Majalengka Regency, West Java Province. Sample of this research is SMPN 2 Sukahaji with middle level school. Determination of the experimental and control classes using purposive sampling technique. Research instrumen consists of students' metacognitive test, students' and teachers' interview sheet, and observation of student activity sheet. Data analysis is performed using parametric statistical tests and non-parametric. The result of research are: (1) in a whole, student who learn under open-ended learning approach get enhancement in metacognitive ability that is significantly better than students who get conventional learning, (2) there is diffrence in gain score between approach (open-ended and conventional) and mathematical prior knowledge (high, medium, low) students toward the enhancement of students' metacognitive ability, (3) There is no interaction between approach (open-ended and conventional) and mathematical prior knowledge (high, medium, low) students toward the enhancement of students' metacognitive ability.

Keywords: metacognitive ability, open-ended approach

A. INTRODUCTION

1. Background

Education has a very important role in the progress of a nation. So important, so that innovations in the field of education continue to be developed to improve the quality of education. Mathematics as one of the subjects that have an important role in improving the

quality of students. Recognizing the importance of mastery of mathematics, then in Act No. 20 Year 2003 on Sisdiknas (Sistem Pendidikan Nasional) Article 37 stated that the subjects of mathematics is one of the compulsory subjects for students at primary and secondary levels of education.

Students who have studied mathematics expected to have capabilities that include attitudes, knowledge, and skills. This is in line with the Competency Standards contained in Permendikbud (Peraturan Menteri Pendidikan dan Kebudayaan) No. 54 Year 2013. Meanwhile competencies expected of graduates who attained that students have knowledge of factual, conceptual, procedural, and metacognitive.

Based on the qualifications that must be possessed by student, it is important to note metacognitive ability, through metacognitive awareness of students may have an interest and ability. According to Brown (1978) metacognitive ability refers to prediction ability, planning skills, monitoring skills, and evaluation skills. Students who have good metacognitive abilities will enhance the ability of solving non-routine problems, while students who have low metacognitive ability will lead to the failure of problem solving (Yoong, 2002).

Weak Indonesian students' mathematical abilities demonstrated by the results of the TIMSS international study in 2011 Indonesia was ranked 38 of 42 countries. The basis of assessment is to measure mathematics achievement, the math problems are not routinely require higher order thinking skills are generally not managed correctly answered by Indonesian student samples (Suryadi, 2005). Similarly, the results of the PISA study in 2009 Indonesia was ranked 61 of 65 countries in math. PISA studies are very useful to identify the level of students' mathematical literacy in several countries; to design reference (benchmark) for the purpose of improvement; and to understand the strengths and weaknesses of the education system in the countries involved in PISA (Kusumah, 2013).

Selection of appropriate learning approach will support the development of metacognitive ability. Efforts can be made by teachers to enhance the metacognitive ability is a variation on the approach and learning strategies. Based on this, one approach is expected to enhance the metacognitive ability is an open-ended approach.

Learning activities with an open -ended approach, the teacher gives problems to the students that the solution or the answer does not need to be defined only one way. So that it would accommodate the student the opportunity to freely do everything according to the will of their (Suherman, 2003).

Based on the above, in this study the initial information about students' mathematical knowledge is used to determine the level of mathematical prior knowledge (high, medium, and low). The purpose of mathematical prior knowledge is used to see the impact of open-ended approach to each category of mathematical prior knowledge.

2. Problem Formulation

Based on the background of the problems described above, the problem to be researched and studied further in this study, namely:

a) Is the enhancement in metacognitive ability of students receive learning with open-ended approach is better than the students who receive conventional learning?

b) Are there differences in metacognitive ability of students who receive learning with open-ended approach and students who receive conventional learning by category mathematical prior knowledge (high, medium, and low)?
c) Is there an interaction between learning and mathematical prior knowledge (high, medium, and low) toward the enhancement of students' metacognitive ability?

B. LITTERATURE REVIEW
1. Metacognitive Ability

Metacognition is a term introduced by John Flavell in 1976. Term is used Flavell (1976) to introduce metamemori in research on children's memory processes. Weinert and Kluwe (Livingstone, 1997) suggests that metacognition is derived from the Greek word "meta" and "cognition". Meta means after or exceeded, whereas cognition-related skills means thinking process. Weinert and Kluwe further stated that metacognition is a second-order cognition that means thinking about thinking, knowledge about knowledge or reflection about actions.
Schraw (Hacker, 2009) distinguishes between metacognition and metacognitive, as follows: "metacognition refers to knowledge about cognition and cognitive processes. Metacognitive refer to one of three different classes and learning about one's performance with respect to the focal task performance". While Dunlosky (2009) states that metacognition includes metacognitive knowledge, metacognitive monitoring, and metacognitive control. Ann Brown (Hacker, 2009) identifies that there are two levels of metacognitive knowledge about cognition (self-understanding), to manage and improve cognition or the called self-regulated.

2. Open-Ended Approach

The open-ended approach was first introduced and developed in Japan in the 1970s as a method of "open-approach". The emergence of an open-ended approach is in response to the current school mathematics education is the activity class called "issei jugyow" (frontal teaching): the teacher explains a new concept in front of the class to the students, then give an example for the completion of some matter. This approach was born from the results of research conducted Shigeru Shimada, Yoshiko Yashimoto, and Kenichi Shibuya (Nohda, 2000).

Problem mathematically taken to task by open-ended approach can be obtained from the contextual problems (real world) and problems in mathematics (Shimada, 1997). Contextual problems drawn from everyday problems or issues that can be understood by the mind of students. With the problems that students will be brought to the mathematical concepts through reinvetion or through discovery.

According to Sawada (Shimada and Becker, 1997) to develop a learning plan with this approach, teachers need to pay attention to the following matters:
a. Write down student responses expected
b. The purpose of the problem must be given clear
c. Serve with interesting problems
d. Complete the principle problem posing so that students understand it easily
e. Allow sufficient time for students to explore.

C. METHODOLOGY

1. Design Research

The method use is quasi-experimental. In this study, subjects are not randomized, but the state of the subject is accepted as it is (Ruseffendi, 2010). According to Cresswell (2010) states that for Quasi-Experimental design with non-equivalent design of pretest and posttest control group design, the experimental group and the control group are selected without random procedure. Both groups shared the pretest and posttest, but only the experimental group are given treatment (treatment).

2. Population and Research Sample

The population of this entire eighth grade students in Majalengka Regency West Java Province. The sample used in this study are two classes of students in SMP 2 Sukahaji. Based on the observations of researchers, distribution capability class VIII student at SMP 2 Sukahaji can be said to have equal ability. The sample in this study selected two existing classes, both classes of the chosen as the experimental class (class VIII B total of 34 students) and a control class (class VIII D total of 32 students). Determination of the experimental and control classes with purposive sampling technique is the consideration that the distribution of students for both classes equally in terms of academic ability.

3. Mathematical Prior Knowledge

Based on mathematical prior knowledge, students are grouped into three groups, namely the category of high, medium and low. The number of students according to mathematical prior knowledge can be seen in Table 1 below.

Table 1
The Number of Students by Category Mathematical Prior Knowledge

Category Mathematical Prior Knowledge	Approach		Sum
	Open-ended	Conventional	
High	10	9	19
Medium	14	13	27
Low	10	10	20
Sum	34	32	66

D. FINDINGS

1. Description Metacognitive Ability

This follows an enhancement in metacognitive ability descriptively.

Table 2
Descriptive Statistics Enhancement Metacognitive Ability

Class	Statistical Data	Mathematical Prior Knowledge			
		High	Medium	Low	Sum
Open-ended	$\bar{x}$	0,59	0,45	0,36	0,46
	s	0,15	0,09	0,06	0,13
Conventional	$\bar{x}$	0,46	0,37	0,32	0,38
	s	0,09	0,07	0,05	0,09

In whole or in mathematical prior knowledge found that mean the experimental class students higher than mean the control class.

2. Testing Results Gain Metacognitive Ability Based Learning

The results of the calculation of the mean difference test gain metacognitive ability using the Mann-Whitney test are presented in table below.

Table 3
Test Results Mean Difference Score Gain Metacognitive Ability

Z	Sig (2-*tailed*)	Sig (1-*tailed*)	Conclusion	Information
-2,857	0,004	0,002	Ho rejected	there is diffrence

Based on Table 3 above that enhancement metacognitive ability of students who receive learning with open-ended approach is better than the students who receive conventional learning.

3. Testing Results Gain Metacognitive Ability Students by Category Mathematical Prior Knowledge

Testing differences in mean gain by category mathematical prior knowledge conducted to determine whether there are differences in enhancement of students' metacognitive ability who received learning with open-ended approach and students who received conventional learning in terms of categories mathematical prior knowledge (high, medium, low).

Table 4
Differences Enhancement Metacognitive Ability
By Mathematical Prior Knowledge and Learning

Mathematical Prior Knowledge	Approach	t	sig.	H$_o$
High	*Open-Ended* - Conventional	2,181	0,045	Rejected
Medium	*Open-Ended* - Conventional	2,606	0,015	Rejected
Low	*Open-Ended* - Conventional	1,812	0,087	Received

Based on Table 4 above it can be concluded that there are differences on the enhancement of students' metacognitive ability among students who receive learning with open-ended approach and the learning of students who receive conventional learning by category mathematical prior knowledge groups for high and medium groups.

4. Testing Interaction between Learning and Mathematical Prior Knowledge

Here are the results of testing the interaction between learning (open-ended and conventional) and mathematical prior knowledge (high, medium, and low) on the enhancement of students' metacognitive ability.

Table 5
Test Results Mathematical Prior Knowledge and Learning Interaction
on The Enhancement Metacognitive Ability

Factor	F	Sig.
Learning * Mathematical Prior Knowledge Category (interaction)	0,977	0,382

Based on Table 5 above there is no interaction between the learning and mathematical prior knowledge. In the graph, the lack of interaction between learning (open-ended and

conventional) and mathematical prior knowledge (high, medium, and low) are shown in Figure 1 below.
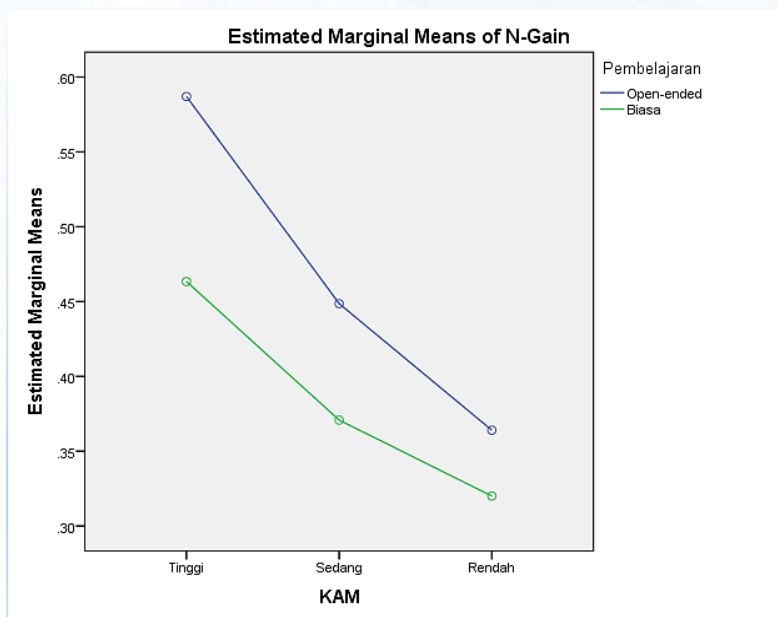
Figure 1   Interaction between Learning and Mathematical Prior Knowledge in Metacognitive Ability

E. DISCUSSION

The results showed that an increase in metacognitive ability of students receive learning with open-ended approach is significantly better than the students who receive conventional learning. This happens because the open-ended learning students are given the opportunity to resolve a problem with a variety of answers and a variety of ways/methods, so it would appear diverse settlement.

Giving open problem to students not only oriented to get answers or outcomes but more emphasis on how students arrive at an answer, students can develop ways/methods, and even students can find the different answers in solving the problem. It provides opportunities for students to undertake a greater elaboration, so as to develop students' mathematical thinking, and foster creative activity of students in eliciting metacognitive ability to solve problems.

The results of this study are similiar with research Alhadad (2010) who found that by applying an open-ended learning that begins by presenting an open problem, to train students to use a variety of mathematical abilities in solving problems. The results are consistent with research Aguspinal (2011) on learning with open-ended approach which concluded that the discovery of several alternative correct answers can enhance students' enthusiasm for learning so that they are motivated to explore the existing competency as a whole, as a result there is a sense appreciated.

Based on statistical tests, it was concluded that the learning and mathematical prior knowledge (high, medium, low) have a significant influence on metacognitive ability. After testing the differences by category mathematical prior knowledge, concluded that increased

metacognitive ability of students receiving learning with open-ended approach is significantly different than students who received conventional learning for mathematical prior knowledge students of high and medium groups. While the increase in mathematical metacognitive ability students who obtain a lower group learning with open-ended approach is not significantly different than students who receive conventional learning. This is understandable because to solve a problem, the necessary readiness prior knowledge. High ability students early, of course, have a better knowledge of readiness than students whose low initial capability.

These results are also consistent with studies Rahman (2013) concluded that the overall increase in mathematical problem-solving ability of learning to students who obtain an open-ended approach is better than the students who received conventional learning. Based on mathematical prior knowledge, there are differences in mathematical problem solving skills improvement for the low category.

Test differences in enhancement metacognitive ability by category mathematical prior knowledge, indicating that the high group students increased significantly better than medium and low student groups. This is due to the high group students are better prepared to do the kinds of questions open. The desire to work on the problems higher, as shown by the high student activity groups to ask questions and give ideas.

F. CONCLUSION

Based on the analysis, findings, and the discussion that has been presented in the previous chapter, it is concluded as follows.
a. Increased metacognitive ability of students who receive learning with open-ended approach is better than the students who receive conventional learning.
b. There are differences in enhancement metacognitive ability of students who receive learning with open-ended approach and students who receive the conventional learning for students of high and medium groups.
c. There is no interaction between learning (open-ended and conventional) and mathematical prior knowledge (high, medium, and low) toward the enhancement of students' metacognitive ability.

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PRACTICAL WORK AND SCIENCE PRACTICAL ASSESSMENT IN MALAYSIA SCIENCE EDUCATION

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Abstract

Practical work is an important aspect in science education as it helps to promote students' understanding and maintain students' interest in learning science. Through practical work, students acquire necessary skills to conduct scientific investigations, which include inquiry skills, science process skills, manipulative skills as well as procedural understanding. Assessment of practical skills is one of the component in the assessment for science education. Due to the complex nature of scientific investigation, the ability to conduct such investigations should be assessed using multiple approaches to give a comprehensive view of what the students are able to do.

Keywords: practical work, practical skills, science practical assessment

A. INTRODUCTION

Science is a study of the nature through a series of systematic observations and measurements and hence explain natural phenomena using scientific theories, rules and principles (Baxton & Provenzo, 2011). Science education helps students to understand the world that they live in, and at the same time acquire knowledge and skills so that they live in harmony with their surroundings, think critically while they need to make decision and solve problems. Through the learning of science, students have better understanding of real life issues and thus develop positive attitude to take responsibility of their actions (Krajcik, Czerniak, & Berger, 2003).

Developed nations such as the United States of America and the United Kingdom started science education as early as the 19[th] century (Atkin & Black, 2007). Malaysia as a developing nation actually gave attention to science education before her independence and such effort continued after the independence (Subahan, 1998), as science education plays an important role in a nation's economic growth, especially in the industrial and technological areas. As a newly formed nation, Malaysia had no expertise in designing her own curriculum and thus adopted the British science curricula (Magno, 2007). However, major educational reforms had taken place since then to produce a science curriculum which is suitable for the Malaysian context.

Science is taught as a core subject in all Malaysian schools. The first level of science education in primary school exposes students to living things and the world around them,

which take place from Primary 1 to Primary 3. In the second level of primary school (Primary 4 to Primary 6), students learn science by five themes: living things, forces and energy, materials, the Earth and the universe, and technology. Students continue to learn science in secondary schools. However, streaming occurs at higher secondary level (Form 4 and Form 5) where students either enter science, humanity or art stream. Students in the science stream will learn subjects such as Physics, Chemistry, Biology and Additional Science while those in the humanity and art streams will continue to learn science under the subject General Science.

B. PRACTICAL WORK IN SCIENCE EDUCATION

Science is a practical subject. Practical work is a necessary part of the teaching and learning of science and students have to conduct practical work in the science laboratory (Woodley, 2009) either to confirm certain theories or to solve problems for a certain situation. Science Community Representing Education, SCORE (2009) defines practical work in science as "a hands-on learning experience which prompts thinking about the world which we live in".   Lunetta, Hofstein, and Clough (2012) describe practical work as learning experiences that help students understand the natural world when they interact with tools and materials in the laboratory. Nivalainen, Asikainen, Sormunen, and Hirvonen (2010) refers practical work as experimental activities used in science learning. Hence, it can be said that all hands-on activities which require students to use and manipulate scientific apparatus and materials can be considered as practical work.

Practical work in school science are carried out in many ways. Dillon (2010) reported that there are different practices in conducting practical work for schools around the world. Kidman (2012) classified practical work into seven forms: demonstrations, closed inquiry laboratory experiments, skill development, directed activity, undirected activity, guided inquiry and open inquiry. In demonstrations, only one person (either teacher or student) conducts the practical work while other observe and then discuss the results. Closed inquiry laboratory experiments are practical work done according to manuals or procedures given, just like following a cookbook recipe to verify certain facts or theories. Practical work for skill development aims to develop manipulative skills or inquiry skills through repeated access to eqiupments or apparatus in the scienec laboratory.

Directed practical activities is used when teacher wants students to follow a set of instructions in a limited period of time in order to obtain certain results so that they can answer certain preset questions and thus learn the science content that the teacher plans. In contrast, undirected practical activities allow students to explore on their own a certain science topic or a certain lab equipment during given free time. Inquiry-based practical work allows students to develop scientific inquiry of planning, conducting, interpreting and evaluating their practical work. In guided inquiry, the teacher poses a question for the students to investigate while in open inquiry, the students decides what they want to investigate themselves.

C. THE ROLE AND IMPORTANCE OF PRACTICAL WORK

Apart from understanding the natual world, science education aims to prepare students so that they can think and work like scientists (Atkin & Black, 2007). This can be achieved through practical works. Park, Jang, and Kim (2008) investigate the actual process of conducting research by physicists and discover that scientific inquiry skills applied by them include: defining and preparing research problem, generating hypothesis, designing a research, executing the research which include obtaining data, calculating and testing, and finally drawing a conclusion. The result of their work lead to discovery or development of new theory, articulation or refinement of existing theory or falsification of previous hypothesis or theory.

Students carry out practical work using similar skills as that of real scientists, but based on a certain given problem or situation. Practical work in science education helps students to verify a concept of theory that they had learnt and thus enhance their conceptual learning (Toplis, 2011). Students like practical work as it provide an alternative to teachers' lecturing and make learning science more interesting. Toplis and Allen (2012) review the role of practical work and found that practical work motivates the students to learn science. Through hands-on experience in practical work, students can remember and recall more effectively what they have learnt.

Abrahams (2011) listed five purposes of practical work:
- To enhance the learning of scientific knowledge;
- To teach lab skills;
- To develop certain 'scientific attitudes' such as open-mindedness, objectivity and willingness to suspend judgement;
- To give insight into scientific method, and develop expertise in using it;
- To motivate students by stimulating interest and enjoyment.

Good quality practical work engages and helps students to develop important skills, to understand the process of scientific investigation and develop their understanding of concepts (Woodley, 2009). When carefully planned and taught, practical work in school science helps in developing knowledge and understanding of science (Dillon, 2010). Practical work also helps to develop skills in using apparatus and standard procedures, as well as an understanding of scientific inquiry.

Teachers agree that practical work gives training in problem solving and make physical phenomena more real through actual experience (Abrahams & Saglam, 2010). Matz, Rothman, Krajcik, and Holl (2012) discovered thath concurrent enrolment in laboratory course and lecture in Michigan University enhance students' learning. Apart from that, meaningful concepts derived from the experience of practical work can be used in further scientific study and future life as students can transfer the process skills used for practical work to other area of learing as well as everyday problem faced in life (Millar, 1989).

D. SCIENCE PRACTICAL SKILLS

Practical work is important in the teaching and learning of science. In order for practical work to be carried out smoothly, students must have certain practical skills. For

example, to investigate the factors that influence the force acting on an object, students must know how to measure the mass of the object, the length travelled and the time taken by the object in order to determine the its acceleration. Mastering practical skills in practical work will increase the accuracy of the investigation. However, practical skills as a term that is widely used is rarely defined as what had been done for science content knowledge (Reiss, Abrahams, & Sharpe, 2012). This paper is suggesting that practical skills include science inquiry skills, science process skills, science manipulative as well as procedural understanding on how scientific investigation should be carried out.

1. Science Inquiry Skills

Science subjects are inquiry based. Students should know how scientific concepts are discovered by scientist through a series questions, investigation and problem solvings. In other words, students should learn the process of doing science (Atkin & Black, 2007; Lunetta et al., 2012), the processes of what had been done by scientists in their laboratories that lead to what they are reading in the science textbooks. The National Research Council, NRC (1996) states that:

> "Inquiry is a multifaceted activity that involves making observations; posing questions; examining books and other sources of information to see what is already known; planning investigations; reviewing what is already known in light of experimental evidence; using tools to gather, analyse, and interpret data; proposing answers, explanations, and predictions; and communicating results. Inquiry requires identification of assumptions, use of critical and logical thinking, and consideration of alternative explanations." (p.23)

From the NRC (1996), Klahr (2000) potray that a complete inquiry cycle starts with identification of problem or question, followed by designing of investigation, examination and analysis of data, and making inferences and conclusions from the data and finally justifying them. This is in consistence with Asay and Orgill (2009) who describe inquiry as design experiences or activities that leading to scientific knowledge and identify six essential features for scientific inquiry: posing scientifically oriented questions, gathering evidence, analyse and formulate explanations from the evidence, connect the evidence to science knowledge and communicate it to the others.

Scientific inquiry based activities always revolve around questions, starting with a scientific question to be answered or solved, then experimental procedures or methods to solve it, and declaring the results or solution to the problem (Bell, Smetana, & Binns, 2005; Harwood, 2004). Hence, for practical work in the school laboratory, practicals skills consist of science inquiry skills which include the skills of questioning the occurrence of certain phenomenon, planning an investigation to investigate the phenomenon, observe and measure to collect data related to the phenomenon, interprate and analyse the data collected and finally make inference, conclusion and evaluate the findings.

2. Science Process Skills

Science process skills (SPS) are skills related to the process of doing and discovering science. SPS becomes of importance when the United States of America introduced a science curriculum project SAPA (Science – A Process Approach). SPS includes a series of skills

that are teachable and transferable. SAPA divides these skills into basic science process skills and integrated science process skills. These skills are essential in learning science.

Phang and Nor Athirah (2012) review the catergorization of four different authors and determine that SPS include: observing, classifying, predicting, using numbers, measuring, inferring, interpreting data, controlling variables, hypothesizing, and defining operationally. The Malaysian Science Curriculum Specifications (2005) lists all these skills as important skills to be mastered in conducting experiments and carrying out projects. In addition, skills of communicating, using space-time relationship and experimenting are also listed as SPS in the curriculum specification of science education in Malaysia.

SPS are actually embedded in science inquiry. It provides a list for teachers and students so that they have a better idea of what are the skills needed for practical work in the school science. A single practical work does not require the exhibition of all the skills of SPS. Rather, it depends on the nature of practical work to determine what are the skills needed. Hence, practical skills required for the teaching and learning of science includes all the skills in SPS.

3. Manipulative Skills

Manipulative skills involve the manipulation of apparatus and materials in the science laboratory. Before carrying out practical work, students must have skills of handling the instruments and apparatus so that measurement and observation can be made. This is related to the psychomotor domain of the learning taxonomy. Malaysian Science Curriculum Specifications (2005) claims that manipulative skills are psychomotor skills that enable students to:

- Use and handle science apparatus and laboratory subtances correctly
- Handle specimens correctly and carefully
- Draw specimens, apparatus and laboratory substances correctly
- Clean science apparatus correctly
- Store science apparatus correctly and safely

Different skills are needed to handle different science apparatus. Handling a light microscope in life science is very different from handling high tension power supply in physical science. All these skills need to be taught to students as part of practical skills in the science laboratory. Studies to determine mastery of manipulative skills in students (Hidayah & Rohaida, 2013) shows the importance of manipulative skills.

Ferris and Aziz (2005) introduce a psychomotor domain model to classify the levels of manipulative skills. There are seven levels: recognition of tools and materials, handling of tools and materials, basic operation of tools, competent operation of tools, expert operation of tools, planning of work operation and evaluation of output and planning means of improvement. These levels give an idea of how good students are in manipulating tools and materials in the science laboratory to conduct practical work.

4. Procedural Understanding

In the science laboratory, planning is necessary before practical work is carried out. Even in a directed activity, students should think before they take any action. In science education should provide students with the experience of how scientists think (Khaparde,

2010; Roberts, 2001) apart from how they work. This thinking process involve consideration of variables to be measured, instruments to be used and the number of readings to be taken while planning for an investigation.

Gott and Duggan (2002) call this thinking process as "the thinking behind the doing" or procedural understanding. The main concept is to get scientific evidence which is valid and reliable through careful planning and interpretion of practical work, which is associated with the design of investigation, measurement during the investigation and handling of data from the investigation. These are also essential in good quality practical work in science laboratory and are practical skills that students should master.

E. DISCUSSION AND CONCLUSION

Science practical skills are skills required to conduct science practical work. In science education, besides learning science content knowledge, students should also be taught practical skills, to prepare them for future studies or career in science, as well as to solve problems in daily life. The science curriculum of Malaysia consists of three main elements: science knowledge, scientific skills and scientific attitudes. Upon completion of their eleven years of science education, students are expected to master scientific skills as well as science knowledge in the curriculum.

Science practical assessment is carried out to determined whether students are capable of conducting practical work, or rather, scientific investigation on their own. There are many ways to assess students' practical skills, for example practical skill tests and practical examinations (Britton & Schneider, 2007). Various types of performance assessment can be used to assess practical skills. According to Popham (2000), performance assessment requires students to react to an assigned task either orally, through written work or produce a product. Assessment can be done on the process or the product of the task.

For science practical assessment, students are given certain practical task. They have to complete the task within a given period of time and then produce a report or answer certain questions related to the task. Students can be assessed when they are performing the task, or through the products or evidence produced, which are the reports or answered worksheets. This is a common practice in many countries. Singapore and Hong Kong are among the countries that used this type of assessment to assess students on their skills of planning investigation, collecting and analysing data, drawing conclusions and evaluating the investigation.

Other forms of science practical assessment include written examinations, viva or oral examination and practical examination (Reiss et al., 2012). Multiple choices questions are also used to assess students practical skills especially SPS. Instruments or tests that have been developed include the Test of Integrated Process Skills (TIPS) and the Science Process Skills Inventory (SPSI). New instruments are being constructed continuosly by different researchers to suit their needs and requirements of their researches.

In Malaysia, practical skills of students are assessed through PEKA (*Pentaksiran Kerja Amali*). PEKA is a school-based assessment which is supposed to be carried out as part of the teaching and learning of science. Students are assessed in five constructs: planning of

investigation or experiment; conducting investigation or experiment; collecting and recording data, interpreting data and making conclusion; and scientific attitudes and noble values. Teachers will grade the students based on performance indicators and scoring scheme that are provided in the assessment guide (LPM, 2009). Instruments used for assessment can be practical report, folio, project, scrap book, check-list or model. A grade will be assign to show the student ability in performing practical work.

However, the grade for PEKA has no effect of the grade of science subjects in the *Sijil Pelajaran Malaysia* (SPM) examination. Rather, a written practical test is used to assess students' practical skills. For every science related subject (Physics, Chemistry, Biology and Additional Science) offered to students at upper secondary level in Malaysia, the final school leaving examination consists three papers: Paper 1 is an objective test with multiple choices questions, Paper 2 is a constructed response test while Paper 3 is a written practical test which aims to assess the skill of experimenting. This written practical test will contribute 20% to 25% of the total score for the subject final grade.

Both PEKA and written practical test are examples of performance assessment. For PEKA, students have to show their practical skills through performance in practical tasks and produce a report or other forms of evidence to be assessed by the teachers. In the written practical test, students are prompt with real life situations where they need to plan investigation and response to questions on how data can be analysed and relationship can be determined. However, Malaysia is a country which is highly examination-oriented (Ong, 2010) and her society pay more attention to examination grades rather than the acquiring of knowledge. Hence, in science practical assessment, students place greater emphasis on the written practical test rather than PEKA.

Science practical assessment is actually a complex performance assessment where many skills need to be assessed. Ability of students cannot be determined through a single paper-and-pencil test only. The suitability of using written practical test to evaluate student ability in conducting practical work remains questionable. More emphasis should be given to school-based assessment such as PEKA so that students really master the skills of conducting practical work and not just knowing how to do practical work, as knowing how to do something and actually doing it are totally different things.

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MULTIMEDIA VIRTUAL LABORATORY USAGE TO EFFECTIVE PHYSIC LEARNING OF OPTICAL GEOMETRY

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Abstract

Physics laboratory is needed to support the learning activities which done. Limitations of laboratory facilities can be circumvented by the use of different learning strategies. One of them is by using a computer with a virtual lab Software. This study aims to explore the use of virtual lab MMI software in geometry Optics learning in junior high student, so as to obtain an overview of this software reliability in improving the mastery of concepts and improvement of student learning activities. This study uses a Quasi Experiment with research design using the randomized pretest-posttest control group design (Fraenkel, 1993). Data was collected through the provision of concept mastery tests conducted at the time before and after learning use this software and observation of student activity sheets. From the analysis of the test data showed that there was no difference between learning using real lab with virtual lab (software). This software is effective to assist students in understanding the concept of the optical geometry shown with N-gain of 0.33, or 33% were included in the medium category, whereas the conventional learning with N-gain of 0.29, or 29%. The result of the data analysis of student activity through observations of the experimental group and the control group was not much different. Average student activity students classified as good.

Keyword: virtual lab software, optical geometry

A. INTRODUCTION

One of the factors that influence the success of the laboratory is a resource that covers materials and equipment, space and furniture, laboratory personnel, and technicians. Limitations of laboratory facilities can be circumvented by the use of different learning strategies. One of them is by using a model of learning that can be developed in a learning model that uses computer media. Physics concepts are realized in a computer program using a software that is easy to learn. Gunawan *et al.* (2009: 388) suggests some form of interaction can be raised through such computer media presentation and practice exercises, tutorials, games, simulations, discovery, and problem solving.

In addition computer can showing computer-based instructional programs in present subject (presentation, slide, etc), the device can also display a virtual labpratorium. The

advantages of the virtual lab software can display the abstract concepts that can not be displayed by means of a real laboratory. Another advantage of the use of computer simulations in practical activities, which can shorten the time consumption.

Some virtual laboratorium software are already widely available, whether paid or free. Although existing simulations offer high interactivity for users, according to teachers, there are still shortcomings including simulation only describes certain material or limited competence, the language, the teacher should collect some simulations from a variety of sources in advance to teach to their students. Therefore, it needed a multimedia virtual laboratory software to show optical geometry concepts more fully.

Based on the above explanation, the use of multimedia virtual laboratory software for learning physics in junior high school students are considered feasible for learning and is one of the alternatives. Multimedia virtual laboratory software can be a combination of several forms of media, namely text, graphics, sound, animation, and video in a computer application. Virtual laboratory software is a laboratory where tools and materials used for the experiment is complete with a set of computer software designed specifically for experimentation.

Multimedia virtual laboratorium software allow students to carry out experiments in virtual and independently without having to be accompanied by a teacher so that experiments can be done at any time is not time bounded. Learning through the interactive virtual lab software is expected to improve the quality of the learning process that can ultimately improve student learning outcomes.
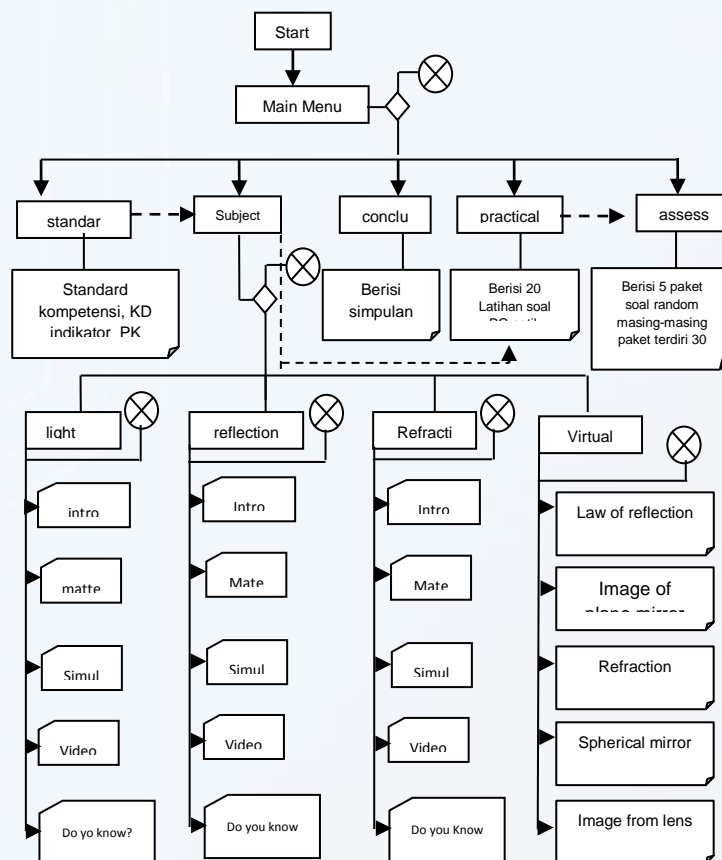
Figure 1. Flowchart of multimedia virtual laboratory

Description multimedia virtual lab software used in this study has a flow chart as shown in Figure 1. This software contains navigation purposes, the subject menu consists of three submenus subject that is 1) a menu of light, 2) menu reflectivity, and 3) plus refraction menu and submenus five virtual lab application.

Virtual laboratorium menu consists of five virtual laboratorium namely 1) Light reflectance law, 2) the nature of the shadow on a plane mirror, 3) Law of Refraction, 4) The nature of the shadow on the concave mirror, and 5) the nature of shadow of the convex lens.

Multimedia virtual laboratorium that applied in optical geometry learning concept to improve students' mastery of concepts and ability to solve problems using the combined model is designed Tutorial and Simulation Model. The characteristics are as follows:

1) In the interactive software includes Competency Standards, Indicators Basic Competence and achievement of competence; material about the concepts in optical geometry; example problems and evaluation of mastery of concepts.

2) Tutorial models are used for optical geometry concept that show texts, picture, simulation, video and example problems.

3) Assessment models that needed are multiple choice and stundent can select optional answer that available. After all questions are answered, it will raise number of true answer as feedback.

4) Students can do self learning while teacher as facilitator and motivator because the main purpose of Tutorial model is to give satisfaction or mastery learning. In addition, the main purpose of simulation model to give examples of the concepts of both real and abstract to make it look real to the students about the subject matter being studied optical geometry

5) Interactive multimedia that can be learned by student include; text (25 %), picture (30 %), animation/simulation (15,9 %), interactive simulation (12,8 %), and video (16,3 %).

Result of study virtual laboratory usage by Meisner *et al*. (2008: 100) show that there is no different between real laboratorium and virtual laboratorium. The success tutorial achievement in virtual environment and interactive are better in mastery physic concept and physic law than task achievement from textbook.

This study aims to explore the use of virtual lab in optical geometry learning in junior high school, so as to obtain a review of the virtual laboratory reliability in improving the mastery of concepts and improvement of student learning activities. In addition, it also can be known observations of student activity in the use of virtual laboratorium.

B. METHODOLOGY

This study uses a Quasi Experiment with research design using). The Randomized Pretest-Posttest Control Group Design (Fraenkel, 1993). The design is showed in figure 2.
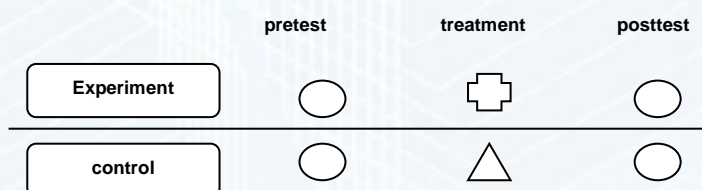
Figure 2. *Control Group Design*

note:
- ⬡ : Pretest = posttest
- ⬗ : physics learning use virtual Lab in experimental group
- △ : physics learning use real Lab in control group

The primary data of student test results before and after treatment, were analyzed by comparing the pre-test scores and post-test. The increase that occurred before and after the learning factor is calculated by the formula g (N-gain) developed by Hake (1999).

Processing and analysis of data using statistical test with the following steps (1) to calculate the normalized gain scores, (2) Test the difference made by using t-test of one tail. The purpose of hypothesis testing is to find a significant difference between the increase in N-gain in the control group with the experimental group.

C. FINDINGS
1. Concept Achievement

The results of mastery of optical geometry concept are presented in Figure 3. Diagram presents the mean percentage of pretest scores, posttest, and N-gain control of optical geometry concepts between the experimental group and the control group.
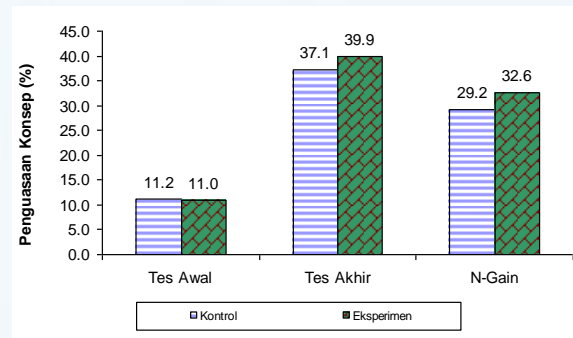
Figure 3. The comparison of mean percentage of pretest scores, posttest, and N-gain for both group.

To know is there any difference in the results of the pretest scores, posttest, and N-gain between the experimental groups and the control group performed the t-test, then the t-test technique used is the one tailed t-test is the right side. Based on the results of the calculation of $t_{test} = 0.349 < t_{table} = 1.677$. This suggests that the proposed hypothesis Ho is accepted, it means the application of learning with virtual lab on the concept of optical geometry alike can improve mastery of concepts such as the conventional learning (real lab).

2. Students' Activity in Learning

Student activity data through observations made by observers each meeting using the observation sheet. The results of the analysis for the two groups are presented in Table 1 and Table 2.

Table 1. Score of Students' Activities in Experimental Group

No	Student Activities	Average Score of students' activities				Average (%)	Category
		P1	P2	P3	P4		
1.	Enthusiasme solve problem (worksheet)	80.0	88.3	86.7	86.7	85.4	good
2.	Pay attention to the teacher's explanation about the virtual lab operating procedures	81.7	85.0	88.3	83.3	84.6	Good
3.	Solve practical problem and evaluation in Virtual lab software	88.3	89.2	90.0	93.3	90.2	very Good
4.	Do experiment, do measurement	70.0	80.8	79.2	75.8	76.5	Good
5.	Express ideas, opinions, and question	80.8	85.0	85.0	84.2	83.8	Good
6.	Cooperation in group	90.0	92.5	90.8	90.8	91.0	very Good
7.	Have discussion actively	89.2	90.8	90.8	87.5	89.6	very Good
8.	Communicated result of experiment	80.0	85.8	88.3	78.3	83.1	Good

Table 2. Score of Students' Activities in Control Group

No	Students' Activities	Average Score of students' activities				Average (%)	Category
		P1	P2	P3	P4		
1.	Enthusiasme solve problem (worksheet)	74.2	86.7	85.8	80.0	81.7	Good
2.	Pay attention to the teacher's explanation about the virtual lab operating procedures	75.8	82.5	85.0	80.0	80.8	Good
3.	Solve practical problem and evaluation that given by teacher	88.3	87.5	88.3	85.0	87.3	Very Good
4.	Do experiment, do measurement	80.0	83.3	85.0	89.2	84.4	Good
5.	Express ideas, opinions, and question	80.0	82.5	84.2	84.2	82.7	Good
6.	Cooperation in group	89.2	90.8	90.0	90.0	90.0	Very Good
7.	Have discussion actively	88.3	90.0	90.0	90.0	89.6	Very Good
8.	Communicated result of experiment	78.3	83.3	89.2	85.0	84.0	Good

note: Very Good (87,5%-100%), Good (75%-87%), enough (50%– 74%), lack (0 – 50%). P (meeting)

Based on data from the student activities through observations made for the experimental group and the control group was not much different. Average students' activity classified as good. From the findings of the two groups, students' activity on experimental to

obtain data have time difference is very striking. At the time of learning activities, students' activities for the experimental group that implements virtual labs requires a shorter time. While the activity of the control group students to apply real laboratory requires a relatively long time and sometimes there are some students who are careless to damage the appliances.

E. DISCUSSION

To test the effectiveness of virtual lab software, it is conducted an experimental method to look at the effectiveness of using virtual lab software. Both groups were subsequently given a different treatment. Learning that use the virtual lab software in the experimental group and the control group of conventional learning. Mean scores of posttest from two groups was different, with a score of 39.9 % for the experimental group and 37.1 % for the control group. After t-testing the mean N - gain between the two groups, it appeared that there was no significant difference between the two groups .

The results also support the use of a virtual laboratory which is said by Meisner et al . (2008 : 91) that there is no different between real laboratorium and virtual laboratorium. The success tutorial achievement in virtual environment and interactive are better in mastery physic concept and physic law than task achievement from textbook.

These results indicate that the multimedia virtual lab software can be a real laboratory occupies a position equally makes learning become better . Generally real laboratory can only be done in schools to obtain experimental data but with the virtual lab software students are not restricted space and time. Students can do experiment whenever and wherever. Students also can do experiment by himself if students can not do experiments in school because absenteeism at school when the experiment took place.

The same was said by Klahr *et al*. (2006 : 74) that unlike the students in a real lab which requires a special room in the school to obtain experimental data, students that do experiment with the virtual lab can only use a small residual space in a given period. Virtual lab experiments generally require little space, with little power and are easier than real lab to manage class during the trials.

It is said again by Klahr (2006 : 74) that the virtual lab easily do the copying and distribution is another advantage that no such real lab for example science kit. Moreover virtual lab experiment more timesaving so that learning becomes more effective and efficient . Finally, the virtual lab becomes easier than the real lab.

Based on the observation of learning activities, found that the activity of the two groups when students in activities trials time to obtain data is very striking difference. At the time of learning activities, student activities for the experimental group that implements virtual labs requires a shorter time . While the activity of the control group students to apply real laboratory requires a relatively long time and sometimes there are some students who are careless to damage the appliances. This suggests that the use of virtual labs more efficient in time consumption as compared to the use of real laboratory .

In the virtual lab (simulation) students can gather data quickly in any situation, students can conduct their own experiments based on experimental instructions even students can develop themselves from the existing lab instructions and also allows to perform

experiments that are not normally performed in the laboratory in general (Trowbridge and Bybee 1990: 171) . However, with virtual experiments (simulations) if the student does not obtain the hand on (technical skills laboratory).

According to Prasetyo (2001) as cited by Iswari (2009 : 51) a shortage of laboratories working is time sequestration or in other words the time allowed is too narrow, and the students did not complete their lab work. Equipment is also an issue for some schools limited laboratory resources. Nonetheless, physics learning through laboratory work should still be implemented.

F. CONCLUSION

Based on the analysis of data, results, and discussion can be drawn conclution as follows, 1) The use of virtual lab software can improve students' mastery of the concept of optical geometry in the experimental group. This is indicated by the N-gain of 0.33, or 33% were included in the medium category, 2) use of conventional learning can improves students' mastery of the concept of optical geometry in the control group. This is indicated by the N-gain of 0.29, or 29% were included in the medium category, 3) Based on the hypothesis test using one tailed t-test, it was found that the use of virtual lab software alike can improve mastery of concepts than the use of conventional learning, 4) use of a virtual learning lab software can increase the activity of students. The student activities include enthusiasm, conduct experiments, cooperation and discussions, communicate the results of the experiment.

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ANALYZE OF KNOWLEDGE AND COGNITIVE PROCESS DIMENSION OF TEACHERS' QUESTIONS AND STUDENTS' ANSWERS TO IMPROVE THE QUALITY OF CHEMISTRY LEARNING

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Abstract

Poor quality of teaching contributed by the low achievements of learning. By asking the students, the intention is to improve students' thinking and learning activities. By asking questions, students will be stimulated to think to look for the answer to a given question. With flung a few questions, students gradually become active and participate and ask or answer questions. Therefore, this study investigated teacher or student-center approach and knowledge and cognitive process dimension. This study used Hendayana lesson analysis framework and Bloom taxonomy revision table. The mixed method research design (quantitative and qualitative) was used. However, this study relied primarily on qualitative, video capture data, and direct observations. Hendayana lesson analysis framework used to determine student center lesson. Bloom taxonomy revision table was used to determine the cognitive and knowledge dimensions of teacher's questions and student's answers. One chemistry teacher in one school were elected, and the teacher taught a chemistry lesson that was observed in camera. The teacher taught 27 students. Teacher need to use questions to elicit student thinking, regularly invite questions from students, and encourage responses from student. The chemistry stressed recall of conceptual knowledge rather than eliciting factual, procedural, and metacognitive knowledge dimensions. The quality of students' answers and thinking is a reflection of teacher's questions, so the cognitive process and knowledge dimensions need to be appropriately stressed. Finding of this study revealed that the chemistry teachers have to increase the quality of their question, to become teacher-center lesson and improve the quality of chemistry learning.

Keywords: knowledge dimension, cognitive process dimension, teachers' questions, students' answers, and quality of chemistry learning

A. INTRODUCTION

Learning activity is an activity that involves several components, among others, students, teachers, learning objectives, subject matter, method and instructional media. The

teacher is a person who manage learning activities, catalyst and other role that made learning activities to be effective learning (Jalius, 2009:8). Therefore, teachers should be able to create an conducive learning atmosphere and with the result that students be active in learning.

Efforts to understand the learning process that occurs in the classroom has not been much done by teachers and education professionals in-depth analysis, especially regarding the knowledge and cognitive dimensions of the teacher's questions and student's answers, who performed this analysis is an attempt to reflect and evaluate the quality of learning. An important aspect in analyzing the learning process is happening here in the form of interaction between teachers and students.

There are some skills that need to be taught by a teacher in learning as a form of competencies required include: questioning skill, giving variations, opening and closing a lesson, explaining and managing the class (Jalius, 2009:31-41). Questioning skills is one way to enable students who have experienced boredom in learning activities by asking a few questions. Facts on the ground indicate that the learning process until today is still dominated by the teacher and not provide access for students to develop independently through the thought process discovery (Trianto, 2009:5). In this study tend to be teacher centered classroom atmosphere so that students become passive. Students are not taught learning strategies to understand how to learn, think, and motivate themselves, but these aspects are key to success in a learning (Trianto, 2009:6).

Complete any legal devices and devices developed theory will not be meaningful if the learning process is not optimally implemented, unsuccessful students and cheating the education providers in the national exams can actually be avoided if optimal learning process. Research and classroom quality assessment showed that the quality of the learning process in general is still far from the expected level.

Analyze of learning can be performed using the revised Bloom's taxonomy table. Improving the quality of chemistry learning can be done by promoting the process of interaction between teachers and students. Therefore the analysis of teacher's questions and student's answers are very important. Therefore, the analysis needs to be done to the teacher and the student answers both in terms of the knowledge and cognitive processes dimensions. Based on the description the authors are interested in conducting the assessment of the "Analyze of knowledge and cognitive process dimension of teachers' questions and students' answers to improve the quality of chemistry learning"

The paper is aimed to determine student center lesson (lesson paradigm) and the cognitive and knowledge dimensions of teacher's questions and student's answers. Research question are formulated into three main questions:
1. How is the lesson paradigm (teacher/student center) from precipitation reaction topic?
2. How are the cognitive and knowledge dimensions of teacher's questions and student's answers from precipitation reaction topic?
3. What the teacher have to do to improve the quality of chemistry learning?

B. LITTERATUR REVIEW

1. Hendayana Lesson Analysis Framework

Hidayat and Hendayana stated that the teaching routine investigation in a particular case is very important to refresh and broaden teachers, one way to look at learning in depth analyze the lesson. Interaction is essentially forming class characteristic. Analysis from the stand point of science lessons centered on students to improve learning. We need to understand what a student-centered learning and how that learning is not student-centered. What characteristic instruction in the classroom. Extend the analysis of lesson verbal response of teachers and students.

The main feature in this lesson is Hendayana analysis "category system", and "step". "Step" is the basic unit of analysis for coding lessons. Step is a set of teacher's questions and students' response to the question. Category system focuses on teacher questions and student responses in a conversation class or better. Category system on the classical session focused on the teacher's questions and student's responses consist of six main groups called: asking yes/no, asking completing words fragments, asking definition, asking limited answer options, the question about the re asking for reasoning, pharafrase unresponded questions. Category system on the classic session focused on the teacher questions and student responses consist of three main groups called: teacher response categories consisting of: abandoned, answer directly, and re-asking/non-parafrase to lead right answer/to inquiry right question. While the category of student's question consisted of: sharing his/her experiences, asking definition, asking choosing something, asking reason of the concept, asking daily application, and asking "what if" (Hidayat and Hendayana, 2012).

Category system in group sessions focused on the interaction consisting of: non-teacher involved, and teacher involved. Non-teacher involved is the condition when there is imperative dialogues, asking expression, answering expression, agreed with peer opinion, constrasting peer opinion, and "Aha" expression. Hendayana express the level of involvement of students in the various segments of learning such as classical and group sessions. During the analysis, step-step lessons identified in the transcript, and then set the category code using Hendayana lesson analysis. Involves the teacher is the condition when the students response by providing answer keys or by asking again for guiding an answer like: asking the procedure reported progress, ask of agreement, asked for a solution that has not been completed, and ask exceed answer/reasoning (Hidayat and Hendayana, 2012).

a. Classical Session

Table 1. Guide of Hendayana Lesson Analysis in Classical Session

Teacher's questions	Students' responses
(1) Asking **Yes / No**	- No response (NR_1) - Utterance (U_1) - Yes/No (YN_1)
(2) Asking completing words **fragments**	- No response (NR_2) - Utterance (U_2) - Completing words fragments (CF)

Teacher's questions	Students' responses
(3) Asking **definition**(s)	- No Response (NR_3) - Utterance (U_3) - Answering by reading texts (RT_1) - Answering by recall /memorizing lecture notes or book (RL_1) - Answering by own language (OL)
(4) Asking **limited answer** options	- No response (NR_3) - Utterance (U_4) - Choosing directly (CD) - Choosing by reasons (CR)
(5) Asking for **reasoning**	- No Response (NR_5) - Utterance (U_5) - Answering by reading texts (RT_2) - Answering by recall/memorizing lecture notes or book (RL_2) - Answering by reasoning (RS_1)
(6) **Pharafrase** unresponded questions	- No Response (NR_6) - Utterance (U_6) - Answering by reading texts (RT_3) - Answering by recall / memorizing lecture notes or book (RL_3) - Answering by reasoning (RS_2)

Teachers' response	Students' Initiatives
- Abandoned (AB) - Answer directly (AD) - Re-asking / non-parafrase to lead right answer / to inquiry right question (RA)	- Sharing his/her experiences (SE) - Asking definition (DF) - Asking choosing something (CS) - Asking reason of the concept (RC) - Asking daily application (DA) - Asking "what if"(WI)

b. Grouping Session

Table 2. Guide of Hendayana Lesson Analysis in group session

Interaction	Types of Students' dialogues
Non-Teacher involved	Imperative dialogues (IMD)
	Asking Expression (ASE)
	Answering Expression (DNE)
	Agreed with peer opinion (APO)
	Constrasting peer opinion (CPO)
	"Aha" expression (AHA)
Teacher Involved	
Interrupt (INT)	Asking the procedures (APO)
Explain (EXP)	Reporting the progress (RPO)
Imperative (IMP)	Asking agreement (AGR)
Responding by deliver the keys (RDK)	Asking unfinished solution (AUS)
Responding by guided questions (RGD)	Asking beyond the answers /reasoning (ABA)

Source: (Hidayat dan Hendayana, 2012)

1) Questioning skills

By asking the students, the intention is to improve students' thinking and learning activities. By asking questions, students will be stimulated to think to look for the answer to a given question. With flung a few questions, students gradually become active and participate and ask or answer questions. Be increased as a result of learning interactions. As for some of the usability ask are: 1) to focus students' attention; 2) generate interest and curiosity; 3) enable students to think and learn; 4) encourage students to make a point; and 5) as feedback for teachers (Jalius, 2009: 33).

Questioning skills is one way to enable students who have experienced boredom in learning activities by asking a few questions. There are several things to consider before asking questions on the teacher that the student teacher must know the subject matter in question and the question must be appropriate to the subject matter discussed, the teacher must know the answers to the questions, so the answers that deviate from students can be justified by the teacher, and teachers should provide a warm and friendly attitude when asking questions so that students do not feel tested and stress. Teachers should provide questions with clear and concise language, when the teacher has given question to the students, the teacher should give the students time to think. Teachers also need to provide guidance so that students could answer questions on their own without the guidance of a teacher. If the student is not complete in answering the question that has been asked the teacher, then the teacher can rotate these questions to other students. In order for students active in learning the teacher can simultaneously provide several different questions to some of the students and so the question is not only of the teachers and the teacher could ask students to discuss and question of the discussion could be made by the teacher in front of the class.

2) Bloom taxonomy revision table

A taxonomy table developed by Anderson & Krathwohl was used for the classification of teacher's questions and student's response into the various cognitive process and knowledge dimensions.

Table 3. Knowledge and cognitive process dimension of chemistry teacher's questions and student's answers.

The knowledge dimention	Utterance	The cognitive process dimention					
		Remember	Understand	Apply	Analyze	Evaluation	Create
Factual	TQ						
	SA						
Conceptual	TQ						
	SA						
Procedural	TQ						
	SA						
Metacognitif	TQ						
	SA						
Total	TQ						
	SA						

TQ: teacher question; SA: student answer; N: number of teacher question or students' answer
source: adapted Anderson and Krathwohl: 2001

Dimensions of knowledge (ie, the rows in the table) contains four categories: factual, conceptual, procedural, and metacognitive. these categories are considered to be a continuum from concrete (factual) until the absrtak (metacognitive). Categories have conceptual and procedural successive abstraction levels, for example, procedural knowledge is more concrete than the most abstract conceptual knowledge. Dimensional continuum underlying cognitive processes are considered as levels of complex cognition. *Understand* the level of cognition is considered to be more complex than *remember*. *Apply* believed to be more cognitively complex than *understand*, and so on (Anderson & Krathwohl, 2001: 6).

A question or a statement, usually, contains a verb and a subject. The verb was used to determine the cognitive process in the question and the subject was used to classify the knowledge dimension. for example, in the statement, "state the component of Blood" asked by teacher is during the lesson introduction stage, the cognitive process was remember, and the knowledge dimensions was factual knowledge, the verb "state" elicited the cognitive process of recall, and the part "components of blood" represent factual knowledge about blood (Christopher, 2012: 70).

The cognitive process dimension used to classify the teacher question into the cognitive domain namely, *remember*, *understand*, *apply*, *analyze*, *evaluation*, and *create*. Remember level is the lowest cognitive process and create level is the highest cognitive process. The cognitive process comparison and explanation of knowledge. The cognitive

process of teacher questions are intended to nurture student cognitive structures. Knowledge dimension was used to classify the subject part of question into the knowledge dimension.

C. RESEARCH METHOD

The method used in this study is a combination of research methods. The model used is a combination method of concurrent embedded strategy. Cresswell (2009) revealed that

> *Concurrent embedded: strategy of mixed methods research can be identified by its use data collection phase, during which both quantitative and qualitative data are collected simultaneously. Unlike the traditional triangulation model, a concurrent embedded has primary methods that guides the project and a secondary methods that provide a supporting role in the procedure.*

In the model of embedded research method is the use of a combination of qualitative and quantitative research methods combined together, but there are differences in the weight of the study. In this model there is a method of primary and secondary methods. In this study, the primary method is a qualitative method, because it is used to obtain primary data, while being the secondary method: a quantitative method because it is used to obtain data to support the data obtained from the primary data. The focus of the study examines the knowledge and cognitive process dimension and learning processes paradigm that occur in class in the precipitation reaction chemistry concepts that serve as a foundation to improve the quality of chemistry learning.

The research start from video capture data, and direct observations. After that made lesson transcript and analyze of learning processes paradigm/determine student center lesson using Hendayana lesson analysis framework. Determine the cognitive and knowledge dimensions of teacher's questions and student's answers using Bloom taxonomy revision table. This research implemented in *SMA Laboratorium Percontohan UPI* located at Jl. Senjayaguru UPI Bandung. The subject of this research are: students of class XI IPA2 *SMA Laboratorium Percontohan UPI*, chemistry teacher is a teacher who will teach in classes that have been defined as a class of research subjects, and the teacher of chemistry and researcher as an observer. The instruments used observation sheet, documentation (handycam), lesson transcript, Hendayana lesson analysis framework, Bloom taxonomy revision table. The lesson was about precipitation reaction. The teacher used active and collaborative strategy with group investigation type. The student explore their knowledge by doing experiment in science laboratory.

D. FINDINGS

Tabel 4. Lesson transcript

Time	Step	Person	Dialogue	Knowledge dimention	Cognitive process
0:29	1	T5	Ooo...Kita sekarang hari ini akan melanjutkan pelajaran yang kemarin, udah dua pertemuan mengenai apa?? Ksp ya?	Factual	Remember

Time	Step	Person	Dialoge	Knowledge dimention	Cognitive process
0:39		S4	Ya	Factual	Remember
12:42	2	T6	Disini apa..timbal nitrat ya...timbal nitrat dia akan terionisasi menjadi apa? Ada yang tau??	Conceptual	Understand
1:22		S5	Pb	Conceptual	Understand
1:24	3	T7	Pb berapa?	Conceptual	Understand
1:26		S6	Pb dua plus	Conceptual	Understand
1:27	4	T8	Trus?	Conceptual	Understand
1:29		S7	Pb dua plus dua NO3 min	Conceptual	Understand
1:39	5	T10	Ya...Betuuul?	Konseptual	Evaluate
2:14		Ss2	Betuuuul	Conceptual	Understand
2:18	6	T12	Kenapa dua??	Conceptual	Evaluate
2:29		S9	Karena NO3 nya dua kali	Conceptual	Evaluate
2:30	7	T13	Disini nya berapa plus?? Aaaa?	Conceptual	Understand
3:07		S10	Dua plus	Conceptual	Understand
3:08	8	T14	trus disini apa satu lagi??	Conceptual	Understand
3:10		S11	Dua NO3 min	Conceptual	Understand
3:14	9	T15	NO3 ya...NO3 trus disini nya??	Conceptual	Understand
3:16		Ss3	Dua NO tigaaaaa......min	Conceptual	Understand
3:17		S12	Dua NO tiga	Conceptual	Understand
3:18		S13	Dua NO..Koefisiennya dua bu…	Conceptual	Understand
3:20	10	T16	Disini dua plus disini satu ya??	Conceptual	Evaluate
3:32		S14	Ya	Conceptual	Evaluate
3:33	11	T17	Satu kan?? dan disini min disini berapa?? Satu berapa tadi koefisiennya?	Conceptual	Remember
3:38		S15	Duaa	Conceptual	Remember
3:41	12	T18	Dua ya kan?	Conceptual	Evaluate
3:50		Ss4	…..	NC	NC
4:35	13	T20	Jadi NaI itu terionisasi menjadi??	Conceptual	Understand
4:52		S17	Na (sambil menulis)	Conceptual	Understand
4:57	14	T21	Benar ya tidak ada koefisiennya ya??	Conceptual	Evaluate
4:59		S18	Ya	Conceptual	Evaluate
5:01	15	T22	Jadi Natrium iodida terionisasi menjadi Na plus...jelas??dan I min. Siapa yang belum jelas???	Metacognitive	Mengevaluasi

Time	Step	Person	Dialogue	Knowledge dimention	Cognitive process
5:13		Ss5	Jelas	Metacognitive	Evaluate
5:15	16	T23	Disini Pb berapa plus?	Conceptual	Understand
5:37		S19	Dua	Conceptual	Understand
5:39	17	T24	Siapa yang bisa mereaksikan??	Metacognitive	Apply
6:48		S20	Udah bu	Metacognitive	Apply
6:49	18	T25	Iyaa gitu??..Sekarang kita reaksikan, itu baru ionnya...sekarang kalau Pb..Pb itu kan dua plus dengan I eeeee min satu...berarti yang dikalikan mana??	Conceptual	Understand
7:01		S21	I	Conceptual	Understand
7:02	19	T26	I berarti jadi berapa I nya??	Conceptual	Understand
7:04		S22	Jadi dua	Conceptual	Understand
7:06	20	T27	Udah terus itu tetap ya?	Conceptual	Evaluate
7:07		S23	Tetap	Conceptual	Evaluate
7:09	21	T28	Ya Jadi eee betul ramzi menuliskan?	Conceptual	Evaluate
7:12		Ss6	Betuuul	Conceptual	Evaluate
7:13		S24	Good	Conceptual	Evaluate
7:20	22	T29	simbol apa ini??	Conceptual	Understand
7:28		S25	Solid	Conceptual	Understand
7:29	23	T30	Padat atau dia ...diaaaa...meeem?	Conceptual	Understand
7:32		S26	....	NC	NC
7:35	24	T31	Kalau ini kan melarut,,kalau ini dia ?	Conceptual	Understand
7:42	25	T32	Mengendap ya berati PbI2 itu adalah suatu garam yang mengen?	Conceptual	Understand
7:47		S28	Dap	Conceptual	Understand
7:49	26	T33	Tau mengendap atau tidak nya..Naaah ini lah yang nantinya akan kita pelajari. Jelas?	Metacognitive	Evaluate
7:55		S29	Jelas	Metacognitive	Evaluate
7:57	27	T34	Jelas ya...Pb dia akan bereaksi dengan Iodium dan Natrium akan bereaksi	Metacognitive	Evaluate

Time	Step	Person	Dialogue	Knowledge dimention	Cognitive process
			dengan NO3. Ada pertanyaan sampai sini??		
8:08		S30	....	NC	NC

T: teacher, S: student

1. Analysis of lesson by Hendayana lesson analysis framework

Figure 1. Lesson analysis of precipitation reaction lesson in classical session

Figure 2. Lesson analysis of precipitation reaction lesson in group session

Table 5. Knowledge dimention and cognitive process of science teacher's question and student's answers

The knowledge dimention	Person	The cognitive process dimention						
		Remember /%(N)	Understand /%(N)	Apply /%(N)	Analyze /%(N)	Evaluate /%(N)	Create /%(N)	Total /%(N)
Factual	TQ	11,2(8)	5,6(4)	0	1,4(1)	1,4(1)	0	19,7(14)
	SA	10(7)	7,1(5)	0	8,5(6)	0	0	25,71(18)
Conceptual	TQ	4,2(3)	38(27)	0	8,4(6)	9,8(7)	(0)	60,5(43)
	SA	8,5(6)	34,2(24)	0	0	10(7)	2,8(2)	55,7(39)
Procedural	TQ	1,4(1)	0	5,6(4)	0	0	0	7(5)
	SA	2,8(2)	0	4,2(3)	0	1,4(1)	0	8,5(6)
Metakognitive	TQ	0	0	2,8(2)	0	9,8(7)	0	12,6(9)
	SA	0	0	1,4(1)	0	8,5(6)	0	10(7)
Total	TQ	16,9(12)	43,6(31)	8,4(6)	9,8(7)	21,1(15)	0	100(71)
	SA	21,4(15)	41,4(29)	5,7(4)	8,5(6)	20(14)	2,8(2)	100(70)

From the analysis of the knowledge and cognitive process dimension from teacher's questions and student's answers we can conclude that the chemistry teacher's questions elicited high order cognitive process like apply and create were very few. So, the student's answers seem to be a representation of teacher's question.

E. DISCUSSION

1. Analysis of Student-Center Approach

Student-center approach were analyze by Hendayana lesson analysis framework. From Hendayana lesson analysis framework it is seen that lesson have tendency to be teacher centered. The lesson has pattern passive, teacher lead, and teacher center learning. The teacher used active and collaborative strategy with group investigation type. The student explore their knowledge by doing experiment and it made there were many collaboration between student-student and student-teacher in group session, although teacher center in classical group.

2. Analysis of knowledge dimensions and cognitive process dimension of teachers' questions and students' answers

Teacher's questions and student's answer were analyzed based on the method adapted from Anderson & Krathwohl (2001) . It emerged that most of the questions used by the teacher contained understand cognitive process of conceptual knowledge. Chemistry teacher questions contained 60,5% conceptual knowledge, 19,7% factual knowledge, 12,6% metacognitive knowledge, and 7% procedural knowledge. It's means that total of conceptual and factual knowledge of teacher question is 80,2% from total of teacher's questions. Metacognitive and procedural knowledge had low percentage from total of teacher question.

Same as the teacher question dimension of knowledge dimension, student answer contained 55,7% conceptual knowledge, 25,71% factual knowledge, 10% metacognitive knowledge, and 8,5% procedural knowledge . We could understand that the cognitive process dimension of student's answers were a reflection from the knowledge dimension of teacher's questions. Most of chemistry question dominate by 41,4% question that asking understand

knowledge, 21,4% elicited remember knowledge, 20% evaluate knowledge, 5,7 apply knowledge, and 2,8 create knowledge.

F. CONCLUSION

The lesson have tendency to be teacher centered. The lesson has pattern passive, teacher lead, and teacher center learning. The teacher's questions 80,2% consist of conceptual and factual knowledge from total of teacher's questions. Metacognitive and procedural knowledge had low percentage from total of teacher question. Same as the teacher question dimension of knowledge dimension, student answer contained 55,7% conceptual knowledge, 25,71% factual knowledge, 10% metacognitive knowledge, and 8,5% procedural knowledge. Most of chemistry question dominate by 41,4% question that asking understand knowledge.

Teacher need to use questions to elicit student thinking, regularly invite questions from students, and encourage responses from student. Chemistry teacher placed greater emphasis or eliciting factual knowledge rather than knowledge dimensions. The chemistry stressed recall of conceptual knowledge rather than eliciting factual, procedural, and metacognitive knowledge dimensions. The quality of students' answer and thinking is a reflection of teacher questions, so the cognitive process and knowledge dimensions need to be appropriately stressed. Although used active learning methods, when teachers do not use good questioning skills, the learning process will not improve the thinking skill of students. Finding of this study revealed that the chemistry teachers have to increase the quality of their question, to become teacher-center lesson and improve the quality of chemistry learning.

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IMPROVING STUDENTS' MATHEMATICAL SELF EFFICACY THROUGH COOPERATIVE LEARNING OF THE GROUP INVESTIGATION TYPE

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Abstract

This study was a Quasi Experimental with The Post-test Only Non-Equivalent Group Design. This research is conducted to investigate the differences in students' mathematical self efficacy was treated Cooperative Learning of the Group Investigation Type (CLGI) and conventional learning. The instruments of the study are mathematical self efficacy scale and students' daily journal. The research result shows that on CLGI, the students' scores of mathematical self efficacy are better than the students' scores of conventional learning. Furthermore, judging from the students' daily journal, the students' mathematical self efficacy of CLGI class showed a increasing trend compared to the conventional class students tend to fluctuate. Therefore, CLGI can be used to improve students' mathematical self efficacy.

Keywords: mathematical self efficacy, cooperative learning of the group investigation type.

A. INTRODUCTION

Mathematics is the science that underlies the development of information and communication technology today. Therefore, mastery of mathematics by students is absolutely necessary. However, the reality of the matter is the mastery of mathematics students in Indonesia is still low. This is evident from the results of the study of TIMSS 2011 and PISA 2009.

The results of the TIMSS study in 2011 showed that Indonesia scored 386 and was ranked 38 of 42 countries. Meanwhile, the results of the PISA study in 2009 showed Indonesia scored 371 or ranks 61 out of 65 participating countries (PISA, 2010). Mathematics problems in TIMSS and PISA studies measure a student's ability level than just knowing facts, procedures or concepts, applying the facts, procedure or concept to use it to solve a simple problem to a problem that requires a high reasoning.

One of the causes of low student achievement is the low mathematical confidence or the so-called students' mathematical self efficacy. Several studies have shown that students' self-efficacy can be said to be low. Risnanosanti (2010) in her research found that students' mathematical self efficacy in the category of moderate. Meanwhile, Widyastuti (2010) found that students' self efficacy is low, even 40,69% were classified as very low. The results of these studies were ironic if we saw one of the goals mathematics courses given to students,

namely that they are confident in solving mathematical problems (National Education Ministry, 2006).

Therefore, students' mathematical self efficacy must be improved. In this study, researchers propose a solution in the form of implementation of Cooperative Learning of the Group Investigation Type (CLGI). In this study, researcher examined whether the self efficacy of students who were given treatment in the form of CLGI better than students taught with conventional teaching. With the implementation of this teaching model are expected students' mathematical self efficacy can be improved.

B. LITERATURE REVIEW

1. Mathematical Self Efficacy

Self efficacy according to Bandura (1986) is a person's self judgment of his ability to plan and implement actions towards achieving success. Self efficacy can be extracted from four sources (Bandura, 1997). Those four sources are mastery experiences, vicarious experience, verbal persuasion, and physiological and affective state.

Self efficacy has an impact on motivation, so it is also related to student achievement. A student who have high self efficacy in a given subject matter would be expected to exhibit strong achievement strivings. Conversely, if a student does not have a high self efficacy, s/he tends to avoid assignment or implement half-heartedly so that they will quickly give up when confronted with obstacles (Schunk, 1981).

Bandura (1997, 2006) stated that the measurement of a person's self efficacy refers to the three dimensions, namely the level, strength, and generality. Level, this dimension relates to the student's self judgment with regard to the degree of difficulty that s/he believes s/he can finish. For example, if s/he is faced with problems or tasks which are arranged according to a certain difficulty level then her/his self efficacy is going to fall on problems or tasks are easy, moderate, and difficult according to the limits of ability that s/he is perceived. Strength, this dimension relates to the student's self judgment regarding the level of strength about competency that s/he is perceived. In other words, this dimension indicates the degree of student's strength in a situation which s/he considers difficult. This dimension is usually directly related to the level dimension, i.e. the higher the level of difficulty of the task then the lower the students' self judgment of the ability to resolve problems or tasks given. Generality, this dimension indicates whether a person's self efficacy will take place on a particular domain or applicable in a variety of activities and situations. This dimension relates to the student's self judgment with regard to the broad field in addressing or solving a variety of problems or tasks. Student may judge her/his self efficacy across a wide range of activity domains or only in certain domains of functioning.

Pajares (1997) stated that the three dimensions proved most accurate in explaining a person's self efficacy. This is because self efficacy is specific to the task and situation at hand. A person can have a high confidence on a particular task or situation, but not for other tasks or situations. Measurement of self efficacy in this study focused on three dimensions of levels, strength, and generality which are then developed into an indicator of students' mathematical self efficacy.

2. Cooperative Leaning of the Group Investigation Type

Cooperative Learning of the Group Investigation Type (CLGI) is a general plan of organizing classes where students work in small groups using cooperative inquiry, group discussion, and cooperative planning and projects (Sharan & Sharan, in Hobri & Susanto, 2006). In this lesson, students work in groups of two to six members. They are actively engaged in planning and organizing task to investigate a specific issue or topic. Furthermore, they do the activities necessary to prepare the report group. Finally, several groups present or display their findings to the class. According to Sharan & Sharan (1989), the steps in CLGI is: (1) identifying the topic to be investigated and organizing students into research groups, (2) planning the investigation in groups, (3) carrying out the investigation, (4) preparing a final report, (5) presenting the final report, and (6) evaluation.

In terms of its characteristics, this teaching model adhered to the view of constructivism, where students learn by actively constructing their own knowledge through a process of assimilation and accommodation as well as interaction with the environment. When the discussion process bottlenecks encountered, Vygotsky calling for scaffolding, teachers give the necessary assistance in the form of questions to assist and advise the student intended to answer. The provision of scaffolding which is accompanied by positive persuasion is closely related to the development of students' self efficacy. This is because the positive persuasion is one of the digger sources of self efficacy.

C. METHODOLOGY

This research is a Quasi-Experimental with The Post-test Only Non-Equivalent Group Design. This study was conducted in one of the Junior High School in Bandung. The population of this study is students of grade eight in this junior high school year 2013/2014, which the sampling was done by purposive sampling. In this research, the experimental class students were given treatment in the form of CLGI, while the control class was given conventional learning. The variables of this study are Cooperative Learning of the Group Investigation Type as independent variable and mathematical self efficacy as the dependent variable.

The research instrument used is the mathematical self efficacy scale and students' daily journal. Mathematical self efficacy scale was developed from the level, strength, and generality dimension (Bandura, 1997, 2006). Of these dimensions was developed to be an indicator to measure the students' mathematical self efficacy. These indicators are shown in Table 1 below. The scale is used after a process of expert judgment and limited trials to test the readability of the statements on this scale.

Table 1
Indicators of Students' Mathematical Self Efficacy

Dimension are Measured	Indicator
Level: this dimension relates to the student's self judgment with regard to the	Student judges her/himself with regard to the degree of difficulty of

Dimension are Measured	Indicator
degree of difficulty of mathematics task that s/he believes s/he can finish.	mathematics task that s/he believes s/he can finish.
Strength: this dimension relates to the student's self judgment regarding the level of strength about competency that s/he is perceived.	Student judges her/himself regarding the level of strength about competency that s/he is perceived.
Generality: this dimension indicates whether a student's self efficacy will take place on a particular domain or applicable in a variety of activities and situations.	Student judges her/his self efficacy whether it will take place on a particular domain or applicable in a variety of activities and situations.

In this study, descriptive data analysis conducted to analyze the students' daily journals and inferential statistics to analyze the data of mathematical self efficacy scale. The independent sample t test is conducted when the assumption of normal and homogeneous fulfilled, while the Mann-Whitney test when the normal assumption is not fulfilled.

D. FINDINGS

In this study the data of mathematical self efficacy of students taken and analyzed after the treatment was given. This is because the research hypothesis to be tested is the mathematical self efficacy of students who are taught by CLGI is better than students taught with conventional teaching. In addition, early mathematical self efficacy of students in both classes is assumed to be same. It is because the students have not received treatment may affect mathematical self efficacy. In table 2 are presented the data score of students' mathematical self efficacy in both classes.

Table 2
Data Scores of Students' Mathematical Self Efficacy

Class	N	Score		Mean	Standard deviation
		Max	Min		
CLGI	36	124	70	109,39	10,24
Conventional	45	137	57	100,64	18,26

Note. Maximum score of mathematical self efficacy = 150.

Descriptively, Table 2 shows that the average of self efficacy scores of CLGI class over the conventional class with a difference of 8,75. In terms of standard deviation, students' self efficacy of the conventional class is more diffuse than the CLGI class. This is indicated by the standard deviation of self efficacy score of the conventional class is 18.26 higher than the CLGI class which is 10.24. To test the similarity of the average of students' self efficacy score in both classes used the independent sample t test. Table 3 below presents the t' test mathematical self efficacy of both classes.

Table 3
The Result of Independent Sample t Test of the Mean Score of Self Efficacy

Mean Difference	T	Sig. (1 tailed)	H_0
8,74	2,722	0,004	Rejected

H_0: there is no difference between CLGI class and conventional class in terms of mean in mathematical self efficacy

H_1: students' mathematical self efficacy of CLGI class is better than conventional class

Table 3 shows that significantly, the mean score of students' self efficacy of the CLGI class (109,39) is better than the conventional class (100,64). This is because the significance value of 0.004 is less than the value of $\alpha = 0.05$. In other words, mathematical self efficacy of students' of CLGI class is better than mathematical self efficacy of students' of conventional class

To determine the influence of CLGI to such differences, this study examined the effect size. The results of the effect size calculations are presented in Table 4 below.

Table 4
The Results of the Effect Size Calculations

Class	Mean	Standard deviation	Effect Size
CLGI	109,39	10,24	0,5
Conventional	100,64	18,26	

Table 4 shows that the effect of the CLGI on students' self efficacy was 0,5. Based on the interpretation of effect size given by Coe (2002), the effect size of 0,5 means that 69% of students who received conventional teaching has self efficacy lower than the average students' self efficacy who were treated CLGI. Based on the classification given Cohen (in Minium, King, & Bear, 1993), the effect size of 0.5 was classified in medium effect.

Aside from mathematical self efficacy scale, the self efficacy level of students is seen from daily journal which is given in each early of the lesson. This journal is given to students to find out the development of self efficacy of students in both classes to succeed in participating in learning and solving the tasks. Graph of the average fluctuation of students' mathematical self efficacy scores based on a daily journal can be seen in Figure 1 below.
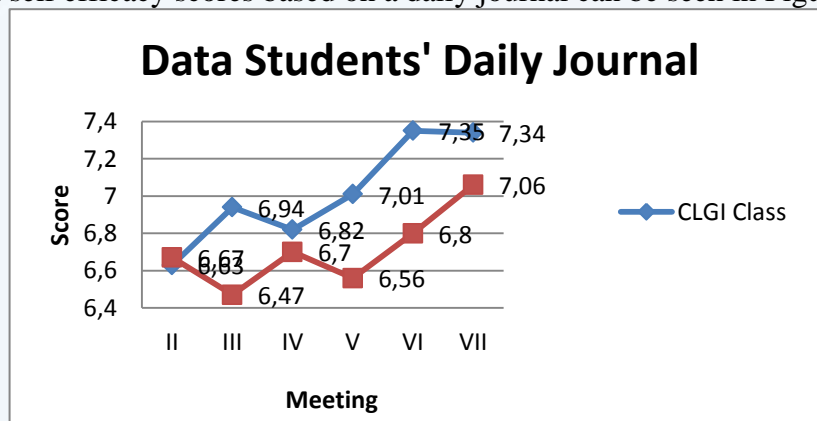
Figure 1. Graph of Students' Daily Journal Scores

In general, from the daily journal is known that students' self efficacy of the CLGI class is better growth than the control class. Compared self efficacy of conventional class that tend to fluctuate, the CLGI class showed an increasing trend of self efficacy. Even so, the students' self efficacy of CLGI class had decreased at the fourth meeting. It is because of the change in the material that students learn. At the previous meetings they conduct an investigation to find a concept, but on the fourth meeting, students were asked to conduct an investigation of solving problems through the application of accumulated concepts that they have learned. This causes them to expect that they will have considerable difficulty in current meeting.

E. DISCUSSION

Statistically, students who are taught by CLGI have better self efficacy when compared to students of conventional class. The development of students' self efficacy was also seen from the daily journals of students. Although initially the experimental class students have self efficacy is slightly lower than the control class students, but students in the class of CLGI showed considerable improvement when compared to students of the conventional class. It is also seen during the learning, students in the CLGI class were active and confident when they are studying, discussing, investigating, and resolving the problem given. In addition, the students are also more confident when they are expressing their opinions either in small groups or large groups.

In CLGI class, students learn in heterogeneous small groups and were faced with a problem that they must solve through the investigation process. While working in groups, each student has the responsibility and contribution to the success of the group. This leads to each student also experience such success, when the group successfully completed the problems. Success/mastery experience is according to Bandura (1997) became a major source for students to develop their self efficacy.

In CLGI class, students have more opportunity to observe the other students, especially the friends in their group. The students can intensively observe and compare themselves with their peers in the work. The activity is which encourages them to be more motivated to learn and improve his ability. Although according to Bandura (1997), this source does not provide the same magnitude of effect with students' mastery experiences, but researcher found this observation activities make a difference to magnitude of self efficacy of CLGI class and conventional class students. This is consistent with the results of the research of Schunk & Hanson (1985) which states that students' achievement and self efficacy is influenced by their observations of their peers. Where, observation of the peers gives more influence than mere observation of the teacher.

The third source of self efficacy, social persuasion which can be said be a differentiator between students' mathematical self efficacy of CLGI and conventional class. Social persuasion in CLGI can be said has intersection with scaffolding. Scaffolding which is a necessary aid given to students when they have difficulties accompanied with words of

motivation or support. In addition to being a solution of the impasse that they naturally also be a source of increased students' self efficacy. This is in line with the statement of Bandura (1997) that a person's self efficacy can be increased through the influence of others are respected and competent so that s/he seemed to "get what s/he needs" and become a positive feedback to do the task.

F. CONCLUSION

Based on the findings and discussion, it can be concluded that the mathematical self efficacy of students who are treated in the form of CLGI better than conventional learning. In this case the influence of CLGI is classified as moderate. The influence can be interpreted that 69% of students who are taught by conventional teaching have mathematical self efficacy lower than students who were given treatment in the form CLGI. Therefore, CLGI can be used as a model of learning that can improve students' mathematical self efficacy. However, it should be noted that the teacher should give such praise positive persuasion and motivation when material change or before test is held. This positive persuasion can be a digger source of self efficacy students so there increases.

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IMPROVING STUDENT'S HABITS OF MANAGING IMPULSIVITY USING PROJECT-ASSISTED GROUP INVESTIGATION

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Abstract

The purpose of this study is to investigate project-assisted group investigation to develop habits of managing impulsivity. This study was a quasi experimental research with non-equivalent control-group design. The population of this study is all students one of a public junior high school in Cirebon, year 2013/2014. Two groups were chosen from the population as research sample using purposive sampling technique. Project-assisted group investigation was implemented in experimental group and direct instruction was implemented in control group. The instrument that were used in this study are habits of managing impulsivity scale, group activity sheets and observation sheets. Normalized gain of the students habits of managing impulsivity was obtained from pre-post habits of managing impulsivity scale and analyzed by non parametric Mann Whitney-U test. The data from group activity sheets and observation sheets were analyzed qualitatively. Based on the data analysis, it can be noted that: (1) the average of normalized gain on students habits of managing impulsivity in experimental group is 0.15, while the average of normalized gain on students habits of managing impulsivity in control group is 0.01; (2) students' mistake in doing investigation which was reflected on their group activity sheets becomes even lesser and lesser in each session; (3) observation result that students positive activity toward habits of managing impulsivity. The conclusion of this study is: the students' enhancement of habits of managing impulsivity who worked under project-assisted group investigation is better than that of students who worked under direct instruction.

Keywords: habits of managing impulsivity, project-assisted group investigation

A. INTRODUCTION

Mathematical problem solving skills in addition influenced by students' mathematical knowledge is also influenced by how students in solving mathematical problems. Several attitude such as cautious, patient, calm, careful, and reflective thinking in the face of a problem will help students to solve mathematical problems that it faces. It shown by people who have habits of managing impulsivity. Someone who has the habits of managing impulsivity will try to think clearly to understand the problems, careful in formulating strategies to approach the problem, and not in a hurry express an idea before they actually understand it and want to hear other opinions are different. Students who have habits of managing impulsivity that is either going to be an effective problem solver. Effective problem solvers by Costa and Kallick (2008), they were always careful in acting, meaning they will

think before they act. Habits of managing impulsivity will make students think more deeply analytical in solving problems. Analysis into the problem-solving activities so that students who think deeply analytical problem-solving ability will have a good mathematical skills. Duckworth and Seligman (Costa & Kallick, 2008) found that teens who have strong self-discipline will get better results than their peers who are more impulsive in academic performance, admission in a good high school, and attending classes. Based on these findings, it is important for students to have the habits of managing impulsivity good especially in mathematics learning to improve learning outcomes.

Increased habits of managing impulsivity of students affected by the process of mathematics learning in the classroom. Selection of appropriate learning model for the specific subject and stage of student thinking needed to support the development of the habit. Often in mathematics learning in the classroom, teachers prefer to speak orally in delivering materials and teacher-centered learning. Teacher-centered learning make teachers as the sole source of information. Students are given less space to explore and investigate the mathematical material being studied. This will make it difficult for developing students' habits of managing impulsivity. One way to engage students actively in the situation that developed the habits of managing impulsivity is the project-assisted group investigation, the project was given the final task of the student learning must be completed by the group at a particular time range associated with daily life and involve activities of design, implementation and reporting of written and oral. Project-assisted group investigation actively conditioning the students to learn and work with other students in a heterogeneous group that encourages students to have good habits of managing impulsivity. This article will discuss whether the students' enhancement of habits of managing impulsivity who worked under project-assisted group investigation is better than that of students who worked under direct instruction?

B. LITERATURE REVIEW
1. Habits of Managing Impulsivity

Habits of managing impulsivity means habitual of mind to regulate the behavior of one's in doing something suddenly without any planning and consideration of the consequences. According to Costa and Kallick (2008) mental processes have become habit does not require much effort to activate and maintain the settings, but the process itself may lie careful thought. That process can through careful examination of the options, weighing the risks and consequences, checking problems, and so on. Sumarmo (2013) states that individuals who have habits of managing impulsivity would think reflectively and can resolve issues carefully that characterized by thinking before acting, plan activities, trying to understand the instructions, and design strategies to achieve goals, considering a variety of alternatives and consequences before acting, gather relevant information, and listen to the views of other alternatives. Costa and Kallick (2008) states that students who have the habits of managing impulsivity, they will pay close attention to what happens during the learning or other in-class activities, they record things that can help when solving a problem, and change strategy by making a plan.

Indicators habits of managing impulsivity according to Costa and Kallick (2008), which uses wait time as an opportunity to think through a problem, attends to results of trial-and-error effort to determine a course of action, pay attention to what is working, and uses strategies for self-management such as note taking. Elyousif & Abdelhamied (2013) states that the indicator habits of managing impulsivity that is think clearly and deeply about the situation, tencourage the student to deliberate the ideas in deep, and listen before speaking. Based on the above opinion, the indicator habits of managing impulsivity in this study, namely:

a. Using the given time as an opportunity to think clearly and deeply about the ways the completion of a problem;
b. Involved in efforts that are trial and error to determine the next set of actions;
c. Pay attention to things that were taking place;
d. Using a strategy to regulate themselves.

2. Project-Assisted Group Investigation

According to Johnson & Johnson (Arends, 2007) learn best when the individual is personally involved in the learning experience. In the view of constructivism, students' understanding will be deeper and last a long time if students are exposed to learning experiences involving their own. Furthermore, Piaget (Dahar, 1996) states that in the process of learning, children will build concepts through experience.

Project-assisted group investigation includes a small group of students with members of four to six people working as a team to solve a problem, task or doing something to achieve a common goal that spurred other students to work together, help each other in integrating new knowledge with existing knowledge, students are trained to listen to the opinions of other people also received other capable students from different backgrounds and also summarizes the opinion or findings in writing. Learning experience in a project-assisted group investigation will create a students' understanding of mathematical concepts become deeper and more lasting. The role of the teacher in project-assisted group investigation acts as a resource at the same time a facilitator. The stages of group investigation (Slavin, 2005) are as follows.

a. Stage 1: identifying topics and organize students into groups.
b. Stage 2: planning tasks to be learned.
c. Stage 3: carry out an investigation.
d. Stage 4: preparing the final report.
e. Stage 5: present the final report.
f. Stage 6: evaluation.

Giving the project in a group is a good way to engage students actively in problem solving situations in the form of mathematical concepts related to everyday life and other disciplines. Wardhani (2010) stated that the project requires an understanding of students in a particular field, a particular student's ability to apply knowledge through an investigation, the ability of students to give information about something which is the result of their investigations. Stages of project-assisted group investigation in this research project is in

accordance with the stages of the project according to Slavin given as a project that must be completed and reported both orally and in writing at the end of the lesson.

C. METHODOLOGY

This research is a quasi experimental with non-equivalent control group design. According Ruseffendi (2010), the quasi-experimental subjects were not randomized, but the researchers received a sober state of the subject. The selection of the research is based on subject of this study has been are grouped into classes that already exist and it is not possible to group students randomly. In this research, the experimental class were given treatment project-assisted group investigation further written GIP and control class using direct instruction. The design of this study using non-equivalent control group design, the experimental group and the control group were selected without random placement procedure then equally given pre-post scale but only the experimental group were given treatment (Creswell, 2009). The variables in this study consists of independent variables is project-assisted group investigation; dependent variable is habits of managing impulsivity; control variables is direct instruction. The population in this study were students one of a Public Junior High School in Cirebon year 2013/2014. The research sample is determined by purposive sampling technique, based the technique obtained a sample of two classes, namely class VIIA as an experimental class and class VIIB as a control class by 37 students in each other.

The research instrument used in this study consisted of a habits of managing impulsivity scale, group activity sheets and observation sheets. Habits of managing impulsivity scale was used to collect data related to the habits of managing impulsivity. group activity sheets is used to train students' habits of managing impulsivity, which is a problem that is investigated in a group of students with the material lines and angles. Observation sheets used to describe the activities of the students during the GIP on habits of managing impulsivity.

Before the instrument is used, first tested the validity and reliability. Validity of psychological construction test done on the habits of managing impulsivity scale, group activity sheets and observation sheets by competent experts. In addition to test the validity of psychological construction, habits of managing impulsivity scale was also tested to determine the validity and reliability of the scale. To determine the validity of each item questionnaire used Spearman's rho test and to determine the level of reliability with Cronbach alpha through SPSS 20 software.

Qualitative data obtained from group activity sheets and observation sheets of students during the learning activity were analyzed descriptively, while the quantitative data obtained from the habits of managing impulsivity scale with inferential statistical tests. Habits of managing impulsivity scale was use a Likert scale with four possible answers, every so often (SS), often (S), infrequent (J), rarely (JS). It converted into the form of scores, in succession to 4, 3, 2 and 1 for positive statements and negative scores for the statement is the opposite. Before the habits of managing impulsivity scores were statistically tested, habits of managing impulsivity scale in the form of ordinal data is transformed using MSI (Method of Successive

Interval) into interval data for the pre-post scale on experimental and control classes. Then the normalized gain is calculated based on the pre-post scale. The results of the calculation of the gain is then interpreted using the classification (Hake, 1999) as follows:

Tabel 1
Classification *N-Gain*

N-Gain	Interpretation
$g > 0,7$	High
$0,3 < g < 0,7$	Medium
$g < 0,3$	Low

After that, testing normality and homogeneity of the pre scale score data and Normalized gain habits of managing impulsivity that have been converted to forms of data interval. Once the data is normal and homogeneous eligible to subsequently test the equality of two mean score of the pre scale and mean score difference of two Normalized gain using the Independent Sample t-Test. If the data are normally distributed but not homogeneous test is done by t'-Test and if the data is not normally distributed, then testing using a non-parametric test for two samples are independent replacement t-Test is the Mann-Whitney test.

D. FINDINGS

Based on the data processing, the data obtained as in the table below.

Table 2
Statistic Descriptive *Habits of Managing Impulsivity*

Data	GIP		Direct Instruction	
	$\overline{x}$	SD	$\overline{x}$	SD
Pre scale	32,91	2,33	33,08	3,64
Post scale	36,25	5,22	33,05	6,46
N-gain	0,15	0,19	0,01	0,21
Ideal Score = 56				

The average score of the pre-post habits of managing impulsivity scale in GIP and direct instruction can be expressed in the following figure:
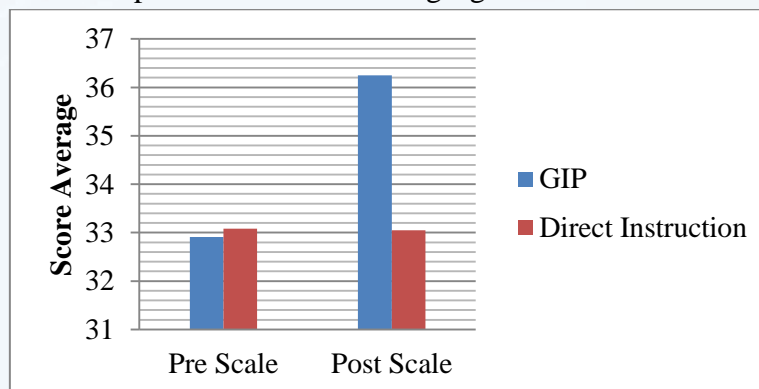
Figure 1. Average Score Pre-Post Habits of Managing impulsivity Scale

The average score of the normalized gain habits of managing impulsivity scale in GIP and direct instruction can be expressed in the following figure:
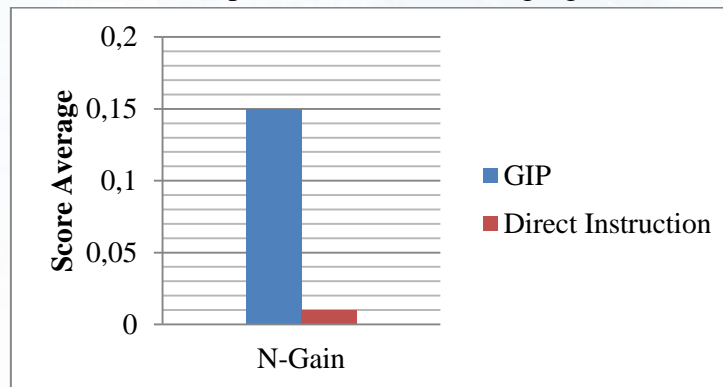
Figure 2. Average Score Normalized Gain Habits of Managing impulsivity Scale

Based on t'-Test at the pre scale scores obtained by the Sig. (2-tailed) = 0.809 > α = 0.05 so that H_0 is accepted, meaning that there is no significant difference between the scores of habits of managing impulsivity scale students who will receive the GIP and students will receive direct instruction. Thus the habit early in both of the class are the same. Furthermore, based on non-parametric Mann-Whitney test on normalized gain scores obtained by the Sig. (1-tailed) = 0.0055 < α = 0.05 so that H_0 is rejected, meaning that the rank normalized gain scores habits of managing impulsivity that students getting GIP significantly better than students getting direct instruction. Thus, the students' enhancement of habits of managing impulsivity who worked under project-assisted group investigation is better than that of students who worked under direct instruction. This is consistent with the results that students' mistake in doing investigation which was reflected on their group activity sheets becomes even lesser and lesser in each session.

Assessment of each aspect of student activity expressed in rating categories, much less given a score of 1, less given a score of 2, enough given a score of 3, good given a scored 4, and 5 were scored very well . Percentage in each activity was calculated by comparing the mean score of the collective and the maximum score, which is 5. Formulated:

$$P = \frac{Q}{R} \times 100\%$$

Based on the results, found that the average percentage of students activities which include meeting the 1st till the 7th meeting in a row is 50 %, 54.29 %, 64.29 %, 80 %, 82.86 %, 88.57 %, and 87.14 %.

E. DISCUSSION

Habits of managing impulsivity is a habit of mind or mental processes to regulate the behavior of someone in doing something suddenly without any planning and consideration of the result of something done. Have the habits of managing impulsivity is important for students both in and outside of learning. The results showed that the Habits of managing impulsivity beginning of the both of class are equally significant, increase in habits of managing impulsivity students getting GIP is significantly better than students getting direct

instruction as seen from the mean score of normalized gain GIP is 0.15 higher than students getting direct instruction is 0.01. However, the increase in both of the class still in the low category, this is due to the relatively short study period. This is consistent with the results of completing group activity sheets increasingly organized, meticulous and a bit error in each group activity sheets assigned to each meeting. The results of observations of the students during the learning activity to the habits of managing impulsivity at the first meeting that is 50 % while in the last meeting at 87.14%. The percentage is getting better in each session, this means that in each session activity students habits of managing impulsivity are positive.

Based on the results that have been obtained, suggests that GIP proved an important contribution in developing habits of managing impulsivity students. It is concluded that learning GIP has a better role in improving students habits of managing impulsivity than direct instruction.

In this study, there are limitations that are expected to be a consideration for other researchers to conduct similar research that will be useful for the expansion of scientific knowledge. The limitations include:

a. The selection of research subjects should not adjacent classroom, it is to avoid jealousy among students.
b. The treatment of research subjects is only done in a relatively short time so that it can affect the outcome is not maximized.
c. Instruments used to measure the habits of managing impulsivity in this study is a scale so that the data obtained are less deep. To strengthen the results of this study need to be done using other measuring devices, such as interviews.
d. Learning mathematics using GIP is unusual for students at the beginning of the implementation of learning so students can not keep up with the maximum learning, ongoing research should be done before any adjustment GIP stages of learning to students that research is currently underway, students more leverage in following learning.

F. CONCLUSION

The conclusion of this study is: the students' enhancement of habits of managing impulsivity who worked under project-assisted group investigation is better than that of students who worked under direct instruction.

G. ACKNOWLEDMENT

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PROBLEM-BASED LEARNING: IMPROVING THE METACOGNITIVE MATHEMATICS ABILITY

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Abstract

This paper discusses the differences of metacognitive ability improvement among students who received learning using Problem-Based Learning (PBL) model and students receiving learning with the conventional model, in whole or in mathematical terms based on students' mathematical prior knowledge, namely the high, medium and low level. Based on this research, it is known that (1) Students' metacognitive ability improvement that has been acquired the Problem-Based Learning model is significantly better than students who acquired conventional learning; (2) There are significantly differences in metacognitive abilities improvement among students who obtain the Problem-Based Learning model with students who received conventional learning in terms of students' mathematical prior knowledge level, high, medium, and low. Metacognitive abilities improvement of Experimental students who have a high and a medium mathematical prior knowledge level, are significantly better than the improvement of Control students' metacognitive abilities that have a high and a medium mathematical prior knowledge level. However, the increase in metacognitive abilities of students who have lower mathematical prior knowledge level in the experimental class and the control class did not differ significantly.

Keywords: mathematical metacognitive ability, problem-based learning

A. INTRODUCTION

The 2013 curriculum was prepared by Indonesian government as an effort to score the generation that is ready to face the challenges of globalization in the future. The curriculum suggests that learning occurs should bring up and develop including attitudes, knowledge, and skills aspects in a single unit. In addition, the learning experience gained by students become a major focus in the learning process, students must learn to know "what", to know "why", and to know "how".

According to the experts and 2013 curriculum framers that is listed in the Graduated Competency Standards, one's ability to be targeted in the 2013 curriculum, especially the high school level, is students' metacognitive ability (Permendikbud, 2013).

Metacognitive ability is awareness of one's knowledge of the process and the result of thinking (cognition), as well as the ability to control and evaluate their own cognitive processes. Metacognitive ability has an important role in learning (Flavell, in Livingstone,

2005). This capability is a key to be success in problem solving (Schoenfeld; Gourgey; in Nool, 2012), students who have low metacognitive abilities will lead to failure in solving the problem, while students who have a good metacognitive abilities will enhance their problem solving ability (Yoong, 2002).

Another advantage of the metacognitive ability is its role in the students' successful learning and is closely related to their intelligence (Borkowski, in Livingstone et al, 2005). This capability includes the general knowledge that can be used for a variety of tasks that enable to use strategies, the effectiveness level of the strategy, and self-knowledge (Wildfire, 2013). Students who display metacognitive ability in solving mathematical tasks have better learning outcomes than students who do not demonstrate metacognitive ability (Kramarski and Mizrachi; in Jbeili, 2012). Students who have good metacognitive abilities, can find a cognitive style that suits his character (Brown; Rahman and Philips; within Sholihah et al, 2012).

B. LITTERATURE REVIEW

Metacognitive ability is closely associated with problem solving. De Corte (Nugrahaningsih, 2012) suggests that metacognitive strategies are applied to solve a mathematical problem consists of five stages: 1) Build a mental representation of the problem; 2) Determine how to resolve the problem; 3) Perform the necessary calculations; 4) Interpret the results and formulate an answer; 5) Evaluating the results. Furthermore, Blakey (Nugrahaningsih, 2012) suggests that the fundamentals of metacognitive strategies include: (1) Linking knowledge with knowledge of its old new (Connecting new information to former knowledge); (2) Selecting the appropriate strategy and thinking (thinking Selecting strategies deliberately); (3) Planning, monitoring, and evaluating the process (Planning, monitoring, and evaluating thinking processes).

Based on the exposure, metacognitive abilities that has been used in this study is the students' ability to integrate knowledge and strategies to solve the problem. The indicator of the metacognitive ability are: 1) Identifying characteristics or problems; 2) Constructing the relationship between prior knowledge and new knowledge; 3) Taking an action (strategy); 4) Knowing the reason for the use of the strategy; 5) Resolving the problem or task authentic; 6) Giving a mathematical explanation for solving problems.

Some research suggests the importance of metacognitive abilities in problem solving and student learning outcomes. Sophianingtyas and Sugiyarto (2013) examined six students of class X in Bojonegoro in solving problems related to chemical calculations, which are grouped based on students' prior knowledge (2 high, 2 medium, and 2 low). Research results indicate that a high level of metacognitive groups being classified as reflective use, a medium metacognitive level in the group being classified as strategic use, and a lower levels in the group classified as aware use.

In addition to these studies, Nugrahaningsih's research results (2012) about the high school students' metacognition at accelerated class, suggesting that metacognitive abilities play an important role in solving the problem and is closely related to the intelligence of the students. Based on this research, the results showed that the high group of acceleration

students has complete knowledge of metacognition, namely declarative knowledge, procedural knowledge, and conditional knowledge. Students can connect information from the question with a prior knowledge, the student can choose the appropriate problem-solving strategies by selecting and applying the required formula. Students can think reflectively to criticize the question. Students also have the self-knowledge about the strengths, weaknesses, and awareness of the level of knowledge. Students have intra-individual variables, like realizing that he/she is more capable in mathematics compared to other subjects.

On the other hand, students from under groups in the class, have incomplete knowledge of metacognition. In mathematical problem solving, students do not make plans, monitoring, and evaluation process of thinking well. When students encounter questions related trigonometry, they fell confused, so it does rely on memorization. If not memorized, students play guess. Another students from the bottom group, if they were asked when or why use a formula that uses the way, the answer is "the teacher said" or "of record".

Problem-Based Learning (PBL) is the learning models which makes the issue as a key of learning. The characteristics of PBL models containing five essential elements, namely: the problem, problem analysis, collaborative and cooperative learning, publication work, and reflection. Students activities in PBL models include interpreting the problem, collect the necessary information, set strategy, implement the strategy, evaluate alternative solutions, and present the solution, so students construct their own knowledge, while teachers only served as a facilitator (Bawden in Hillman, 2003), which has thrusting a variety of authentic problems, facilitating the students' investigation, and supporting the student learning (Hillman, 2003).

Consistent with this opinion, Graaf & Kolmos (2003) and Tan (2004) outlines some of the following characteristics: 1) the problem becomes starting point; 2) the issues raised are issues that exist in the real world; 3) teachers and students define the problem; 4) activity-based learning, the learning process includes researching activities, making decisions, and writing; 5) learn to regulate themselves become the primary focus; 6) using diverse sources of knowledge and evaluation of resources is an essential process; 7) group-based learning (collaborative, communicative, and cooperative learning), most learning occurs in a group setting; and 8) review and evaluation of students' experiences and learning process.

Schmidt (1983) and Newman (2005) also describes seven steps students work in groups: 1) explain the terms and concepts that are not yet known; 2) defining the problem; 3) analyze the problem; 4) describe a systematic explanation; 5) formulate learning objectives; 6) collect additional information outside the group; and 7) synthesize and test new information obtained.

C. METHODOLOGY

This study uses a quantitative approach with a quasi-experimental, 3x2 factorial design, and non-equivalent control-group design. The sample used in this study were two classes (class experimental and control classes), these sample were randomly selected using purposive sampling technique class. The experimental class using the problem-based learning models (PBL) model and the control class learning with the conventional model. The instrument used in this study is the metacognitive ability tests and observation sheets. Both

groups of samples are given a pre-test and post-test, but only the experimental class are observed.

Test instrument used is a metacognitive ability test which contains 6 questions. Each question includes six indicators of metacognitive. This instrument has a reliability coefficient $r = 0.92$, and each question has a validity coefficient items were successively 0801, 0806, 0887, 0812, 0873, 0842. This research was conducted as much as 8 times learning in class, including pre-test and post-test. Each meeting takes 2x45 minutes.

D. FINDINGS

The results of both studies were analyzed by two ways ANOVA test at level of $\alpha = 0.05$. this ANOVA test results can be seen in the following table.

Table 1
Results of Two Ways ANOVA Test for *N-gain* Metacognitive Ability

Sumber	Df	F	Sig.
Model	1	7.227	.010
KAM	2	10.925	.000
Model * KAM	2	.849	.434

Based on the table, the value of the variable F model (representing the learning model) is 7,227 with a significance value of the test is 0.010. Significance value is less than $\alpha = 0.05$ level. This shows that H_0 is rejected. It can be concluded that the learning model gave a significant difference to the improvement of students' metacognitive abilities. It is also shown in the KAM variables (representing the students' prior mathematical knowledge). KAM F value of the variable is 10 925 with a significance value is 0.000 KAM variables. The significance value smaller than $\alpha = 0.05$ level. This shows that H_0 is rejected. It can be concluded that the initial mathematical ability of students gave a significant difference to the improvement of metacognitive abilities.

To determine the initial mathematical ability which is significantly different, then performed further ANOVA test, Poshoc Tukey test at the level $\alpha = 0.05$. The results of this test can be seen in the following table.

Table 2
Poshoc Tukey Test Results for Metacognitive Ability

Kemampuan Awal Matematis		Sig
High PBL	Medium PBL	.615
	Low PBL	.002*
	High Conv	.279
	Medium Conv	.008*
	Low Conv	.000*
Medium PBL	Low PBL	.012*
	High Conv	.886
	Medium Conv	.067
	Low Conv	.003*

Kemampuan Awal Matematis		Sig
Low PBL	High Conv	.457
	Medium Conv	.678
	Low Conv	.999
High Conv	Medium Conv	.965
	Low Conv	.257
Medium Conv	Low Conv	.383

Based on the table, the average pairs of gain students with High KAM PBL-Low PBL, High PBL-Medium Conventional, and High conventional-Low PBL, a row has a significance value 0.002, 0.008, and 0.000. Third significance value is less than 0.05, so H_0 is rejected. It can be concluded that the average gain of students with high levels of KAM in PBL classes differed significantly with an average gain of students in both the low level and KAM levels of medium and low levels in conventional class. It is also shown by the average pairs of gain students with Medium PBL-Low PBL and Low PBL- Medium Conventional. Value significance difference test averages are respectively 0.012 and 0.003, so H_0 is accepted. It can be concluded that the average gain of medium level students in PBL class was significantly different from the average gain of low level students in a conventional and in the PBL class.

E. DISCUSSION

The acceptance of the first hypothesis cannot be separated from the research process in the field. Learning activities can never be separated from teachers, students, materials factors, and the interaction between them. However, in this study more factors observed were students, materials, and interactions between the two are mutually supportive of an increase in students' mathematical metacognitive abilities.

Student interaction with the material in the experimental class and the control class were both running well. Students in both classes so enthusiastic about the material provided. Overall, the student' spirit so high both in learning and in completing a given task, especially in the experimental class. This is evident from the activity of the attention explanation, do chores, asking, denied, or dare to appear in front of the class while the presentation session.

The application of different learning models in both classes provide a significant impact on student learning outcomes in these two classes. The application of learning models Problem-Based Learning (PBL) provides a different atmosphere for the students. Students are required to work in teams to solve the problems given in the teaching materials. Student activity is not just limited to finding solutions, but also brainstorm to identify problems, seek as much information to resolve the problem, determine the exit strategy and determine the solution, provide understandable explanations of all students, and trying hard to prepare yourself and the group to perform well in front of the class in a presentation session. Thus, students are required to work harder to understand and solve the problems given more than usual. In this way students are trained to think of metacognitive and self-learning.

The provision of teaching materials and classroom treatment of these experiments resulted in the highest post-test scores were in the experimental class. Based on data from the prior mathematical abilities, these students belong to one category of students with high-level, coupled with the habit of solving problems given in the teaching materials, thus making the students more accustomed to resolve the problem well. In addition, based on the observation during the research process, the students have good attitudes and behavior in solving the problem. He always has a high focus to solve the problem, he also always devotes its attention to solve problems as well as in learning.

In addition to scores of pre-test, post-test scores was observed, and the results showed that the lowest post-test scores were in the control class. Based on observations, it is less active students in class, daydreaming, more silent, when asked about his interest in mathematics, he said something like mathematics, because too much use of formulas, so that from elementary school to junior high school math he claimed value is always less satisfactory. This makes students less interested in learning mathematics. In addition, the learning model used is not too make students active, although the presentation session for discussion several times done, but who dared to perform in front of the class with only a few students with moderate and high intelligence, while students with less intelligence tend to be more quiet and less bold convey the idea because they do not believe themselves.

The fact of the exposure is in line with the opinion of Marzano which suggests that metacognitive regulation include self-control, which include a commitment, attitude, and attention, which is where the commitment and attention is a key factor for someone to solve the problem as well as academic work.

Treatment also resulted in the experimental class average post-test score of the experimental class higher than class control and impact on receipt of hypothesis 1, namely an increase in metacognitive abilities of students who obtain a better model of PBL from increasing metacognitive abilities of students receiving learning with the conventional model. Unlike the experimental class, students in the control class (applying conventional learning models) are only given the problems derived from the 2013 curriculum textbooks (student handbook) and the solution was told by the teacher, so that students are only able to solve the problems of the ordinary. This result is consistent with the opinion of Nool (2012) who argued that metacognitive student success is a major factor in solving the problem, as well as research Yoong (2002) who stated that students with high metacognitive abilities will lead to successful problem solving, while students who have metacognitive abilities low tend to lead to the failure of problem solving.

However, based on the analysis and observations by researchers, the results showed that the highest pre-test scores were in the control class. After further explored, through the recognition of students, the students have studied some material on trigonometry through private tutoring is done in the home.

Subsequent analysis, the average post-test score and n-gain control class lower than the experimental class. This happens due to the implementation of applied learning in the classroom control is not directed to resolve the problem. Learning in this class simply uses the existing problems in the class X textbooks were more directed at the student's ability level of

understanding, so the students are not accustomed to solving the problems is quite difficult and requires several processing steps.

In addition to impacts on receipt of the first hypothesis, treatment of differentiated learning in both classes also affect research hypothesis 2. Hypothesis testing results showed that the average increase in metacognitive abilities of students at the beginning level of mathematical ability either high or are experiencing the same increase significantly. Both the average increase is significantly better than the average of students' metacognitive capacity building at the level of early mathematical ability lower. In contrast to PBL class, the average increase in metacognitive abilities of students at each level of early mathematical ability either high-medium, high-low, low and moderate-conventional classes did not differ significantly.

If seen from the descriptive statistics, the average post-test scores of students with moderate levels of mathematical ability early in the PBL class higher than the average post-test scores of students with a high level of mathematical ability early and being in a conventional classroom. It is also caused different from the learning process. The provision of teaching materials that students have an understanding of different makes and different habits. Based on the observation, students with ability levels were more active in the PBL class discussion, ask questions, find solutions and exchange ideas, so they have an understanding and a clearer strategy to solve problems that students students with high ability levels in a conventional classroom. Although students with high ability levels in a conventional classroom have more power, but in strategy and understanding of the problem, the students still have different perceptions of each other.

Based on the indicators measured in metacognitive abilities, in the PBL class, in general, all indicators increased. The indicators have increased with higher categories is 2nd indicator (construct the relationship between prior knowledge and new knowledge), 3rd indicator (take action / strategy), and 5th indicator (resolve the problem). This is because learning is more student directed at solving the problem. Before solving the problem, students are required to identify the characteristics, constructing the relationship between prior knowledge with new knowledge, taking strategies, and execute strategy. However, habituation is inseparable from the role of a facilitator who provides assistance to students through scaffolding techniques. Habit is what allows students improve all three indicators.

However, the 1st indicator (identify characteristics / problems), 4th indicator (determine why the use of strategies), and 6th indicator (provide an explanation for resolve the issue) at the level of moderate improvement. Improved indicators of 1 belong to the increase in the medium category, this is because in the beginning the student was able to identify traits/ problems, they are already accustomed to write down what he knew of the matter.

The 4th and 6th indicators increased with category because students were not accustomed to expressing reasons for the use of strategies, they do not trust myself to write the reasons the election strategy, despite what students already know the strategy he used in solving the problem. In addition, students are not used to working in a systematic and pleased with the completion of the instant. Although the final results are obtained correctly, they have not been able to explain the answer in detail.

In contrast to PBL class, in the conventional class, only the 3^{rd} and 5^{th} indicators that have increased, the 2^{nd} indicator is constant, while the 1^{st} and 6^{th} indicators decreased. This occurs due to the different treatment of learning. At the time of the lesson, students are not trained to explain the answer in a systematic and structured, students do not explain the result obtained with a good settlement. At the end of the lesson, even though the answer is correct, the student is more pleased with the instant answer, meaning that students do not write well its solution phases. This has resulted in the decrease score some indicators.

F. CONCLUSION

Based on the data analysis, finding, and discussion of research results that have been described, it is concluded as follows.
1. Students' metacognitive ability improvement that has been acquired the Problem-Based Learning model is significantly better than students who acquired conventional learning;
2. There are significantly differences in metacognitive abilities improvement among students who obtain the Problem-Based Learning model with students who received conventional learning in terms of students' mathematical prior knowledge level, high, medium, and low. Metacognitive abilities improvement of Experimental students who have a high and a medium mathematical prior knowledge level, are significantly better than the improvement of Control students' metacognitive abilities that have a high and a medium mathematical prior knowledge level. However, the increase in metacognitive abilities of students who have lower mathematical prior knowledge level in the experimental class and the control class did not differ significantly.

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IMPROVING STUDENT'S CREATIVE THINKING DISPOSITION USING OPEN-ENDED APPROACH

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Abstract

This study was a quasi experimental research with non-equivalent control-group design. The purpose of this study is to investigate open-ended learning approach in order to fasilitate students to built a disposition in creative thinking. This study was implemented at one of the junior high school in Bandung city, SMP Negeri 5. The population of this study are all students of eighth grade in SMP Negeri 5 Bandung year 2013/2014. Two groups was choosed from the population as research sample using purposive sampling technique. Direct instruction was implemented in control group and Open-Ended approach was implemented in experimental group. This study use non-test instruments, that are: creative thinking disposition scale, observation sheet and interview. Gain of the student's creative thinking disposition was obtain from creative thinking disposition scale and analyzed with parametric t-test. The data from observation sheet and interview results was analyzed qualitatively. Based on the analysis of data, the finding is obtained in this study are: (1) the average of normalized gain on student's creative thinking disposition in exsperimental group is 0,065, while the average of normalized gain of student's creative thinking disposition in control group is 0,019; (2) observation result indicate that students shows positive attitude towards creative thinking disposition; (3) interview result shows that students are interested in open-ended learning approach in order to improve their creative thinking disposition. The conclution of this study is the gain of student's creative thinking disposition using Open-Ended approach is better than using direct instruction.

Keywords: disposition, open-ended approach

A. INTRODUCTION

Human life can not be separated from thinking activities. One example of thinking process is when people seek the way to solve a problem in their daily life. Thinking is a mental activities that involves the performance of brain towards an information that create an idea or concept development. According to Gestalt phsycology, thingking is an abstract psychic activities that we can not watch the process with our senses. According to Plato, thinking is speaking in heart. A people can think, but can not be seen directly.

Students in studying and learning activities naturally perform a thinking process in order to get information that taught by the teacher, understanding mathematical concept, and

finding the way to solve a mathematical problems. Every ways of problem solving and learning process should not be focussed in achievement of basic skills that usually dominated of routine tasks that fairly solved with convergent thinking through memorizing and repetiton of examples that given by teacher, but it also develop high order thinking ability through divergent thinking.

Divergent thinking is essential to solve mathematics problems from all perspective, and construct all possible solution. In this case, divergent thinking is essential in studying and learning activities that not focus in a single solution in every problem solving, but how to construct all possible solution and possible ways to solve the problem. Divergent thinking may all possible ways and procedura to answer the problems with the unique and complex argumentation, why the answer correct and reasonable so that can be aplicated to solve the problems in real life.

Student's creativity can appear and develop through divergent thinking ability, that can solve mathematical problems through non-procedural ways with see the other side of theese problems. Student's who are thinking divergently, can give many ideas and argumentation in order to solve mathematical problems so that theese problems can be solved in many ways and even more than one way.

But the fact on the reality shows that most of students still think convergently. Most of students still in procedural thinking, that is follow the ways of problem solving based on the rule that given by the teaacher. Many students have difficulties to seek the arguments or idea in order to solve the mathematical problems. Whereas, mathematical problems not only can be solved in one way but also in many ways. Mathematical problems is also not only have one solution that given in procedural way, but also may have many solutions in unique ways. Convergent thinking indicate that the lowness of student's creativity.

Creative appear because of the strong motivation within people. If the habit of creative thinking appear continiously, then a disposition in creative thinking will grow accumulatively. Sumarmo (2013: 77) said that creative thinking dispotition is a will, a realization, a tendency, and a strong dedication in students in order to think and do something creative in positive ways. We can use open-ended approach to improve student's creative thinking ability. Sumarmo (2013: 310) said that one of the learning approach to develop cerative thinking disposition is begin with posing open-ended problems.

Open-Ended is a learning approach that can give a freedom for students to think actively and creatively in order to solve the problem. Open-Ended approach pose an open problems, that is a problem that construct as well that have variation not only the ways of the solution process to the solution of the problems. According to Shimada (1997: 25) in Open-Ended approach, teacher give a situation of the problem to students that the process of the solve and the solution not decided in one way. To solve theese kind of problems, students certainly need creativity so that Open-Ended approach can improve student's creative thinking disposition.

B. LITERATURE REVIEW

1. Creative Thinking Disposition

Mathematics learning is directed for fulfill today and future needs. Mathematics vision have a wide role and means, that is develop reasoning ability, critical thinking, sistimatically thinking, creative thinking and accurate, grows up self confidence and appreciate to beautiful mathematics order and develop objectivity and opens that are usefull to face the future that usual changed. The eseattitudes and habits of thinking are accumulatively arise a disposition toward mathematics (Sumarmo, 2013). Creative appear because a strong motivation within people. If the habits of creative thinking appear continiously, then disposition into creative thinking will grow accumulatively.

NCTM (Sumarmo, 2013) defined disposition as attractiveness and apreciation toward mathemtics. More boardly, mathematical disposition is not only as attitude but also as tendency for thinking and acting positively. Sumarmo (2013: 315) said that creative thinking disposition is a will, a realization, a tendency, and a strong dedication in students in order to think and do something creative in positive ways. According to Sumarmo (2013: 315), there are twelve indicators of creative thinking disposition: (1) opened, flexible, tolerant toward differ opinion and uncertain situation; (2) posing the opinion and feeling freely; enjoy for asking; (3) appreciate a fantasy; rich of initiative; have an ariginal argument; (4) have own opinion and not influenced easyly; (5) have self image and emotional stability; (6) self confidence and autonomous; (7) have anxious and interested to something abstract, complex and holystic; (8) have a widely interest; (9) brave take a risk, have responsibility and commitment for the tasks; (10) diligence and not bored easyly; not out of mind; (11) sensitive into environment situation; and (12) more oriented into nowadays and future than past.

Creative thinking disposition is an essential disposition that have to earn by students and develop to students who study mathematics, because creative thinking disposition is appropriate with mathematics vision, national education goals and learning objectives that school mathematics is indispensable for manghadapi increasingly fierce competition . Habituation to the disposition attitude should be carried out simultaneously and continuously through habituation during the learning process . For example, habituation honest attitude, discipline, hard work / perseverance, critical, creative, independent and curiosity can be built through habituation provision of relevant mathematical task and challenge that suits your needs and stage of intellectual development of students . Tasks and exercises that the teacher can continuously stimulate superior attitudes that foster a positive attitude towards mathematics in particular to think creatively in an effort to improve the outcomes and performance of students in learning mathematics . This is consistent with the suggestion NCTM (Sumarmo: 2013) to structure the task of training, meetings and test items in mathematics learning should be aimed at developing students' attitudes disposition . In addition, an innovative approach to learning that membelajarkan students with an active and meaningful can also encourage students to develop themselves to achieve the ability and disposition to think . Learning mathematics as developing creative thinking skills and dispositions of students should be implemented integrally, not partial, and not separately, so that the development of the sphere that one can support the development of other domains.

2. Open-Ended Approach

Open -Ended is an approach that can provide flexibility to the students to think actively and creatively in solving a problem . Open -Ended Approach presents a problem that is Open -Ended, which is constructed so that the problem has a good variation of a process or way of solving that leads to the solution of these problems . According to Shimada (1997 : 1) the approach of the Open -Ended, teachers provide a situation or problem to the students that the settlement or solution is not specified in a way . To resolve these problems, of course it takes the creativity of students so that the Open -Ended approach is believed to improve the ability and disposition of creative thinking of students .

Until now there has been no agreement among the experts about the notion of Open -Ended, and an open question or open problem . However, some authors adopted the notion of open -ended problems are problems that are not covered, the problem is defined as a problem with a closed initial situation and ultimately responsible are closed . Diversity or unclear understanding of the term open problem (Open -Ended) corresponds to the limited research data in accordance with the statements and suggestions for the use of the term Open -Ended question. Sumarmo (2013: 222) states that there are still very few studies that discuss the effectiveness of the use of open problems to stimulate student learning in the classroom. The study design and categorization tend to focus on diversity issues and answers and methods of analyzing the answers. Sumarmo also suggested that some of the considerations for preparing questions or good mathematical tasks which are to prepare questions or tasks should be divergent or open.

The answers vary according to the opinions of students assessed based on the accuracy of counting, drawing, and give the reason or rationale to the students' answers . Skills completing this task can be measured using performance - assessment approach (Sumarmo, 2013) . Learning mathematics should focus on implementing mathematical process (doing mathematic) instead of memorization (memorizing). This can be done through an open-ended approach, because when students complete an open-ended problem, they require the ability to investigate, explore, communications, identify the parts of the problem, and formulate a conjecture or suspicion to the problem. This of course can lead to the creativity of students in mathematics. This is in accordance with the opinion Sumarmo (2013: 93) which states that the tasks that are open-ended to get the student to work with active and creative thinking . Through the tasks that are open-ended, the teacher can identify the significance of understanding, mathematical reasoning ability and communication and to encourage students to think critically and creatively.

Open-Ended approach not only has an open aspect to the problem or constraint is given, but an open aspect to the Open-Ended approach also includes activities in which students are open mathematical activity is seen as a variety of student activities and thinking and mathematical activities must constitute a unity .

In developing lesson plans using the Open -Ended approach, the teacher should write the student's response is expected. Given problem or issue must have clear objectives which are presented as attractive as possible and should include the principle of " problem posing " so that students easily understand the intent of the problem . Teachers also need to allow

sufficient time for students to explore the problem . Therefore, the learning steps using the Open-Ended approach are: (1) present a problem ; (2) organizing learning; (3) observe and record student responses; (4) concluded (Suherman, et al : 2003).

C. METHODOLOGY

This research was a quasi- experimental design with a control group not equivalent . According to Creswell (2012 : 242) is not equivalent control group design (non - equivalent control group design) is the design of experimental group and control group randomly selected without the procedure later both groups were equally pretest and posttest, but only the experimental group is given the treatment . Ruseffendi (2005 : 52) states that the quasi-experiment, subjects were randomized but did not receive state investigators sober subjects .

The purpose of this study was to test the Open -Ended approach to creative thinking skills and dispositions of students . The independent variable in this study is the approach of the Open -Ended . Dependent variable is the ability and disposition of creative thinking of students . Control variables in this study were a group of students capable of high, medium and low are known based on the pretest .

The study involved two classes of samples, namely the experimental class and the control class . Sample classes are not formed by placing the subjects at random, but using classes that already exist . In class learning experiments conducted using the Open -Ended approach and implemented on conventional learning control class . This research was conducted at SMP Negeri 5 Bandung . The population of this research is all the eighth grade students of SMP Negeri 5 academic year 2013/2014 . Two classes of population selected as a study sample that is class VIII C as a control class VIII and class D as a class experiment . In the control class class implemented conventional learning . In learning experiments conducted using the Open -Ended approach . Selection of the study sample using purposive sampling technique because the researchers themselves who determine the sampling based on certain considerations.

The research instrument used in this study consists of instrument tests and non - test. Instrument tests consist of tests of creative thinking skills, while the non - test instrument consisted of a questionnaire / scale questionnaire is a disposition to think creatively, observation and interviews. Selection of these instruments is based on triangulated data intended to ensure the validity of the data . Non - test techniques used to collect data related to the disposition of creative thinking. Questionnaires were used to collect data related to students' attitudes toward mathematics. To collect data in the form of teacher activity during the learning process takes place, then use the observation sheet . Then to find out information about the opinions, aspirations, hopes, desires, and beliefs of students towards mathematics, the authors use interview techniques.

Non-test data collection in this study was done descriptively where the data collected is not data in the form of numbers. The data comes from observation notes, interviews, documents, photographs, audio and video recordings were obtained through questionnaires, observations, and interviews related to the disposition of creative thinking of students.

Creative thinking disposition scale is used to determine how students' creative thinking disposition toward the concept of area and volume of figures with flat sides . Creative thinking disposition scale given to students in both the control and experimental class class after the pretest and posttest . First analyzed the accuracy of grain -scale disposition of creative thinking of students then tested for validity and reliability by means tested on students and then analyzed using Spearman's rho test through the software SPSS 20 . Subject suitability indicators disposition to think creatively and grammar (legibility) every point scale disposition creative thinking consulted to both lecturers and students.

This creative thinking disposition scale using a scale with four options, namely : very often, often, infrequent and never. The fifth option is used on the grounds that there is no confusion in students so biased against the answers of students to creative thinking disposition scale can be avoided.

Because the data in the form of creative thinking disposition scale ordinal data, the data must first be converted into interval data. The data transformation method mengginakan Successive Interval method. Respondents were measured by giving numerical values to 1,2,3,4 scores, where each score obtained will have the ordinal level of measurement. The numerical value is considered as an object and then through the process of transformation is placed into the interval.

The purpose of this trial is to determine the validity of each item statement and also to calculate the weight of each option of each statement . Thus, scoring each statement choice of students creative thinking disposition scale determined a posteriori distribution is based on respondents' answers to the MSI method (Method of Successive Interval). By using this method, the weight of each option of each statement can vary depending on the distribution of student responses. This is done in order to determine whether the scale is feasible disposition to think creatively used.

D. FINDINGS

Creative thinking disposition is obtained from creative thinking disposition scale consisting of 24 items consisting of 12 statements of positive statements and 12 negative statements that have previously been tested for validity and reliability analyzes using SPSS 20 software assistance. Scale berikir creative disposition given to the students as pretest, the test before learning takes place and as a posttest, after learning that takes place both in the experimental class and the control class. Giving creative thinking disposition scale at pretest and post-test was conducted to determine the increase in the disposition of creative thinking of students in the experimental class and the control class.

Data mean value and standard deviation for the data pretest scores, posttest and gain from the disposition ternormaliasi creative thinking of students is presented in the following table:

Table 1
The Descriptions of Student's Creative Thinking Disposition

Group	Pre Scale		Post Scale		N-Gain	
	$\overline{X}$	SD	$\overline{X}$	SD	$\overline{X}$	SD
Experiment	63,45	7,02	67,26	13,97	0,065	0,50
Control	63,41	7,84	64,13	11,09	0,019	0,43
Ideal Maximum Score					96	

Based on the table above, it can be seen that the average pretest value of the experimental class was 63.45, slightly larger than the control class that is equal to 63.41. Then the average posttest experimental class was 67.26, higher than the average posttest control class is 64.13. Furthermore, the average grade n-gain experiment is 0.065, higher than the average n-gain control class is 0,019.

To see a picture of the disposition of the increase creative thinking of students, the data presented below are the average n-gain creative thinking ability of students between the experimental class and the control class:
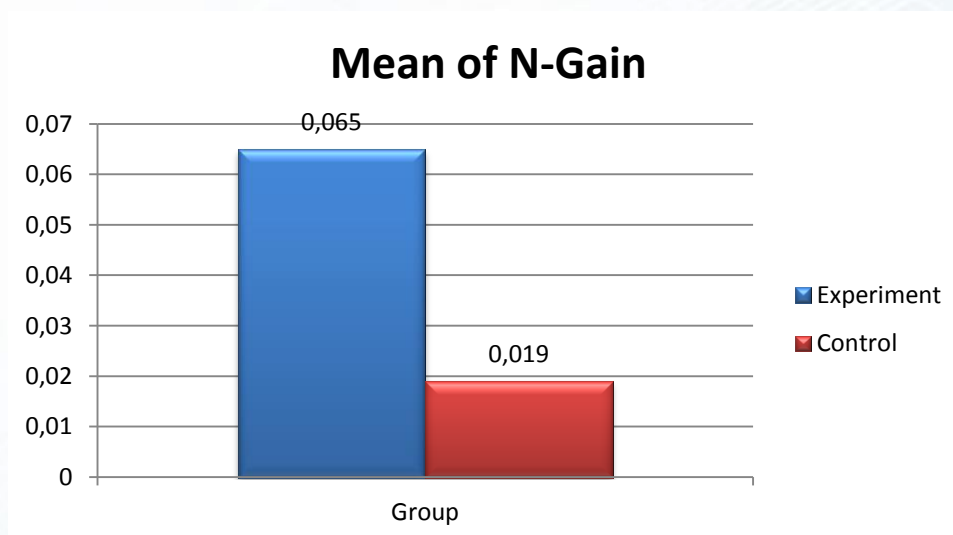
Figure 1. Mean of N-Gain Students Creative Thinking Disposition

Based on the picture above it can be seen that the average value of n-gain control class is 0.065 and the average value of n-gain experiment for class 0, 019.

E. DISCUSSION

Based on the analysis of the students' creative thinking disposition scale, it is known that students in the experimental class had an increased disposition to think creatively higher than the control class. Students have a positive attitude towards mathematics, mathematics learning with the Open-Ended and approach to the problems of creative thinking ability. The students 'positive attitudes provide a good influence on the improvement of students' creative thinking ability.

F. CONCLUSION

Based on the analysis of data and discussion of research results, it can be concluded that Overall, the increase in the disposition of creative thinking of students receiving mathematics instruction using the Open-Ended approach is better than conventional learning.

G. ACKNOWLEDGEMENT

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THE INFLUENCE OF USES PROBLEM POSING APPROACH ON CREATIVE THINKING

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Abstract

Problem posing is one of the alternatives in order to make students become more active, because in essence the problem posing ask students pose problems or questions based on broad topics or questions that have been done or specific information provided by the teacher. When students understand and plan for the settlement of a problems requiring creative thinking abilities of students adequate. On this basis, we conducted this study to determine the effect of problem posing approach to the creative thinking of students in the concept of inheritance. This research was conducted at SMP Negeri 2 Ciruas, Serang. The method of this research is quasi eksperiment with design used nonrandomized control group pretest-posttest design. The technique sampling is purposive sampling. The amount of research sample were 36 students for experiment class, and 37 students for control class. Data was collected by using form of creative thinking test instrument descriptions that have been tested for validity and reliability. Analysis data used t-test. The result of analysis posttest t-test data both of classes obtained t count point is 5,62, and t table point in 5% significance is 1,99, It is mean t count more higher than t table or t count > t table. It indicates Ha is accepted and Ho is refused. Therefore, There is effect problem posing approach on creative thinking in concept of inheritance.

Keywords: problem posing approach, creative thinking, and biology

A. INTRODUCTION

The development of time and current technology must be accompanied by an increase creativity of its people. Students as part of a community that will become the next generation also need to be trained to think creatively. Learning in school is one way to train students' thinking skills, especially creative thinking. But often learning in schools is still not well managed by the teacher, no direct interaction between teachers and students and student interaction with other students, so students tend to get bored with learning in the classroom. We also often find students who are shy to ask questions or submit argument or answer teacher posed problems. This has the meaning that the learning process should get more attention and required the selection of appropriate learning strategies that train of thinking skills especially creative thinking.

Munandar (2001, p 79) also argued about a phenomenon that has been mentioned previously that the teaching in the school generally only train convergent thinking process, so that students will be familiar with the convergent thinking, and when confronted with a problem, the student will have difficulty solving problems creatively. Rafiuddin's discovery (cited Arnyana, 2009, p 498), adding Munandar opinion. In its findings stated that the event of a complaint about the lack of critical and creative thinking skills possessed by students because education has not been handled well. Therefore, the handling of critical and creative thinking skills are essential to be integrated in every subject.

Based on the above problems, it is necessary to the process of learning that encourages students to understand the problem. Students are motivated to issue, will be able to improve students' ability to think creatively in the settlement plan. In addition, students can be actively involved in finding their own problem solving and to encourage student-centered learning and the teacher only as a facilitator. Thus, the problem posing is one approach that can motivate learners to think creatively, because the problem posing approach in essence is asking students pose a problem or question. Problems presented can be based on a broad topic, a matter that has been done or specific information provided by the teacher (Sukarma, 2004, p 52).

Biology is one of the subjects that can be integrated with the teaching of thinking skills with problem posing, because the biology relates to a way of knowing and understanding about the nature systematically so that learning biology is a process of discovery, so that students are required to be able to think critically and creatively. On the biology learning using problem posing, students are expected to formulate the problem through some facts so that students are aware of the existence of the problem. Based Krulik (cited Siswono, 2005, p 2) in understanding and problem solving necessary to plan a creative thinking ability of students is adequate, because that ability is the high-level think (reasoning) after a think basic (basic) and critically. Based on the above, the author felt compelled to do some research on the effect of the use of problem posing approach to the creative thinking of students to the concept of heredity (genetics).

B. LITTERATURE REVIEW
1. Problem Posing

Problem posing is an approach means that students are trained to pose a problem or make questions. This approach can develop students' skills in critical and creative thinking. It is based on the opinion of Haetami (2007, p 74) that the problem posing is a learning technique that trains students to create their own questions and do it, so it is expected that students will be more active in learning, to better understand and appreciate the variations of questions about and proficient in understanding the substance of the given problem by teacher.

According to Silver (in Surtini, 2003, p 10), there are three types of problem posing activities are applied in three different forms of cognitive activitiesis:

(1) Submission of pre-solution (pre solution posing) is asking questions that are based on the existing situation.

(2) Submission in the solution (within solution posing) is redefined the problem has been resolved.

(3) Filing after solution (post solution posing) is modify the the purpose or problems that have been solved to create a new problem.

Learning by problem posing approach is generally characterized by re-defining the problem that has given the teacher. Therefore, the application of problem posing in learning activities can be done individually or in groups, with the preliminary stages, development, implementation and cover (Aisyah, 2000, p 61-62).

Table 1. Basic Steps in Learning by Problem Posing

Step	Activity Teachers
Introduction	1. Teacher informs the learning objectives 2. Directing students to the manufacturing problem 3. Encourage students to express ideas openly
Development	1. Provides information about concepts learned 2. Provide an example of a matter relating to the material being taught and how to create questions that are identical based on the problems that exist
Implementation	1. Testing the students' understanding of the concepts taught by giving some problems. 2. Directing the students work on the problems and to make matters are identical based on the questions that the students make. 3. Motivating students to engage in problem solving
Cover	1. Helps students review the results of problem solving 2. Summing up the results of the learning

The question or problem that are made by the students need to analyze, namely a careful examination (set limits). In analyzing some of the criteria required. These criteria are (Aisyah, 2000, 63-64):

(1) Solvency matter, the matter can not be resolved if the problem uninformed about the issues that give rise to a new meaning, has nothing to do with the information provided. While the problem can be solved if the problem has sufficient information and questions that are asked in accordance with its meaning.

(2) Linkages about the material presented, giving the task associated with the new material is taught.

(3) Settlement made about students, seen at the planning stage (sentence), the implementation of planning and inference whether the settlement is made true or false.

(4) The structure of the sentence about the language.

(5) The level of difficulty question. Easy to solve directly using existing data. Moderate to solve not only the direct use of the concept. Difficult to solve not use the data or information available, but look for it with some concepts.

2. Creative Thinking

Creative thinking is the ability to think that originated from the sensitivity to the situation at hand, that in the circumstances it was seen or identified a problem that want or need to be resolved. Furthermore, there is an element of originality which arose in the mind of the person associated with what is identified. Baer argues that creative thinking is a synonym of divergent thinking. There are four indicators of divergent thinking, are (Arnyana, 2009, p 498-499) :

(1) Fluency is the ability to generate many ideas.

(2) Flexibility is the ability to generate ideas that varied.

(3) Originality is the ability to generate new ideas or ideas that previously did not exist.

(4) Elaboration: the ability to develop or add ideas to produce a detailed idea or detail.

Creative thinking is not a highly organized process. Creative thinking is a habit of mind that is trained to pay attention to intuition, turning imagination, revealing new possibilities, opening viewpoints and evoke ideas unexpected. Creative thinking requires perseverance, self-discipline, and full attention, include mental activities such as (Johnson, 2009, p 214-215):

(1) Ask questions.

(2) Consider a new and unusual information with an open mind.

(3) Establishing linkages, particularly between different things.

(4) Connect-connect various things freely.

(5) Apply the imagination in every situation to produce something new and different.

(6) Listen to your intuition.

Tests to measure the aptitude traits of creative thinking (cognitive characteristics of creativity) and non-aptitude traits (affective characteristics of creativity). Here are the characteristics of creative thinking abilities (aptitude) (Munandar, 2001, p 88-90):

(1) Fluency

Fluency can be defined as the skill trigger many ideas, answers, solving problems, or questions. Indicators of current thinking skills in students, namely:

(A) Ask lots of questions

(B) Respond with a number of answers if you have questions

(C) Has a lot of ideas

(2) Flexible thinking skills (fleksibility)

Flexibility means the ability to generate ideas, answers, or questions varied. Someone who is flexible can see a problem from a different perspective so that they can seek many alternatives. The indicators of these skills include:

(A) Provide all kinds of interpretation (interpretation) of an image, a story or a problem

(B) Applying a concept or principle in different ways depending

(C) If given a problem is usually thought of all kinds of different ways to solve

(3) Original thinking skills

Indicators of original thinking skills are:

(A) Thinking about problems or things that have never been thought by others

(B) Questioning the old ways and trying to think of new ways

(C) Have a way of thinking than others

(D) More than happy synthesize analyze something

(4) Skills detailing (elaboration)

This skill is the ability to enrich, develop an idea and elaborates the details of an object, idea, or situation so that it becomes more attractive. Indicators of detailing skills are as follows:

(A) Looking for a deeper meaning to the answers or solving a problem by performing the steps in detail.

(B) To develop or enrich other people's ideas,

(C) Attempt or examine the details to see the direction that will be pursued.

(D) Adding stripes, colors and details (parts of) their own image or picture to someone else.

3. The Relationship of Problem Posing With Creative Thinking

Silver (in Siswono, 2008, p. 45-47) describes in more detail the relationship of problem posing with three main creativity components are:

Table 2. The Relationship of Problem Posing With Creative Thinking

Components of Creativity	Problem Posing
Fluency	Students create a lot of problems that can be solved. Students share the problems presented.
Flexibility	Students pose a problem that can be solved in different ways. Students use the approach of "what if" to pose a problem.
Originality	Students examine some of the issues raised then propose a different problem.

The discussion of the above table are:

(1) Fluency in filing problem refers to the student's ability to make problems at once diverse and true solution.

(2) Flexibility in the filing of a problem refers to the student's ability to have a way different solution to the problem of the filing.

(3) The originality in the filing of a problem refers to the ability of students to propose a different problem than the problem posed previously.

Opinions above to see that creativity as a product of creative thinking and problem relating to the filing of the submission problems can be a means to assess (measure) as well as encourage the creative abilities of students. In problem posing students are asked to make inquiries of the information provided, and ask is the root of all creations. Raising questions, make students motivated to seek settlement of the question. So the steps in learning with problem posing approach must be integrated with each other and require the preparation of teachers. This becomes very important, so that classroom learning be fun and students can play an active role.

C. METHODOLOGY

This research method is a quasi experiment with nonrandomized control group pretest-posttest design. The sample used in this study are students of class IX SMP 2 Ciruas consists of two classes, one class as the experimental class and the other classes as class control. Experimental class was given treatment by problem posing approach, and control class was given the conventional learning with a discussion of the problem from teachers not the students. Their creative thinking skills measured by the test form of creative thinking essay questions that cover several aspects of fluency, fleksibility, originality, and elaboration. In addition, all teachers and students also was observed to see the implementation of each phase of problem posing by the teacher and the students' response to the application of problem posing.

D. FINDINGS

The results of the pretest, students made a classification based on the level of creative thinking of students. From the table it can be seen that a lot of students who fall into the category of creative thinking were low in both classes. The following table shows the data:

Table 3. Classification Level of Creative Thinking on Pretest Result

Classification Level of Creative Thinking	Experimental Class		Control Class	
	N	%	N	%
Very low	27	75	23	62,16
Low	8	22,22	13	35,14
Moderate	1	2,78	1	2,7
High	0	0	0	0
Very high	0	0	0	0

After several meetings with the problem posing learning in the experimental class, then there is a reduction of students who are at very low and low categories, even some of the students have been very high in the category.

Table 4. Classification Level of Creative Thinking on Posttest Result

Classification Level of Creative Thinking	Experimental Class		Control Class	
	N	%	N	%
Very low	0	0	2	5,4
Low	9	25	16	43,24
Moderate	10	27,78	13	35,14
High	9	25	6	16,22
Very high	8	23,22	0	0

Each of these indicators of creative thinking of students has increased, but with a different score. In the experimental class, the highest increase occurred in the aspect of

originality, while the lowest increase in the aspect of fluency. Whereas in the control class, the highest increase in the aspect of fluency, and the lowest increase in the flexibility aspect.

<table>
<tr><th colspan="4">EXPERIMENT</th><th colspan="4">CONTROL</th></tr>
<tr><td colspan="4">PRETEST · POSTEST · N-GAIN</td><td colspan="4">PRETEST · POSTEST · N-GAIN</td></tr>
<tr><td>Fluency</td><td>Flexibility</td><td>Originality</td><td>Elaboration</td><td>Fluency</td><td>Flexibility</td><td>Originality</td><td>Elaboration</td></tr>
<tr><td>63 / 76 / 0,35</td><td>29 / 65 / 0,5</td><td>22 / 67 / 0,57</td><td>20 / 63 / 0,53</td><td>33,7 / 62,5 / 0,43</td><td>29,2 / 39,4 / 0,14</td><td>43,1 / 65 / 0,38</td><td>17,4 / 35 / 0,21</td></tr>
</table>
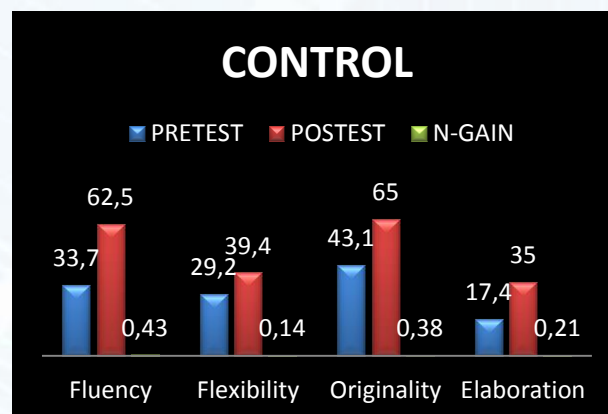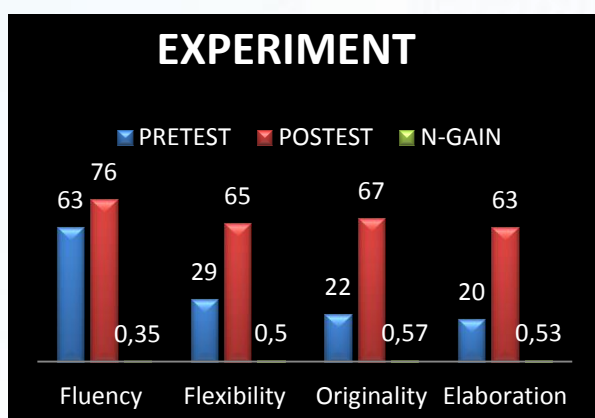
Based on the results of the pretest hypothesis test calculations obtained t = 0.2063, while ttable at significance level of 5% to 71 db is 1.99. This means tcount <t table, so that Ho is accepted. It can be concluded that there is no difference between the pre-test experimental and control classes. Based on the results of the pretest hypothesis test calculations obtained t = 5.62, while ttable at significance level of 5% to 71 db is 1.99. This means t count> t table, so Ho is rejected. Thus it can be concluded that there are significant differences between the post-test experimental and control classes.

E. DISCUSSION

Based on the pretest results of the experimental and control classes showed that their creative thinking skills are still in the low category, it indicates that the previous creative thinking ability of students lack of trained by the teacher. The ability to think creatively is strongly influenced by environmental factors, for example in this case is the school. Learning in schools that have not been up to train students' ability to think creatively will hinder them to solve problems creatively (Munandar, 2002, p. 79)

The results of observations on the first to the second meeting in the experimental and control classes that strengthen students' ability to think creatively is less trained, students are still not used to create problems or questions and resolve these problems creatively. The questions that the students made have not been good in terms of solvency and the structure of matter, since the students are still not accustomed to bring a different concept and context of the problem. Previously, students were more often trained in the form of multiple choice questions that do not stimulate their thinking. So that students do not raise questions or answers divergent, make connections between concepts, and have not been able to provide data on the question.

Posttest results of the experimental class students were larger than the control class shows that the influence of the use of problem posing approach to creative thinking abilities of students to the concept of inheritance. The statement reinforced with Suryosubroto (2010) one of the learning approaches that can motivate students to think critically, creative and interactive is problem posing or filing the problems outlined in the form of a question.

In the experimental class after the given problem posing learning, students are taught to look for in terms of the existing data and create questions and answers are divergent, so that some of the indicators of creative thinking of students has increased. The questions were made also increased from the aspect of sentence structure and other aspects. This is because at the first meeting of textbooks owned by students is limited, so students can not develop in a sentence to make inquiries. Students are not used to making a good question, for example, students do not use the word in question is made about the language and sentence structure is not in accordance with the rules about Indonesian correct. However, further meetings have been anticipated by the teacher by providing a companion textbook as a reference, so that students can make inquiries for the better.

Problem posing that gives effect to the creative thinking skills of students because of the several stages of problem posing approach, the teacher always gives motivation and more opportunity for students to learn more actively in constructing their own knowledge. As on stage to raise the question of the existing situation, students are asked to look for data that can be used as a question, and get it done. By building his own knowledge, thinking skills students can train to be higher. This is consistent with the results of the research of Wahyudi (2001), the application of cooperative learning and problem posing round table has a relatively large degree of effectiveness compared with conventional learning in the classroom. In this case proves that the ability to create questions will add insight and mindset of students due to the ability to create questions means students are able to complete it. Sukarma (2004) in his journal also expressed the same thing, learning by problem posing approach gives a large role to students to be active in learning. Students can play a role in constructing knowledge for themselves, in addition to providing increased social activity.

In the discussion activity on problem posing learning, students analyze questions of a particular group. Criteria analysis is solvency problems or questions. Question of the group will be given to another group to look for the answer. The discussion goes with not saturate because students are invited to scrutinize the question. If the question has a level difficult question, then another group tasked to fill in the answers, not able to answer on the grounds presented in the discussion forum. According to the observation, the students are usually not able to answer the question because it does not have the structure of the language, so that students are ambiguous in answering that question. Can also be made as a matter that is difficult to do, because it is not according to the situation or the information provided, must look to some other concepts. Thus, the problem posing approach affects students' creative thinking. This is consistent with research conducted Siswono (2008) which indicates that the filing of a problem (problem posing) can improve the ability to think creatively, especially in the aspects of fluency and originality.

F. CONCLUSION

Based on the research that has been done, it can be concluded that the application of Problem Posing approach have significant influence on students' creative thinking on the concept of inheritance. It is obtained from the analysis of the data using the t test. Data calculation results average difference of the two groups obtained posttest t is greater than t table (5.62 > 1.99). Indicators of creative thinking highest increase is original thinking

(originality) is N-Gain 0.57, and the lowest increase was thinking fluently (fluency), is N-Gain 0.35.

In this study, which measured only the cognitive aspects of creativity (creative thinking). Future studies, it is advisable to measure the affective aspects of creativity, creative thinking and measuring other indicators, such as evaluation. Researchers are also advised to try to look at the relationship between high cognitive ability students with the ability to think creatively based on the application of problem posing approach.

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STUDENTS' PRIOR KNOWLEDGE IN CONCEPTS OF METABOLISM

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Abstract

Students prior knowledge so please note that the learning can be applied effectively and efficiently. Students prior knowledge affect what they learn. The purpose of this study was to determine the initial knowledge of class XII Science students at one of high school in the city of Bandung on the concept of metabolism. The results of this study serve as biological reference preparation of teaching materials to be created and used in teaching the concept of metabolism. This research is a descriptive study that revealed the students' prior knowledge. The subjects were 17 students of class XII science at one of high school in Bandung. The instrument used is in the form of a written test consisting of multiple choice diataranya 10 questions about energy, enzymes, cellular respiration, photosynthesis. The results of this study concluded that students prior knowledge about the concept of metabolism has not been good, although the concept has been given in previous education. Therefore, should the teacher must know knowladge beginning students, so that science teaching can be more meaningful. results from prior knowledge students were grouped into three categories: know, do not know, misconceptions.

Keywords: Students' prior knowlage, metabolism

A. INTRODUCTION

Initial knowledge is a collection of individuals' prior knowledge and experience gained throughout the course of their lives, and what will he bring to life a new journey. What has been known to affect the students what they will learn. Students' prior knowledge will help students to connect new knowledge and old knowledge they have acquired to make learning meaningful (Arends, 1997). Meaningful learning theory put forward in a process of learning Ausubel linking new information to the relevant concepts in cognitive development (Dahar, 1996)

The learning process is not just memorizing concepts or mere facts, but trying to connect these concepts to produce a meaningful understanding, so the concept can be studied and well understood and not easily forgotten (Susanti, 2011). The teacher must know the prior knowledge students about lessons and teaching materials that will be delivered directly to the target that should be achieved. This means that if students have a grasp of the concept of the teacher does not need to explain these concepts or simply discuss a few. So that learning can be focused on things that are not understood by the students. Learning will be effective,

efficient, and meaningful. Basically each of the students who take the learning in the classroom already has a certain scheme of them world as the prior of knowledge (Rahmatan, 2012). it's the same thing that disclosed Brown (2003) students who come to school already has knowledge of the lesson they will learn.

Metabolism is the material taught in class XII appropriate curriculum and cognitive development of students. Before the study material matabolisme students are expected to have prior knowledge about the matter. This material has been studied in previous level and this material is also the basis for learning at the next level.

Metabolism is an important concept in biology science studied at almost all levels of education from elementary, junior high school, senior high school and college, but this concept is one that is difficult in biological materials by students. This is because the material is abstract metabolism.

Metabolism material to be tested in this test were taken from standard materials contained in biology Campbell is about energy, enzymes, celuller respiration, glycolysis, the citric acid cycle, electron transformation, fermentation, photosynthesis (Campbell, 2008).

To determine the extent to which students' prior knowledge about the material metabolism are needed research to determine the students' prior knowledge. Therefore in this paper will present how the understand students prior knowledge the material of metabolism. This study aims to provide information for teachers to about students' prior knowledge and teaching materials in the manufacture so as to know which concepts are already well understood and yet not well understood by the students.

B. METHODOLOGY

This study is a descriptive study that reveals about students' prior knowledge on the material metabolism. Subjects were high school students of class XI by 17 people. instrument used was a written test shaped multiple choice test true-false, and use reasonable level of confidence. Answers to these questions are grouped into three categories: know, do not know and misconceptions. The details of the categories can be seen in Table 1. The data obtained were processed using the students' answers in the form of a percentage.

Table 1: Categories of students answer

Answer	Reason	Level of Confidence	Category
Corect	Corect	Confident	Know
Corect	Corect	Unconfident	Do Not Know
Corect	Incorrect	Confident	Misconceptions
Corect	Incorrect	Unconfident	Do Not Know
Incorrect	Corect	Confident	Do Not Know
Incorrect	Corect	Unconfident	Do Not Know
Incorrect	Incorrect	Confident	Misconceptions
Incorrect	Incorrect	Unconfident	Do Not Know

C. FINDINGS

Table 2: Results of the students' answers on the topic of metabolism

Question	Answer (Percentage)		
	Know	**Do Not Know**	**Misconceptions**
Energy can not be created and destroyed?	35,2	35,3	29,4
Enzim analog dengan seseorang yang mengibaskan kelereng kelereng yang cepat dapat mencapai tujuannya, tidak dibantu oleh orang tanpa mereka?	17,6	52,9	29,3
Phase that occurs in glycolysis analogous to investors who invest funds (such as energy) which will be paid back to the stage / phase of payment (payment of energy)?	5,9	76,3	17,7
NADH and FADH2 carry the high-energy electrons extracted food during glycolysis and the citric acid cycle t?	5,9	88,1	5,9
Before the citric acid cycle, pyruvic acid produced in glycolysis first completely converted to acetyl coenzyme A?	5,9	88	5,9
Deployment of bread because of fermentation process of alcohol?	23,5	52,9	23,5
Fotosintesis tidak hanya terjadi pada daun, tetapi dapat terjadi pada batang yang hijau ataupun buah yang belum matang?	23,5	41,2	35,2
Photosynthesis occurs not only leaves, but can occur on the rod, green or immature fruit?	11,7	82,2	5,9
Dark reaction (Calvin cycle) does not only happen at night alone?	11,7	64,7	23,5
Plant closing stomatanya on a hot day and dry to maintain the water?	41,1	47	11,8

Question about metabolism consists of 10 questions based on the book Campbell biology eighth edition. The explanation of the results of the study will be discussed in the following discussion.

The discussion of the energy can not be created and destroyed, but energy can be converted from one form to the other needs to be discussed because <50% of students will not know this concept. Students responded that energy can be created and destroyed on the grounds that the energy can be converted from one form to another, there is a reason for choosing the energy in the universe is not constant, there is also a reason for choosing the energy can be transferred and transformed choice last reason students because energy is composed of atoms that can be created and destroyed. The details are six students (35.3%) know that energy can be converted from one form to forms other. Six other students do not know this concept and four students (29.4%) misconceptions about this concept.

Further discussion of the enzyme, that enzyme is a chemical agent that may accelerate the reaction without reacting participate need to be discussed in depth because> 50% of students do not know about this concept. although this includes the basic concepts that should be known to the students in the material metabolism. most of the students responded that the enzyme, chemical agents that speed up reactions and join react. Are detailed Nine students (52.9%) did not know about this concept, four students (29.3%) misconceptions against this concept and only three students (17.6%) who know this concept.

Further discussion on glycolysis need to be discussed in depth because> 70% of students did not know that the phase that occurs in glycolysis analogous to investors who invest funds (such as energy) which will be paid back to the stage / phase of payment (payment of energy) due to the energy investment phase using ATP and energy payments occur on the payment phase and the addition of energy used in the energy investment phase. This concept is known only by one student (5.9%), misconceptions three students (17.6%) and did not know this concept thirteen students (76.3%). NADH and FADH2 concept that will bring high-energy electrons extracted food during glycolysis and the citric acid cycle to the electron chain transformation in the mitochondrial membrane, also need to be discussed in depth because> 80% of students do not know this concept. Only one student (5.9%) who know the concept of this and one student misconception (5.9%) remaining fifteen students (88.1%) did not know about this concept.

The discussion of the glucose is converted to pyruvic acid, then converted to acetyl coenzyme A before entering the citric acid cycle. needs to discussed in depth because> 80% of students do not know this concept. Only one student (5.9%) who know the concept of this and one student misconception (5.9%) remaining fifteen students (88%) did not know about this concept.

The discussion of the fermentation, which is about the expand of bread due to the alcohol fermentation process due to the CO2 bubbles produced by the yeast known only four students (23.5%), misconceptions four students (23.5%) and the remaining nine (52, 9%) did not know about this concept. So the concept of fermentation need to be explained to the students in depth.

Further discussion on photosynthesis, photosynthesis does not only occur on the leaves, but can occur on the trunk, green or immature fruit because chloroplasts are also found stem green or immature fruit needs to be discussed because only four students (23.5%) who knows this concept, six students (41.2%) and seven misconceptions students (41.2%) did not know this concept.

The concept of the results of the light reaction in the form of ATP and NADPH is used not only in the light of course but the reaction cycle of ATP and NADPH forwarded to the Calvin cycle (dark reaction) should be discussed in depth because> 50% of students do not know about this concept. Details as follows students do not know this concept as much as fourteen students (82.2%), misconceptions one student (5.9%), and only two students (11.7%) who knows.

Subsequent discussions of the dark reaction (Calvin cycle) does not only happen at night, but also occur during the day because the ATP and NADPH produced during the day

by the light reaction needs to discussed in depth because> 50% of students do not know about this concept. Details as follows students do not know this concept as many as nine students (64.7%), misconceptions four students (23.5%) and only two students (11.7%) who knows.

Discussion on alternative mechanisms of photosynthesis in hot and dry regions on a hot day and dry plants to retain water shut stomata still need to be discussed as eight students (47%) did not know this concept, seven students (41.1%) know These concepts and misconceptions two students (11.8%).

D. CONCLUSION

Based on the results of research and discussion of the foregoing, it can be concluded that students' prior knowledge is not so good about the material metabolism. The concept most students are not known to the citric acid cycle is 88%. Students are do not know of > 50% questions are provided as much as 80% of the total existing questions. Thus the concepts that are not known by students need to be discussed in depth in the classroom and the teaching materials that will be made. Teachers know the importance of students' prior knowledge before beginning a lesson of learning to be effective and efficient, and meaningful.

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UITM KEDAH STUDENTS' AWARENESS AND READINESS FOR MOBILE LEARNING IN THE MAINSTREAM EDUCATION

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Abstract

The purpose of this study was to determine the state of awareness and readiness among Universiti Teknologi MARA Kedah undergraduates towards mobile learning. The subjects were part two undergraduates from two different programs. The research tool used was in the form of a questionnaire. The descriptive statistics percentage was used and the results revealed that more than 80% of the students owned more than one mobile devices and most of them were aware and ready to have mobile learning implemented into their mainstream education.

Keywords: mobile learning, awareness, readiness

A. INTRODUCTION

Technology is a very powerful tool that has brought changes to human life. In this 21st century, every aspect of human life is affected by the phenomenon of globalisation which is very much due to the advancements in technology. The education sector is also without exception. Globalisation of Education Institutions is seen as imperative as it is a way to compete globally and to meet the political, economic and social demands (Othman, M. Hamzah, T. Singh, Abdul Wahab, & Ismail, 2011).

The educational system in general and in higher education in particular witnessed tremendous technological advancement. The role and use of Information and Communication Technology (ICT) in education has long been recognized. Olaniyan & Okemakinde (2008) stated that the Internet is a major component of school and university life where it affects the educators and the learners as well as the resources. For instance, university libraries today are using online databases with digital journals, websites and in fact there are also Wi-Fi services available at Higher Education Institutions (HEIs). Life-long learning, distance learning, and online education which can support the development of human capital have been introduced and ventured into by many HEIs. All these are to fulfill the demand for skillful and knowledge workers of this 21st century and the future.

The rapid advancement in technology has taken the learners as well as the educators from distance learning (d-learning) to electronic learning (e-learning) and today ultimately to mobile learning (m-learning). The significant growth of wireless and mobile computing technologies like handphones, smartphones, tablets, iPad and PDA has taken the education world to the latest learning model of mobile learning (m-learning).

As a developing country, Malaysia really encourages the development and improvement in ICT. This is proven by the initiative of Malaysian government to give RM200 rebate for all smartphone purchases to Malaysians aged between 21 and 30 which would encourage more users of such devices especially among university students (The Star, 2012). In addition, further supports by the government in its budget for 2014 allocates RM3.4bil for the second phase of the country's high-speed broadband (HSBB2) would see a tremendous growth of data and increase the Internet access throughout Malaysia including Sabah and Sarawak with new underwater cables be laid within three years (The Star, 2013). By looking at the improvement to the wireless mobile technologies in Malaysia, mobile learning seems to be gaining positive prospects in the Malaysian future curriculum (Abdullah & Siraj, 2009). Thus, more universities are gearing towards the direction of implementing mobile learning especially for the distance education.

Universiti Teknologi MARA (UiTM) has also started moving towards the direction of implementing synchronous / asynchronous technology-mediated instructions into its mainstream education especially since this option is seen as a way to surmount the pressuring issue of space (i-Learn Centre, 2012). The issue of space constraint has always been one of the pressuring issues to the management of UiTM especially after the recent announcement by the Malaysian Government to increase the student enrolment to reach 250,000 by year 2020 (The Malaysian Bar, 2013). However, to what extent the students as well as the educators especially at the branch campuses are aware and ready for the change has not been thoroughly studied.

This study is considered timely and appropriate as it finds out the state of awareness of and readiness for mobile learning among the most important group which is also the one that would gain the most impact, the students! Though this study is small scale and limited to just the degree students at one of UiTM branch campuses, UiTM Kedah, the results is still considered essential as it gives an overview of the current state of the students' awareness of and readiness for mobile learning. Furthermore, much has been said today about students who are being well-equipped with private mobile computers and/or similar handheld devices by their parents. Goggin (2006) described this situation of the increased use of mobile devices as an international phenomenon. The young generation brings these technology anywhere, at anytime for their daily affairs. Thus it is also interesting to find out whether UiTM Kedah students are also affected by this phenomenon. The findings from this study would be a surplus point to the education sector especially the instructors as the gadgets can be manipulated and utilized for the benefit of education.

The objectives of this study are three-folds which are to:
1. identify the types of mobile gadgets that the students use.
2. investigate the purpose of using the mobile gadgets.
3. investigate whether the students are aware of and ready for mobile learning.

Prensky once pointed out that the generation we have today is very much different from their predecessors (2001). These students think and process information fundamentally different from their predecessors' in which they prefer really fast information, like to carry out many parallel processes, prefer graphics rather than text information, prefer random access

(like hypertext), love networking, and prefer games to "serious" work (Prensky, 2001). Pedró (2006) added that this generation has a limited capacity for paying attention to the same thing for a prolonged amount of time, they prefer multimedia and are able to obtain knowledge by processing discontinuous and non-linear information. Tapscott (2009) highlighted a few more characteristics about them in which they prize freedom of Choice, like to customise things, collaborate naturally and enjoy conversations over reading, interested in scrutinising organisations, insist on integrity besides having fun at work and school, and for them speed and innovation are a part of life.

Due to those unique characteristics they are nicknamed among others as 'Digital natives' (Prensky, 2001), 'new millennium learners' (Pedró, 2006), 'the net generation' (Tapscott, 1999), 'the gamer generation' (Carstens & Beck, 2005), and 'generation M' (Rideout, Roberts, & Foehr, 2005). In summary, these students are the young generation of today who involve in the massive access to and use of ICT. Obviously, these young people have grown up surrounded by technology. They are more comfortable with collaborative and interactive learning (Sanchez, Salinas, Contreras & Meyer, 2011). Regarding their social attributes, they seem to make use of their free time by consuming different media simultaneously especially the digital media (Pedró, 2006; Prensky, 2001; Rideout *et al*, 2005). Much has been written by numerous authors that suggest the existence of this generation who has been socializing in a media-based world (Carstens & Beck, 2005; Montgomery, 1996; Oblinger & Oblinger, 2005; Pedró, 2006; Prensky, 2001; Rideout *et al*, 2005; Tapscott, 1999).

All these attributes of the new generation have affected the education industry. As a result of the significant growth of wireless and mobile computing technologies, the delivery of knowledge through the digital learning has been converting in recent years from distance learning (d-learning) to electronic learning (e-Learning) and ultimately to the mobile learning (m-Learning) model of today. Thus, there is the need to adapt teaching and learning to the students' experience and abilities.

Mobile learning is a new stage of digital learning that uses mobile devices, such as personal digital assistants (PDAs), mobile phones, portable computers and so forth. Trifanova, Knapp, Ronchetti & Gamper (2004) define mobile devices as "any device that is small, autonomous, and unobtrusive enough to accompany us in every moment" (p. 3). This definition, however, does not account for new ultra small laptops that can almost fit in the palm of a hand. On the technical level, there is quite a difference between ultra small laptops and the general category of handheld devices, namely processing power and memory capabilities.

O'Malley, Vavoula, Glew, Taylor, Sharples, & Lefrere (2003) suggested that m-learning is taking place when learning opportunities are offered via mobile devices. Kukulska-Hulme (2005), in defining mobile learning stresses on the mobility of learners. For m-learning to take place the learners should be able to engage in educational activities without having constraints of physical location. Kukulska-Hulme & Shield (2007) further elaborated on m-learning as the type of learning that could be formal, as within the context of a classroom, or informal, as when the learner chooses when and what to learn. As the whole, the above concepts and ideas in defining m-learning suggest that learners' mobility, being

able to learn virtually anywhere and anytime as long as they carry a mobile device, are the main characteristics of mobile learning.

The concept of mobile learning as described by various researchers as 'anytime', 'anywhere' and 'anyplace', gives support to flexible education. According to Nyíri (2002) m-learning emerges in the course of person-to-person mobile communication. He points out that soon the dominant mode of access to the Internet will be through wireless devices, so e-learning will simply becomes m-learning, without any particular changes in the content. Its nature surpasses many disciplines in which it offers contents that are multi-sensorial, and are linked to each other in many ways such as by texts, diagrams, pictures, and maps and these make mobile learning more attractive and interesting.

Day by day, we see newer devices that can do more, have better and improved capabilities and are priced affordably. No one can be certain as to how much more technology is going to evolve in the future, but one thing that is certain is the improvement itself that will always be made to the latest technology. The mobile gadgets offer many opportunities that must be tapped into. Kukulska-Hulme (2005) claims that mobile learning "is rapidly becoming a credible and cost-effective component of online and distance learning, and anyone developing courses in companies, universities and colleges must consider carefully what it has to offer" (p. 2).

Teaching and learning through mobile learning has become a rapidly evolving area in educational research. To date, many researchers and practitioners have explored the delivery, methodology and feasibility of mobile device usage in education context, the building of information technology (IT) infrastructure, technical support and other resources required (Kukulska-Hulme & Traxler, 2005) and all those current research focus is in general evaluative.

For a successful adoption of m-learning, much attention must be given to the influential factors related to the device. According to Jones & Issroff (2007), there are six factors that motivate users to use their mobile applications: control (of their learning process and the goals for their learning), ownership, support for collaborative learning, learning in context, continuity, and the fun and communication factor.

Control of learning: Users of mobile applications have complete control of their learning in the sense that there are no constraints that would impede the learning process. In general, users have access to their devices all the time. Unlike other digital media like laptops and PC, the fact that mobile devices can be carried around all the time gives users great amount of control over how and when they access their mobile devices. Selfe (1999) argues that technological innovations should take into consideration the importance of allowing learners opportunities to interact and take control of their learning process. Learners are likely to attend to learning experiences if they are encouraged to take a more active role in their learning (Watts, 1997; Wenden, 1991). When learners are actively engaged with the task, they are more likely to develop learning strategies that will aid their language development. Engaging learning experiences can contribute to learners' motivation.

Ownership: Mobile devices offer users a sense of privacy that is not necessarily available to other computing devices. Users feel motivated because in technicality, no one

else can invade their private virtual world. This is a feature that mobile applications provide, for example, users may not necessarily be able to view personal photos on a public PC or even a laptop in a public place. However, with their mobile device it is completely safe for a user to do so. These factors provide many reasons for users to interact with the device, and motivate them to do so.

Continuity: Users' access to information and learning material does not necessarily stop because of the location of the learner. Users can access and interact with information on the bus, in the car, while walking, and/or in a variety of other situations.

Collaborative Learning: Due to its accessibility, mobile device allows for more opportunities for participation, a key aspect of the learning process. Researchers and educators are advocating uses of technology that maximize learners' inclusion in the learning process. Selfe (1999), Warschauer (2003), Phipps, Sutherland, & Seale (2002), and Rainger (2005) assert that accessibility is a pivotal aspect in learning. Rainger (2005) states that accessibility is the "key to strategies to support inclusion, participation, and diversity within education and training" (p. 57). Warschauer (2003) considers the ability to access information technology 'critical' to social inclusion.

Learning in Context: Many researchers suggest that the 'mobility' nature of mobile technologies in itself supports learning as an activity that is not constrained to educational environments. In this line of argumentation, mobile technologies function both as tools for the particular educational activities, and also for connecting school and other everyday activities. This would mean that education might spread outside of the classroom as well as that non-educational activities are also brought into the classroom.

The Fun and Communication Factor: Prensky (2007) argues that digital games are not just for fun, or for basic review of school subjects. He argues that digital gaming can be used solely for learning. The new generation has realized the potential in technology and is expecting those in charge to use it to its full potential. The world of gaming is presenting them with opportunities that have not been presented elsewhere in the academic and corporate world. According to Prensky, learning in school is boring and very unengaging. Thus, despite the immense technology the world has witnessed, it has not made its way into schools as it did into kids' minds and hearts. Interaction with the machine is normally less risky than the interaction with humans as in face-to-face communication,. During face-to-face communication, learners are usually under the pressure of making mistakes in using language and that listeners may make fun of them.

Selfe (1999) argues that access to technology is the key to empowering students. She argues that educators pay particular attention to issues of access especially when championing a technological innovation. Therefore, providing mobile learning applications to users on their mobile devices will provide them access to learning material, and will likely influence how they use their mobile devices.

Kukulska-Hulme (2005) documents that current mobile devices are designed for specific uses that typically focus on allowing users to enter and access fairly structured data like contacts, lists, dates, financial information, and memos, to send and receive messages, to view documents and pictures, or to access the web. (p. 46). Since mobile phones are

widespread every where and are popular among students for communication with each other, they may offer a motivating alternative for learning. Using the real world resources for teaching and learning in the classroom can make education more meaningful and relevant to our students.

Mobile learning can offer some assets to the education world. Mobile phones have positively contributed to the field of learning in many different ways. It helps learners to improve their literacy and numeracy skills and to recognize their existing abilities. It can also be used to encourage both independent and collaborative learning experiences. Besides, it helps learners to identify areas where they need assistance and support. Mobile gadget also helps to combat resistance to the use of ICT: Information Communication Technology and can help bridge the gap between mobile phone literacy and ICT literacy. Moreover, it helps to remove some of the formality from the learning experience and most importantly it engages reluctant learners. Furthermore, it helps learners to remain more focused for longer periods and finally, it helps to raise self-esteem and self-confidence.

B. RESEARCH METHOD

Survey method was employed for data collection. A self-report questionnaire was developed to obtain the data on the types of mobile gadgets used by the students, the purpose of using the devices and whether the students are aware of and ready for mobile learning.

1. Participant

All 46 undergraduates from two different programs, namely IM224 (Bachelor of Science (Hons) Library & Information Management) and AM228 (Bachelor of Administrative Science (Hons) in UiTM Kedah campus were involved as the participants of this study. They were all in semester three of their degree program and were chosen as they were considered to have been well-exposed to the education systems in UiTM. From the two groups there were 11 males and 35 females. Majority of the respondents were female. This bias sample population is due to the current phenomenon in most education settings where the females outnumber the males.

2. Research Instrument

The research instrument used to gather the data was in the form of a self-administered questionnaire. The students were given the set of questionnaire and asked to fill in the form that comprised questions on four parts: types of mobile devices owned by them, purpose of using the mobile gadgets, awareness of and readiness for mobile learning and perceived usefulness of mobile learning. However, this paper reports on the results of three sections only which are the types of mobile devices owned by students, purpose of using the mobile gadgets, awareness of and readiness for mobile learning. The reliability test of instrument produced a Cronbach Alfa of 0.828, which was acceptable.

3. Data Analysis

The data collected were computed and analyzed using the SPSS21. The statistical procedures used in this study were descriptive statistics – frequency and percentage.

C. FINDINGS AND DISCUSSION

1. Types of Mobile Devices Owned by Students

Interestingly it was discovered that more than 80% of the students owned more than one gadget. In details 17.3% owned one mobile device, 52.2% for two mobile devices, 26.1% for three and 2.2% for four and five mobile gadgets respectively. As for the types of mobile devices owned, it was discovered that 71.7% owned basic handphones, 63% smartphones, 63% netbook/notebook, MP3/MP4/iPod 10.9%, Tablet PC/iPad 8.7% and not popular at all PDA with 0%.

The findings revealed that UiTM Kedah students are also affected by the mobile technology phenomenon described by Goggin (2006) in which more than 80% of them owned more than one gadget. Surprisingly, there are those who owned four to five mobile devices. With more than half of them using the smartphones and netbooks/notebooks, it seems like those gadgets are really affordable to the students.

2. The Purpose of Using Mobile Devices

The results revealed that making calls and sending SMS scored 100% respectively, followed by listening to music 84.8%, downloading/ watching video and surfing the Internet 82.6% respectively, sending MMS 65.2%, note-taking 52.2%, emailing 47.8%, using the organizer 32.6% and finally playing games 21.7%.

Looking at the many ways the gadgets are being utilized by the students, it explains the factors described by Jones & Issroff (2007) as elements that motivate users to use their mobile applications such as control (of their learning process and the goals for their learning), ownership, support for collaborative learning, learning in context, continuity, and the fun and communication factor.

3. Students' Awareness of and Readiness for Mobile Learning

The students were asked whether they were aware of mobile learning; the results revealed that 78.3% of the students are aware of mobile learning, while 21.7% indicated the opposite. The results showed that 60.9% of the students indicated Definitely Yes; 34.8% Not Sure/May Be and only 4.3% Not Interested At All.

With all those types of gadgets owned and the way they are being used, it was not surprising to discover that majority of the students are aware of and ready for mobile learning to be implemented in the mainstream education in UiTM.

D. CONCLUSION

This current study, though it was just a small scale can still be considered essential as it gives an overview of the current generation of students studying at tertiary levels in Malaysia, particularly in UiTM. For mobile learning to be implemented in the mainstream education in Malaysia either as a blended instruction (blended learning) or distance education is not really a problem to this young generation because they are more exposed to the gadgets and well-versed about the gadgets capabilities and functionalities, in fact, a lot better than their present educators. However, to make the learning successful, a lot other elements have to be considered, among others the infrastructure that can be provided by the learning institutions, the selection of suitable technological devices and learning content, the

management of the learning system, and preparation for types of skills and trainings needed for educators as well as students. Therefore, a more thorough study that covers a wider scope involving more participants from both public and private higher institutions is suggested to be carried out in order to get a more comprehensive scenario of mobile learning in Malaysia.

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THE IMPACT OF HANDOUT BASED MIND MAP IN INQUIRY LEARNING MODEL FOR STUDENTS STUDYING PHYSICS RESULTS CLASS VIII SMP N 2 PADANG

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Abstract

This research was conducted based on the fact that the students' achievement in learning physics is low and does not show a maximal understanding of the concepts and principles of physics. Thus, the presents study proved a solution for that problem. It is called handout based mind map in inquiry learning model. The study aimed to examine the impact of handout based mind map in inquiry learning model for junior high school students studying physics. The study was quasi-experimental. This study used Randomize Only Control Group Design. Then, the subject of the study was students class VIII SMPN 2 Padang enrolled in 2011/2012 school year. The technique in determined the subject was cluster sampling technique through random sampling. The data of the study was the result of learning cognitive, affective and psychomotor aspects. The instrument used is an objective test for cognitive learning outcomes and observation sheets for affective aspects of learning outcomes and psychomotor aspects. The result of the study showed that the student's the average learning outcomes on all three aspects of the experimental class are higher than in the control class. Hence the hypothesis that learning outcomes with the use of an experimental class handout based mind map in inquiry learning model is greater than the control class in SMPN 2 Padang and it is acceptable in the real level of 0.05.

Keywords: handout based mind map, inquiry, learning outcomes

A. INTRODUCTION

National development in education field is a way to educate the nation's intellectual life and upgrade the quality of human resource. Then, science is one of the knowledge which can assist human resource in living on earth need. Physics as a branch of science which also needed to be learnt, known, comprehend and develop. In physics, the concepts, principles and theories are learnt along with the natural law occur in our surrounding. Physics has an important part in developing the creativity, critical thinking, and imagination in develop a qualified human resource. Therefore, physics should become a joyful subject that students

will find it fun and interesting. Thus, the subject will stimulate students' learning interest and spirit.

Having understanding of the great impact and contribution of physics in human life, the quality of physics education should be improved that in school the subject need to become an interesting subject for the students. Therefore, government has to put an effort to increase education quality, for example through curriculum development. It is started from curriculum 1994 which later revised into competence based curriculum and nowadays revised into *kurikulum tingkat satuan pendidikan* (KTSP). In the current curriculum, facilities and infrastructure for each school are facilitated by the government with *bantuan operasional sekolah* (BOS) and computer aids. Also, movement intensively conducts several programs to increase the teachers' quality with seminars, refresher courses, training and certification programs

The above effort shall bring a quality education specifically in teaching learning physics. However, there are still many students who face difficulty in comprehending the material and hardly able to reach the expected competencies. It can be seen from learning result that most of the students' score is above the expected standard.

Based on the observation of the students' average score on grade VIII, in three classes' daily test, students were not able maximally comprehend the concept of physics which was introduced in classroom and laboratories. Most of them could not pass the Kriteria Ketuntasan Minimal (KKM) which determined by the school, 8,0. Furthermore, the LKS, Handout and etc, as the learning resource, did not seem to be used maximally. Whereas, its function is to help the teacher to increase the students understanding toward the concept and principle of physics, particularly in teaching learning process. Teachers should start the teaching learning process by presenting phenomenon related to a concept and principle in physics which occur every day and close to the students' daily life. Then, teacher shall explain the concept and principles to get students understanding. Teacher also have to give a chance to the students to actively involved thus they can find their own concept and principles while learning. So, in order to create a good learning atmosphere teacher need to be well prepare in preparing learning material

So, one of learning model which could become a solution to the problem above is inquiry learning model. Wina (2007:196-197) stated that inquiry learning model pointed on maximally activate the student participation in searching and finding which means in the teaching learning process the student function is as subject that they should find the main objective of learning. Also, the aim of inquiry learning model is to develop students thinking ability. A principle of the model is interaction principle which emphasizes on the interaction between students and teacher, students and students, also students and their environment. In short, the inquiry learning model is expected to increase the students' creativity and their comprehension of the materials.

In the inquiry learning model, teachers are expected to be able to select appropriate learning materials. It is called handout which later will help the student in teaching learning process. Thus inquiry learning model and handout as learning resource is expected to increase the students' creativity and their skill in solve the problem through scientific work.

Handout is a written material prepared by the teacher for the teaching learning process. It should be designed and prepared well that the handout should be able to increase students' spirit and seriousness in doing its exercises. Handout should contains pictures, colors and has good plot that gain students interest in reading, understanding, learning and doing it. Therefore, handout can be modified with the mind map concept which will help the student understanding of the concept and principle of physics. Moreover, at the end of the meeting students are asked make mind map in their handout which will bring positive activity of the students to draw conclusion of the learning.

B. RESEARCH METHODS

The present study used quasi experimental research design. The research conducted in two sample classes, experiment and control class. In the experiment class, the inquiry learning model was used based KTSP and handout based on mind map while in the control group the teaching learning process was conducted by using classroom discussion based on KTSP. At the end of the research, a test was given to both of the class to assess the result of the study. The research design for the present study was Randomized Control Group Only Design. The population of the study is students of SMP N 2 Padang grade VIII year of study 2011/2012. After two normal and homogeneous classes were chosen, the control and experimental class were determined randomly. Thus, class VIII 2 were determined as control group while VIII 1 as experiment group.

C. RESULT AND DISCUSSION

1. Cognitive Aspect

The result data from both of experiment and control class are taken from the objective test which consists of 25 questions. Based on the data calculation, average score ($\bar{x}$), standard deviation (S), variant (S^2) can be seen in below table:

Table 5
Data Description of Final Test

Group	N	$\bar{x}$	S	S^2
Experiment	30	81,20	5,16	26,64
control	30	76,66	6,89	47,54

2. Affective Aspect

Research data for affective aspect are taken from class observation during the teaching learning process, 5 meetings. During the observation, the researcher also invited two other teachers to observe students affective aspect based on format affective marking. The effective observation format is consisted of five effective indicators, they are asking, suggesting, presenting, analyzing, and collaborating. The average score of those five indicators is presenting in table 6 and 7.

Table 6
Data Description of Experiment Class Observation on Affective Aspect

No	Indicators	Average score Meeting					Average
		1	**2**	**3**	**4**	**5**	
1.	Questioning	73	71	72	71	67	71
2.	Suggesting	71	69	69	69	66	69
3.	Presenting	73	69	67	69	67	69
4.	Analyzing	69	70	70	71	69	70
5.	Teamwork	76	73	73	71	71	73

Table 7
Data description of control group observation on affective aspect

No	Indicators	Average score Meeting-					Average
		1	2	3	4	5	
1.	Questioning	56	54	59	55	59	57
2.	Suggesting	59	56	59	55	55	59
3.	Presenting	53	57	55	58	58	56
4.	Analyzing	59	65	65	63	57	62
5.	Team work	65	73	71	62	61	66

3. Psychomotor aspect

In the psychomotor aspect, the research data were collected for two time observation during practicum session. The researcher and two other teachers observed the practicum section based on the psychomotor observation format. The descriptions of psychomotor aspect of the students in control and experiment class are presented in the following table:

Table 8
Data description of experiment group observation on psychomotor aspect

No	Indicator	Average score Experiment		Average
		1	**2**	
1.	1	69	73	71
2.	2	69	70	70
3.	3	67	69	68
4.	4	67	69	68
5.	5	71	70	71

Indicators' description:
1 ability to know the utensil used
2. Ability to assembly the tool
3. Ability to read and take the data
4. Ability to formulate and analyze the data
5. Ability to resume the result of the experiment

Table 9
Data Description of Control Group Observation on Psychomotor Aspect

No	Indicators	Average score Experiment		Average
		1	2	
1.	1	57	57	57
2.	2	59	55	57
3.	3	65	65	65
4.	4	58	63	61
5.	5	58	53	56

It can be seen based on table 8 and 6 that the experiment class' average score of each aspect is higher than the control group in each meeting.

D. DATA ANALYSIS

Data analyses of each aspect, cognitive, affective and psychomotor, were conducted by testing the hypothesis statistically and it was conducted before drawing the conclusion. There were several steps in testing the hypothesis. First, each of the samples needs to get formality and homogeneity test. Then after that, hypothesis test could be done. Based on normality and homogeneity test that has been done, the two classes of samples obtained were normally distributed and had homogeneous variance, the t test

E. DISCUSSION

The result of the test presents that the students who learn physics by using handout based mind mapping in inquiry learning model have higher learning outcome than those who are in regular learning model. Then, the statistic analysis also leads the same result which the model has significantly high usefulness. It is because the inquiry learning model helps the students to construct their own concept that the model engages the students directly mentally physically. It is in line with Fatni (2003: 33): "children need to be engaged mentally in learning process. For instance children could develop their intellectual ability, critical thinking, analysis and apply their knowledge". The quotation clearly shows the important of students' direct participation in reaching the goals of the study, such as answering questions delivered by the teacher. Thus, students will find and construct their own concept on their cognitive structure which is followed by the class and group discussion.

The result from the classroom observation shows that students' in the experimental class has higher learning motivation that those in the control class. Depdiknas (2008) explained that one of handout function is to help the student in learning process that handout helps students to understand the materials. In handout, the materials are presents in simple statement and question which bring the students to produce brief answer and comprehension. The simple statement is meant to lead the student to be able to find either concept or formulation and increase the participation in classroom and group discussion

So, the inquiry learning model helps the students to actively involve in learning

process that it will increase their learning interest and thinking ability compare to the regular class. Moreover, in the inquiry learning model, students have to prepare themselves in the learning process which means the background knowledge is considered important to assist the students in comprehending further concept. Background knowledge is important because student cannot learn any knowledge without it.

The inquiry learning model lets the student to construct their own concept based on their own ability that the teacher's function is only as facilitator, evaluator and motivator. First, Teacher as a facilitator means in the teaching learning process teacher do not present and explain the materials such in regular class, thus, their function is only to facilitate the students. In the joyful and interesting learning activity, the students are free to express their suggestion. Second, teacher as evaluator means teacher will evaluate the students learning result in order to assess the students' comprehension of the materials. Last, teacher as motivator means teacher should motivate the student to foster their learning motivation. A method to motivate the students in fulfilling their need in order to reach the goal of learning is through the task of drawing a conclusion in the form of a mind map that should be collected for each meeting. So, the students' learning result is increased along with their learning awareness.

The result data of the treatment for the sample class during research are divided into cognitive, affective and psychomotor aspect of the students learning outcomes. In the cognitive aspect, the average score of the experimental group is higher than those in the control group, that the average score in experimental class is 81,2 while the control group's is 76,66. Effective aspect of the experimental group is also higher than the control group. Then, the same result also found in the psychomotor that the students in the experimental group are more active in practicum than the control group. Students are also required to think and act creatively, able to engage in relevant activities and have the ability to analyze. Students begin the experiment by first finding out what the problem to be solved. Then the students know what tools to use, how to assemble the tools, how to read and retrieve data, how to process the data and conclude the results of the experiment. After that the students discussed to prove whether the facts presented in accordance with the materials listed on the handout-based mind map. Based on the data analysis, it can be concluded that the use of handout based on mind map on inquiry learning model in learning physics affects student learning outcomes.

There are several problem are found in the implementation of inquiry learning model. First, the students did not used to follow the steps Inquiry models. To overcome this teacher should be able to manage the class well, so step-by-step instructional model of inquiry-based mind map with handouts can run well. Second, the students did not familiar in interacting with handouts, and to build their own understanding without depending continuously to the teacher. Therefore, teacher have to be able to generate and increase students' motivation by provide learning facilities so that they can learn well, independent and active.

The explanation above clearly shows that handouts based on mind map on inquiry learning model affects students' learning outcomes of physics in cognitive, affective and psychomotor aspects.

F. CONCLUSION

Based on the data analysis and discussion above, it can be concluded that:

1. The average score of student learning outcomes in experimental class is higher than the class of learning outcomes control. In experimental class average score on cognitive aspects is 81.2; the affective aspect is 69.5 and the psychomotor aspect is 70.31. While the average learning outcomes in the cognitive control class is 76.66; the affective aspect is 61 and the psychomotor aspect is 61.8. therefore, based on the results of data analysis, it can be stated that the use of handout based mind map in Inquiry Learning Model effects the learning outcomes of physics and acceptable on the real level of 0.05

2. The use of handouts based mind map in inquiry learning model gives meaningful impact on learning outcomes of the student's cognitive, affective and psychomotor aspects that can be seen from the presence of significant differences in the students' learning outcomes.

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THE RELEVANCE BETWEEN AN ESP SYLLABUS AND THE STUDENTS' NEEDS A CASE STUDY OF FIRST SEMESTER STUDENT AT MECHANICAL ENGINEERING DEPARTMENT

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Abstract

In learning English for specific purpose, students sometimes do not get materials that appropriate with their needs. Moreover, ESP materials are more specific than general English, so students should receive materials related to their background of field. This problem usually happens because teacher does not conduct need analysis to students before designing a syllabus. Thus, there is no appropriateness between students' needs and the content in syllabus in terms of skill or materials. Therefore, this research aims to find out the relevance between an ESP syllabus and the students' needs. This research used descriptive qualitative method specifically case study that deals with a single or small-case that studied in detail. The population was taken from the 1^{st} semester students of Mechanical Engineering Department at a private university in Karawang. Random sampling was 24 students that taken from two classes from the population of 120 students. The data was taken by distributing questionnaire to students and analyzing the syllabus designed by teacher. The result of this research shows that most students who are working in companies need to learn speaking skill as the most important skill as well as grammar. In addition, the ESP syllabus provided by teacher is quite relevant to the students' needs. Therefore, it is suggested that teacher conduct need analysis to students before designing syllabus in order to have the relevance with students' needs.

Keywords: need analysis, ESP, ESP Syllabus, mechanical engineering

A. INTRODUCTION

1. Background of study

It is well known by many people that English is now used in many fields for various needs as well. Therefore, English is studied in almost every department in University, at least as a general and specific course. Certainly, the department offers their own aspects and skills of English that based on what is needed. It then leads to establishing the English for specific

purpose where the content of English is learned is different among departments. It is supported by Robinson (1980) that the language in an ESP course is not the subject matter, but is being learned as part of the process of acquiring some quite different body of knowledge or set of skills. Therefore, more specifically, ESP emphasizes the special abilities for English language learners than the general English.

However, the skills needed by learners sometimes are not met and served by related institution or more practically it is not listed in the syllabus of the institutions made by teachers or other stakeholders. Richards (2001:33) said that different types of students have different language needs and what they are taught should be restricted to what they need. Thus, learners should be able to get the material in accordance with what they want because it is usually very useful and will be used in certain circumstances in their environment. Therefore, need analysis is very important to conduct especially for ESP in English as a foreign language.

However, need analysis sometimes is not accurate and do not even have a particular problem. This leads the syllabus created does not meet the criteria of learners' need. Furthermore, if there is no need analysis, it will give a bad effect to the syllabus presented by the teacher. Though most of the syllabus content itself is taken from the situation and needs in its environment. As pointed out by Dick (1995) that the teaching situation has to be analyzed to reveal the conditions under which the syllabus will be implemented and the available resources, potential problems, as well as external factors that might force us to depart from the syllabus at some point must be determined.

There are still many such problems happen, especially in university. For example, in one of the private state universities in Karawang provides a variety of departments and faculties. One of them is majoring in mechanical engineering in the faculty of engineering. Surely, English is needed in mechanical engineering must relate to mechanical engineering itself and focus on the use of language in their field. Thus, in contrast with General English learners, ESP learners are enrolled in the course not for the sake of language knowledge but in order to be able to function in a specific context using the language as a tool (Petrova, 2008:7)

This kind of research has been done by Hossain (2013:22), in his qualitative research, he concluded that Students of engineering need to learn Business Communication for use in their future job profession. Focus should be given on both writing business correspondence and speaking skill. It is clear that that the students' need in its institution mostly concerns to the writing and speaking skills. Specifically, those skills will be useful and will be used in their future job profession. Accordingly, Kim (2013) in his research concluded that the most important content in Engineering English chosen by students is daily conversational English (53%), engineering contents (57%) and general business English (49%). In the other hand, the content courses is to train people for a job such as work forms, charts and samples of relevant course assignments and student papers; and business communication related websites which provide business letters, dialogues, instructions, telephone conversations, podcasts, etc.

Furthermore, a set of instruction and content of syllabus must depend on students' need. The contents are developed in a careful process to determine appropriate materials to give to students. Therefore, a type of syllabus is chosen to cover all the contents. These

previous research suggested that ESP for engineering students is appropriate to use task-based syllabus, even though there are still other appropriate types. Finally, this study investigates the students' needs in a Mechanical Engineering Department and its relevance to the syllabus provided by teacher.

2. Research Question

Based on the background above, this study attempts to investigate the issue the appropriateness and relevance of the syllabus to students' needs. The main research questions then formulated into the following lists:
a. What are the students' needs in learning English at Mechanical Engineering Department?
b. Is the syllabus used at Mechanical Engineering Department relevant to the need of students?

3. Objectives of the research

The objective of this research is to answer the research questions above that is:
a. To know the students' needs in learning English at Mechanical Engineering Department.
b. To know whether or not the syllabus used at Mechanical Engineering Department relevant to the need of the students.

4. Significance of the study

The result of this study is expected to contribute and give some information input to those who concerns in teaching learning process in ESP context. The significances of the study are as follow:
a. The result of study can be used as basic information for the development and improvement in English teaching program in ESP, especially in Mechanical Engineering department.
b. It is expected that this research would be beneficial for other researchers who can stimulate to carry out similar study with other interest in the future.

5. The Scope of the Study

The scope of this study is limited to analysis of a syllabus used in the first semester of Mechanical Engineering Department. The analysis focused on the general view of syllabus, so it did not specifically analyze the materials or textbook that used. In addition, the teacher was also not investigated since this study focused on the students' side only.

B. LITERATURE REVIEW

This part reveals the related theory that will be the basis of investigating the formulated problems. This part addresses the issues of the students' needs and syllabus used in ESP program. Specifically, it discusses some topics such as the origin of ESP, types of syllabus, and need analysis process.

1. The Definition of ESP

English for specific purpose (ESP) is the area of English language teaching which focuses on preparing learners "for chosen communicative environments" (Mohan, 1986:15) Additionally, Strevens (1980: 92) concluded that it differs from ESL in that it is based on a close analysis of the learner's communicative needs for a specific occupation or activity, as well as a detailed analysis of the language of that occupation or activity. Hence, the term "chosen communicative environment" means the English language is specifically used in a field. It is used communicatively to support activities that need English as a tool.

Furthermore, in contrast with English for general purposes, ESP learners usually study English in order to carry out a particular role such as doctors, nurses, engineering and scientist. The current view is that ESP is not a product, but rather a process. For example, Crystal (2003: 108) defines ESP as 'a course whose content is determined by the professional needs of the learner'. A similar idea is expressed by Hutchinson and Waters

> ESP is not a matter of teaching 'specialised varieties' of English. The fact that language is used for a specific purpose does not imply that it is a special form of the language, different in kind to other forms. Certainly, there are some features that can be identified as 'typical' of a particular context of use and which, therefore, the learner is more likely to meet in the target situation. (1987: 19)

Besides, there are some characteristics of ESP that differentiate itself from general English. Dudley-Evans and St. John (1997) formulated a modified definition of absolute and variable characteristics of ESP:

a) Absolute Characteristics
   - ESP is defined to meet specific needs of the learner;
   - ESP makes use of the underlying methodology and activities of the discipline it serves;
   - ESP is centered on the language (grammar, lexis, register), skills, discourse and genres appropriate to these activities.

b) Variable Characteristics
   - ESP may be related to or designed for specific disciplines;
   - ESP may use, in specific teaching situations, a different methodology from that of general English;
   - ESP is likely to be designed for adult learners, either at a tertiary level institution or in a professional work situation. It could, however, be for learners at secondary school level;
   - ESP is generally designed for intermediate or advanced students;
   - Most ESP courses assume some basic knowledge of the language system, but it can be used with beginners.

Thus, a number of terms and phrases are very important for ESP. Those are specific needs, language skills, designed for specific disciplines, and designed for adult learners It means that ESP program usually given to learners who have good knowledge of general English, or at least they have understood the basic of English.

In addition, Hutchinson & Waters (1987:3) assert that ESP is based on designing courses to meet learners' needs. Thus, the development of ESP is based on the learners' needs or wants. As stated by Richards (2001:28) The ESP approach to language teaching began as a respond to a number of practical concerns such as:

- The need to prepare growing numbers of non-English background students,
- The need to prepare materials to teach students who already mastered general English, but now needed English for use in employment,
- The need for materials for people needing English for business purposes, and
- The need to teach immigrants the language needed to deal with job situations.

All the practical concerns above have a strong influence to the development of ESP today. In this globalization era, the development of business and information are growing rapidly. Thus, the need of English is urgent since English is used to communicate among people in business and working. Accordingly, ESP Programs are offered in many institutions to meet peoples' needs from different working environments especially for non-native English speakers.

2. ESP Syllabus Design

Syllabus Design can be defined into many differences. First off all, syllabus is a subpart of curriculum which is concerned with a specification of what units will be taught (Allen, 1984:64). Thus, syllabus is more specific than curriculum that has specific content. As added by Hutchinson and Waters (1987: 94), syllabus can be classified in terms of the underlying approach to the course design. They all refer to a process which includes many some factors such as learners, their needs, materials, etc. In other words, there are different roles a syllabus could play in this process. (Petrova: 2013:29) explain that firstly the syllabus is the 'prime generator' of the course contents in a language-centred approach, where everything throughout the course happens according to the syllabus. Secondly, it is 'to provide opportunities for learners to employ and evaluate the skills and strategies considered necessary in the target situation'

Yalden (1987:86) advocates that a syllabus is an instrument to link learners' needs and aims to activities that take place in the classroom. While Hutchinson and Waters (1987: 94) more added that the content of a syllabus depends on two factors: the actual learning situation and the target situation. Subsequently, a good syllabus should accommodate the needs of different students depend on learning situation and target situation. In the other word, syllabus is not developed by teacher without gaining information about specific students' needs. In addition, Syllabus Design in ESP is an even more requiring task because it is dealing with specific learners' needs, specific materials, and specific objectives (Krarzia, 2013:36).

Furthermore, Kranhke (1987: 9) formulated six types of syllabuses for foreign language teaching: Structural syllabus, Notional/Functional syllabus, situational syllabus, Skills-based syllabus, Task-based syllabus and content-based syllabus. Among those types of syllabus, there are syllabuses as well as integrated syllabuses that can be used as ESP syllabus since the contents concerns to the communicative needs and specific skills to master by learners. For example, to some degree, skill-based syllabus has been used in language for

specific purposes (LSP) programs, for learners who have some more or less well-defined activity they need to carry out in the second language. (Kranhke, 1987: 51)

Finally, ESP syllabus must be flexible and reflect various aspects. This can be organized around different aspects like the subject, structure, notion, skill or learning tasks. However, it does not mean that other aspects that are undervalued or not presented in the course at all. The syllabus must be oriented towards the end of some, or product. At the same time it should not underestimate the importance of experiential learning, or with the process.

3. Need Analysis in ESP

It has been widely discussed in the previous section, and as stated by Nunan and Lamb (1996: 27), a syllabus compilation is necessarily preceded by a needs analysis, as it 'provides a basis for setting goals and objectives'. In addition, Richards (2001:32) pointed out that an important principle of ESP approaches to language teaching is that the purposes for which a learner needs a language rather-than a syllabus reflecting the structure of general English should be used in planning an English course. In the other words, ESP approach is based on the needs and students' want toward specific English skill, not to the syllabus that has been formed from general English materials. Richards (2001:32) expressed that rather than developing a course around an analysis of the language, an ESP approach starts instead with an analysis of learners' need.

Additionally, Hutchinson and Waters (1987:53) added that what distinguish ESP from General English is not the existence a need as such but rather an awareness of the need. Thus, the awareness will have an influence towards the content in language course when learners and teachers know why the learners need English. Therefore, started from the awareness of a need, teachers and stakeholders then conduct need analysis to learners in order to create compatibility of needs between teachers and learners in terms of content that provided including in the syllabus. Therefore what is meant by needs analysis here is ultimately the analysis of the target situation needs – the kind of language that the learners have to acquire to cope in the target situation (Hutchinson and Waters, 1987: 54)

This part of needs analysis is generally referred to as present situation analysis (Dudley-Evans 2001: 133). Hence, it is possible that an analysis is done not only one time for a period time. It means there must be present analysis for different situation including different learners to anticipate different needs. Moreover, there are various techniques available for gathering information of needs from learners. Tudor (1996: 73) suggested techniques that divided into two types:

1. The source of information is the learners themselves: questionnaires, interviews, tests, participatory needs analysis
2. Information is derived from the target situation analysis: observations, case studies, authentic data collection.

In addition, Hutchinson and Waters (1987: 56-62) formulated a framework for analyzing learning needs that can be used for target situation analysis. It is divided into objective needs and subjective needs.

1. Objective needs
   - Why is the language needed?
   - How will the language be used?
   - What will the content areas be?
   - Who will the learners use the language with?
   - Where will the language be used?
   - When will the language be used?
2. Subjective needs
   - Why are the learners taking the course?
   - How do the learners learn?
   - What resources are available?
   - Who are the learners?
   - Where will the ESP course take place?
   - When will the ESP course take place?

In conclusion, based on the understanding of the need analysis as well as techniques and frameworks in the analysis of learners' needs above, we can just carry out need analysis well and systematically, and then make it as a reference to the development of syllabus that contains the content that is appropriate for the learners.

C. RESEARCH METHODOLOGY

1. Research Design

The method of this research is qualitative design by employing case study. According to Silverman (2005:126), case study examines a case only to provide insight into an issue. Particularly, this study deals with a single or small-case that studied in detail (Silverman, 2005:126). In this study, the researcher investigated the students' perspectives towards their needs in learning English as specific purpose. Besides, the researcher also focused on analyzing a syllabus that used by teacher whether or not it is relevant to the students' needs.

2. Data collection

a. Population and Sample

The population of this research is the 1st semester students of Mechanical Engineering at a Private University in Karawang. The total population is about 120 students. The samples are 24 students that taken randomly from two classes. Those students were chosen because they are also working in companies with different roles.

b. Instrumentation

The instruments of this research used in this study were questionnaire and document analysis. The first, questionnaire was given to selected students. The list of questions were adopted from questionnaire that used by Petrova (2008) in her research. In addition, the questions made were also based on the framework for analyzing learning needs formulated by Hutchinson and Waters (1987: 56-62). The second, document analysis was used to analyze a syllabus made by a teacher who teaches English for Mechanical Engineering 1 for in the first

semester students. The syllabus consists of 14 meetings. The syllabus were analyzed and described in terms of its relevance to the needs of learners.

c. Data Collection Procedure
   1) Questionnaire
      In this study, there are two kinds of questionnaires to distribute to students. The first questionnaire was students' analysis questionnaire based on Needs Analysis Framework formulated by Hutchinson and Waters (1987: 56-62) that contains objective and subjective needs. This questionnaire consists of ten closed-ended questions that divided into two parts. Part I (questions 1-4) the respondents were instructed to provide some personal details such as their speciality, age, sex, native language and level of English. In addition, the respondents were asked to state whether they currently have to use English in their job or studies and to assess the amount of specialist knowledge acquired so far.

      While in Part 2 (questions 5-11) was aimed at revealing the students' attitude to ESP, as well as their expectations of the course. The questions were meant for measuring the initial level of students' motivation for devoting their time to the subject, and concentrate on three separate aspects: interest, importance in comparison with other subjects and usefulness. The other questions were multiple-choice questions with three to five available options that concern to the four skills of English that is reading, writing, listening and speaking.

      The questionnaires were in Indonesian distributed directly to the students after finishing during their English lesson by their English teacher. They were allowed to ask questions for clarification if necessary and were given help with formulating their ideas in open-ended questions.

   2) Document analysis
      In document analysis, an ESP syllabus made by a teacher who teaches English for Mechanical Engineering 1 for the first semester students of Mechanical Engineering is the main document to analyze. The syllabus consists of 14 meetings of learning and 2 meetings of examinations. The researcher analyzed the syllabus only focused on the topic that provided by teacher in every meeting. After that, the topics were compared to the learners' need that had been obtained by need analysis. Furthermore, the final analysis was to find the relevance of topics in the syllabus to the needs of learners.

d. Data Analysis
   The data of this research were analyzed through qualitative data analysis. Having obtained the data from distributing questionnaire and document analysis (syllabus), the researcher immediately conducted to analyze the data. All data were analyzed on the basis of research questions stated in section 1 and were classified into two parts. First, students' needs in learning English which cover the importance of objective and subjective needs as well as the sub skills in the four language skills. Second, the relevance students' need to syllabus

provided. Furthermore, data from questionnaire and documents were analyzed to answer the research questions concerning students' needs of English lesson and the relevance syllabus provided to students based on theory in section II.

In addition, Miles and Huberman (1994) formulated the analysis of qualitative data into activities that is data reduction, data display, and drawing and verifying conclusion. The first, in data reduction step, the researcher collected the data from the questionnaire. There was a large number of data that collected, so the researcher reduced the data to take the more important data and deleting the useless data. Thus, the most data taken was the data or answers mostly chosen by students that close to the main needs of students.

The second, Miles and Huberman (1994) pointed out that data display is an organized and compressed assembly of information, so that it can be seen a large amount of data at once, begin to understand what is happening, and start to draw justified conclusions. The data display in this research was matrices that shown in table where the column and row were based on the questionnaires and answers from the students. The third is drawing and verifying conclusion. In this step the researcher made a conclusion from the data display of students' answers as well as the content of syllabus. The conclusion was obtained after carefully comparing and matching the relevance between the students' need that got from data display and the topic of lesson in the syllabus.

D. FINDING AND DISCUSSION

From the data collection through the questionnaire and document analysis, the presented data was based on the research questions concerned with the primary data. These findings will be presented in qualitative analysis. In then earlier stage, the researcher pointed out the research question; 1) What are the students' needs in learning English at Mechanical Engineering Department? and 2) Is the syllabus used at Mechanical Engineering Department relevant to the need of students?. Thus, to answer the first research question, the researcher analyzed data result that obtained from questionnaire that divided into three parts. The first part is about the students' personal information, the second part is about students' attitude towards ESP and the third part was about students' expectations towards ESP course. The last, to answer the second research question, the researcher matched and compare the data got from need analysis and syllabus from teacher. It is discussed in the fourth part that is the relevance between students' needs and the content of syllabus.

1. Students' personal information

To answer this first part, the researcher firstly analyzed data from questionnaire (Question 1-4). The data can be seen in the appendix table 1. Based on the table, it can be concluded that overall, 24 students completed the questionnaire. All their specialties are engineering with native language is Indonesian. Besides, of the students 23 was male and 1 was female with various age from the youngest was 18 years old and the oldest was 40 years old. Furthermore, the level of English was mostly elementary including 18 students while the other 6 students were in the level of pre intermediate and intermediate. In addition, most students already had to use English in their jobs or studies to a greater or lesser extent. 7

students used English from time to time, 12 students used English seldom and 5 students never used English. The last, 10 students were confident enough to assess the amount of their knowledge as substantial, 9 students believed that they had acquired the basics of their main field of study and 5 students felt that they did not know much about their specialty yet.

In line with the data above, it can be concluded that most students have already known English but only the basic or elementary, but in the company they are working, they use English in some kinds of activities especially for those who are expert in their specialty. Therefore, learning ESP is important for them since their native language is Indonesian and they must improve their skills of English to have better use in their working activities. Meanwhile, the skills of English that they needed are discussed in the next section by answering the other questions of questionnaire.

2. Students' attitude towards ESP course

To answer this part, the researcher firstly analyzed data from questionnaire (Question 5-8). The data can be seen in the table 2 (see appendix). By seeing the table, most students (21 students) expressed an overall interest in taking ESP with only 3 students answering that they were not very much interested in the course. Besides, 13 students considered it as important as other subjects and 7 students felt that it was more important than other subjects in the college. However, only 4 students rated it as a less important subject in their study programs. In addition, most students (16 students) regarded ESP as a very useful course. While, the rest of 8 students thought that it could be useful for them in the future.

Furthermore, the answers of students for the question 8 that focused on the areas where ESP might be of use, all students thought that the four aspects provided in the questions were useful. To the question whether ESP will be useful for using materials written in English related to the students' specialty, 19 students answered "very useful" while the other 5 students answered "useful". In the next question 17 students thought ESP would be very useful for finding a better job and 7 students thought it was useful. Furthermore, 11 students stated that ESP would be very useful for communication with specialists from other countries while 8 students stated it was useful for that purpose. Finally, most students (22 students) felt that ESP would be useful in improving their general language skills, while 2 other responded that it was useful only.

3. Students' expectations towards ESP course

To answer this third part, the researcher analyzed data from questionnaire (Question 9) that consist of 7 sub questions concerning the purpose of ESP in improving skills of English. The data can be seen in the table 7. Concerning the students' expectations of ESP, the purpose to learn professional English terminology was considered important component of the course by 6 students. 15 students agreed that it would be useful for them. Only 1 person claimed that they already knew all the necessary terminology. Furthermore, 12 students answered that they needed to study different topics related to their specialty. Only 7 students rated it as important for an ESP course. On the other hand, to improve grammar was thought to be important by 20 students and useful by 4 students. In addition, according to the students' answers, the

language skills considered the most important skill was speaking that chosen by 22 students. Next comes the development of writing skills with 20 students considering those the most important. The reading skill considered as the most important thing by 19 students and listening skills by 16 students.

After that, the students' perspective of the way class work should be organized is reflected in the table 4 (see appendix). As the table shows, the most preferred forms of work chosen by most students (15 students) were teacher-oriented lessons, where the teacher explains some new material and then corrects students' mistakes when they practice. Then, there are two ways that have the same amount of highest rankings that is analyzing language structures (8 students) and trying to work with new words on students' own and learning by using songs, films, games, projects and presentations (7 students). The last effective ways according to students was class discussions, role-plays/group work where students' are given occasion for discussions, role-plays and group work (5 students).

4.   The relevance between students' needs and the content of syllabus

This is the last part of analyzing the data where the researcher compared and matched the two data have been obtained that is students' needs and the syllabus content. Based on the need analysis, it can be concluded most students who are mostly still in elementary level of English, need to learn speaking skill as the most important skill and writing as the second one. In addition, they also considered that grammar is also important to learn. Besides, the most preferred forms of work were teacher-oriented lessons, where the teacher explains some new material and then corrects students' mistakes when they practice, and learning by using songs, films, games, projects and presentations as the second one. Hence, to compare with the syllabus content, the researcher provided the syllabus that can be seen in the appendix.

Based on the syllabus, it can be seen that the skill offers to learn by students is mostly speaking skill. This skill is emphasized and it can be applied in some meeting that is 1, 3, 5. In these meeting, students are instructed to speak related to the topic such as introducing their selves (meeting 1), daily activity (meeting 3) and what will you do as a mechanical engineering (meeting 5). While in the meeting 12, 13, 14, and 15, the students must speak to present the material that has been discussed in each group. It is in accordance with the purpose of course that stated in the beginning that the students are encouraged to express their ideas by using English with the theme of mechanical engineering by presentation. Thus, this aspect is appropriate with the students' need that speaking skill is the most wanted skill by students in need analysis. However, the students' needs in writing skill can be applied in the meeting 2, 3, 6 and 9 where students will have some practice in writing different texts.

Furthermore, based on the students' need, students considered that grammar is important to learn. When we see the syllabus, there are some meetings that focus on grammar material that is in meeting 4. Grammar is also taught in every meeting especially in writing like stated in the description of syllabus purpose "in writing, students are encouraged to learn grammar actively. However, the portion probably is not as much as in general English. Thus the needs of students in Grammar seems difficult to ne provided by teachers completely. Thus, it can be concluded that between the students' need in grammar and the syllabus is

quite relevant although the learning focus is on the skill as well as communicative approach, not to the form as well as grammar since there are not many meetings that focuses on grammar.

Additionally, based on the need analysis, the most preferred forms of work were teacher-oriented lessons, where the teacher explains some new material and then corrects students' mistakes when they practice. In the syllabus, it is not clearly stated in every meeting what actually the role of teacher during the teaching process. However, it is explained in the learning strategies that in the teaching process, teacher firstly give the theory and materials followed by students' practice in the class. Specifically, it can be applied in the meeting 1, 2, 3, 4, 5, 6, 7, 9 and 10 where the teacher probably gives explanations firstly, then students do the practice. In the other hand, learning by using songs, films, games, projects and presentations can be done in meeting 12-15 where students become presenters.

E. Conclusion and Recommendation
1. Conclusion

In this research, there are some conclusions as follows:

a. Most students are very interested in learning English as well as general and specific purposes since their level in English is still elementary.

b. Most students work in some companies that require them to use English, so they considered that they need to learn speaking skill as the most important skill and writing as the second one beside they need to learn grammar as well.

c. The most preferred forms of work based on the students' need were teacher-oriented lessons where the teacher explains some new material and then corrects students' mistakes when they practice. Learning by using songs, films, games, projects and presentations also can be various techniques to make students interested in learning English.

d. The ESP syllabus provided by teacher is quite relevant to the students' needs in. It can be seen that speaking skill becomes the main skill that offered by teacher as well as the skill that needed by students. In addition, the students' need of grammar is also provided by teacher in every meeting.

2. Recommendation

The researcher suggests some recommendations as follow:

a. It is be better for teacher to conduct need analysis to students before developing an ESP syllabus.

b. In participating in ESP class, students need to have basic general English in order to study effectively since the materials they are taught is relatively difficult than general English.

c. For further research, it can be included all aspects of analysis to have more valid and accurate result. Since in this research, there only involves syllabus and the instrumentations was only questionnaire.

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SECTION 2 :
SOCIAL

ENVIRONMENTAL EDUCATION ACROSS THE CURRICULUM: PRESCHOOL TEACHERS' KNOWLEDGE, ATTITUDE AND PRACTICE IN MALAYSIA

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Abstract

Teachers play an important role in determining the successful implementation of environmental education among the young generation especially children. At the preschool level, environmental education can enhance the children's potential in all aspects of development and mastery of basic skills; as well as instil positive values. These can be achieved by integrating environmental education through activities that involve exploration, interaction with the environment, games and self-test in order to develop harmonious individuals (Ministry of Education Malaysia, 2005). Researches have shown that teachers' knowledge, attitude and behaviour can affect and influence students' attitude towards the environment (Aminrad *et.al*., 2013; Summers *et al*., 2000).Therefore, it is important to determine the level of teachers' knowledge, practice and concern towards the environment in order to evaluate their willingness in guiding and shaping the children to begin practising sustainable lifestyle since childhood. Thus, this research aims to determine the level of knowledge, attitude and practice concerning environmental education among preschool teachers.

Keywords: environmental education, preschool curriculum, preschool teachers, teachers knowledge, attitude and practice.

A. INTRODUCTION

Environmental destruction is a global concern in which the impacts cross any boundaries. The quality of the world and the future generations rely on the protection and conservation of the ecosystem today. Environmental pollution has caused, among others, global warming, thinning of the ozone layer, ocean and river pollutions, sound and light pollutions, acid rain and barren lands (Ramlogan, 1997). It is predicted that the environment will be pressuredif the trend of economic growth and unchecked user polar continues. Malaysia which is currently in the midst of developing is facing a huge challenge in ensuring a sustainable growth.

Various researches conducted have shown that the quality of environment is very much dependant on the level of knowledge, attitude and practice among the human beings themselves (Kuhlemeier *et al*., 1999; Schulitz & Oskamp, 1996). Education has been regarded as a tool to control the environment and sustainable growth since the Tbilisi conference in 1977 (Moroye, 2005;Scoullos dan Malotidi, 2004; Sterling, 2003). The

environmental education and schools have become major ways in handling problems related to the environment (Moroye, 2005; Pace, 2000) and guarantee the future (Boubaker SMATI, 2004). The implementation of environmental education will create awareness, concern and recognition on the consequences of humans' actions, thus leading to more responsible behaviour towards the environment (Aminrad *et al.*, 2013; Salequzzman & Stocker, 2001).

Hence, school, as a formal educational institution in the society, must play its role in educating and inculcating the culture of responsible behaviour towards the environment. Teachers should be more creative and proactive in inculcating the behaviour. They play an important role in determining the success of environmental education among the young generation, especially children. Researches have shown that teachers' knowledge, attitude and behaviour towards the environment will affect and influence students' attitude towards the environment (Aminrad *et al.*, 2013; Summers *et al.*, 2000). Thus, it is important to determine the gap in knowledge, practice and behaviour towards the environment among the preschool teachers in order to evaluate their readiness in guiding and shaping the children to start practising sustainable lifestyle since childhood. The aim of this study is to determine the level of knowledge, attitude and practice among the preschool teachers on environmental education across the curriculum.

B. LITERATURE REVIEW
1. Environmental Education across Preschool Curriculum
The National Preschool Curriculum Standard (KSPK) has been designed based on the National Education Philosophy. The aim of KSPK is "to develop the potential among children aged four to six years holistically by integrating physical, emotional, spiritual, intellectual and social aspects through a learning environment that is conducive and safe with fun, creative and meaningful activities". This is to develop skills, instil confidence and create positive self-concept in children to ensure that they are successful in their existing environment and prepared to handle challenges and responsibilities at the primary school level. The KSPK consists of 6 main pillars: communication, attitude and value, humanity, science and technological literacy, physical and aesthetical developments, as well as development of self-concept. In the Preschool Curriculum Standard published in 2010, there is a focus on 'Environment and I' under the humanity strand. The contents of the topic consist of appreciating the beauty of nature, understanding the relationship between human beings and nature; and preserving the environment.

Environmental education across the curriculum at the preschool level has been officially introduced with the publication of 'Environmental Education across the Preschool Curriculum Teaching and Learning Module' in 2005 by the Curriculum Development Centre. The contents of the Preschool Environmental Education consist of five themes which are animals, plants, air, water and land. All the five themes have subthemes that can be applied by teachers in their teaching and learning process. Teachers are given the flexibility to apply their creativity in adapting the materials and tools; and creating different learning environment.

2. Teachers' Knowledge, Attitude and Practice towards the Environment

Major reforms in the Malaysian education system have begun since the late 80's and early 90's (Nadeson & Rasid, 2005). Several studies related to awareness, knowledge and attitude towards the environment were carried out among school teachers in Malaysia. Mohd Ali (1999) and Osman (2003) reported that the level of knowledge towards environmental issues among the teachers was still average. For a teacher to be able to deliver significant environmental issues that are complex, debatable and abstract in nature such as the greenhouse effect, he needs to have basic knowledge about the environment, environmental problems and ways to control humans' attitude and behaviour in overcoming the problems, as well as specific pedagogic knowledge (Than 2001).

Teachers who have good knowledge about environmental education and deep understanding on the philosophy of environmental education are in good position to deliver the message on environment quality to the country holistically (UNESCO-UNEP 1987). Atreya et al. (1985) also emphasized that teachers should have knowledge on the contents of environmental education as their students are seen as the manifestation of knowledge and learning. If the teachers lack knowledge on environmental education, they may not be able to deliver the contents with the right focus.

Positive teachers' attitude towards the environment will produce positive behaviours in teaching which can be observed through actions and speech in the classroom. Ham and Sewing (1987) emphasized that if the teachers do not have positive attitude towards environmental education, not much learning takes place in the classroom. Teachers with positive attitude towards environmental education will try to teach environmental education based on what they know and feel (Martin 1984).

3. Integration of Environmental Education by Teachers in Malaysia

Environmental education has been implemented in the national education since 1996. The teaching of environmental education is carried out by integrating the elements of environment in respective subjects. The teachers the most dominant factor in ensuring the success of environmental education across the curriculum in order to create a progressive society (Nadeson, 2007). Several researches conducted have shown that the level of knowledge on environmental education among trainee and trained teachers was still at the minimal level (Ponniah, 1996; Teoh, 1996; Ismail, 2004; Mageswary et al., 2006). According to Mageswary et al. (2006), the minimal knowledge on environmental education was the main reason for most teachers not to integrate environmental education in classroom teaching. Yusoff (2003) felt that teachers' commitment in the teaching and learning process is crucial in the implementation of environmental education across the curriculum in schools.

This is supported by the research done by Habibah Lateh and Muniandy (2012) who proposed that one of the important components in the development of environmental education literacy among the society is to ensure that the teachers have the knowledge and understand the concept of environmental education first. The findings of the research showed that teachers with good understanding on the concept of environment were able to teach and guide students effectively on environmental education in their curriculum at school.

4. Challenges to the Implementation of Environmental Education

Bixler and Floyd (1999) have summarized that there are 3 categories that pose challenges to the environment which are structural, interpersonal and intrapersonal challenges. Structural challenges include external pressures such as logistics, finance, policies and liability issues that demotivate teachers and students from getting involved. Interpersonal challenges include continuous conflict among educators in an organization regarding philosophical and conceptual issues in education that can cause certain programmes or even the organization to become dysfunctional.

Chan (1995) identified six challenges in implementing environmental education, which are logistics, examination, institution, education, attitude and conceptual challenges. While Carr (2005) reported that the main reasons for teacher not to integrate environmental education in teaching are time constraint, inflexible curriculum, as well as lack of preparation time and teaching materials.

5. Theories and Models Related to Teachers' Knowledge, Attitude and Teaching Practice

The theories and model associated with the teachers' knowledge, belief, attitude and teaching practice that form the basis of this research are Theory of Planned Behaviour, Social Cognitive Theory and Teacher Commitment Model on the teaching of environmental education.

6. Theory of Planned Behaviour

Theory of Planned Behaviour is an extension of Theory of Reasoned Action put forward by Fishbein and Ajzen in 1975 (Ajzen 1991). The new element in this theory is the perceived behavioural control. This element, according to Ajzen, is the most important element that differentiates this theory from the original theory which had limitation in dealing with uncontrolled behaviour.
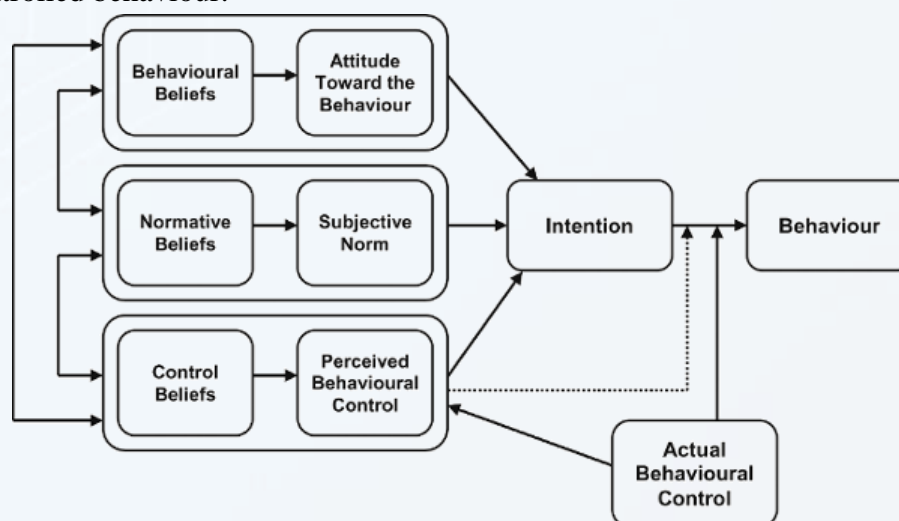
Diagram 1: Theory of Planned Behaviour (Ajzen 1991)

There are four basic concepts in this theory which are belief, attitude, intention and behaviour. Belief involves the knowledge and perception related to behavioural object. Attitude involves emotion and judgement associated with the object, while intention refers to the reason for the behaviour, and behaviour refers to the actual action performed. Behavioural intention is the outcome of the attitude towards behaviour that is influenced by knowledge. The assumption of this theory is that knowledge and attitude influence the actual behaviour through behavioural intention (Kuhlemeier et al. 1999).

7. Social Cognitive Theory

The theory introduced by Bandura (1986) provides a huge framework in understanding human motivation in various contexts that include individual behaviour. According to the theory, human behaviours can be explained as dynamic interaction and reciprocal causation between personal, behavioural and environmental factors (Diagram 2). These three factors will determine an individual behaviour through the reciprocal determinism process. Individual behaviours are closely linked to personal factors namelycognitive and affective.
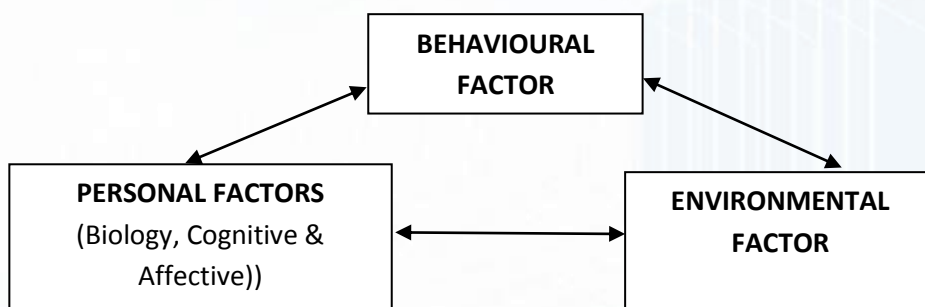
Diagram 2: Modelof Triadic Reciprocal Causation (Pajares 2000)

8. Model of Environmental Education Commitment

Teacher Commitment Model in teaching environmental education has been put forward by Shuman and Ham (1997). This model is based on four major theories which are the field theory by Lewin (1942), theory of planned behavior by Ajzen (1985), theory of life-span development by Brim and Ryff (1980) and research on life experience that influences environmentally responsible behaviour by Palmer (1993) and Tanner (1980).

This model provides the theoretical framework that takes into account life experience in developing the tendency among teachers to teach even though confronted by obstacles. The teacher's life experience in this model of environmental education commitmentinvolves three stages: children, college and adulthood. Teachers who were exposed to outdoor activities and spent time at nature centres during childhood may develop a belief that can influence their commitment towards environmental education. While in college, teachers who were involved in hands on environmental education activities and workshops would have the stimuli to teach environmental education. Teachers' commitment is also influenced by the

teachers' experience during adulthood. Thus, the experiences and life stages influence the teachers' commitment in teaching environmental education.
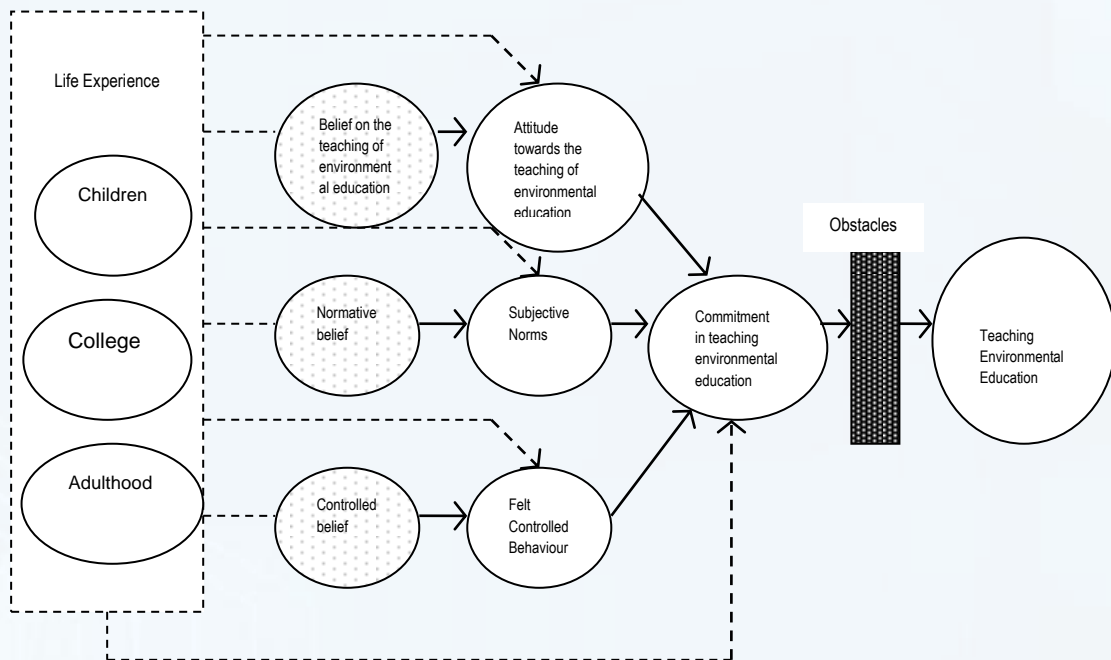
Diagram 3. Model of Environmental Education Commitment (Shuman dan Ham 1997)

C. RESEARCH CONCEPTUAL FRAMEWORK

This research will be conducted to identify the level of knowledge, attitude and practice, as well as the challenges among preschool teachers in obtaining the input on the relevance of implementing environmental education across preschool curriculum. Thus, the main dependent variables which are knowledge, attitude and practice as well as the relationship between the variables will be the focus of this research. Intermediate variables such as age and teachers' experience will also be taken into account in discussing the level of the three research variables among preschool teachers.
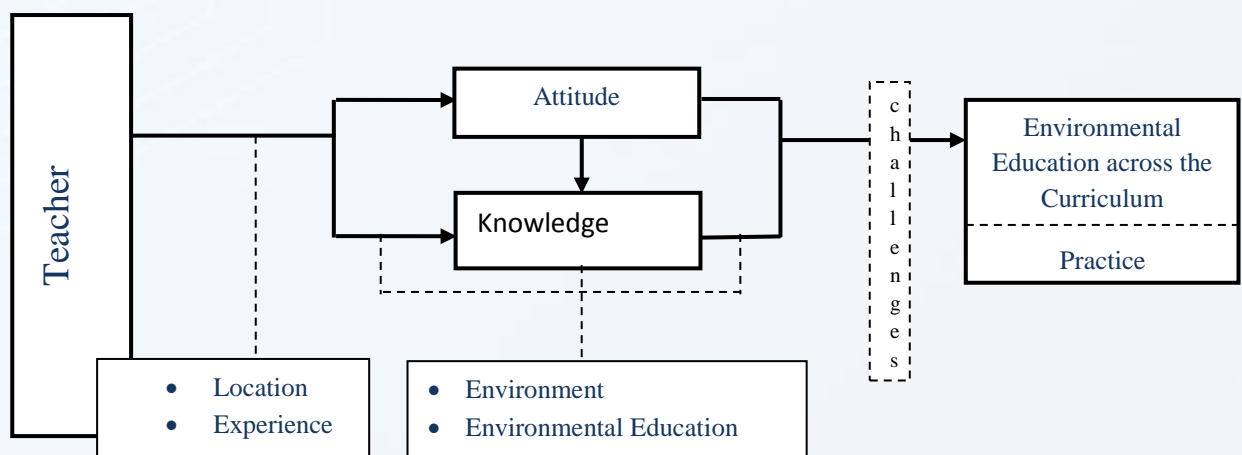
Diagram 4. Research Conceptual Framework

D. CONCLUSION

The awareness towards environmental education is justified and needs to be given serious attention in order to strengthen the knowledge and positive attitude, value, as well as practicetowards the environment among the preschool teachers. Thus, in producing a more responsible generation towards the environment, the Ministry of Education especially, has to spearhead the efforts in educating the society in order to fulfil the aim. It is hoped that educators will be well informed of the aim and objectives that need to be achieved in environmental education. This will lead to more effective implementation of environmental education across the curriculum for the benefits of the society and country.

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KESAN INTERVENSI KELOMPOK KAUNSELING DAN BIMBINGAN TERHADAP LOKUS KAWALAN DAN KONSEP KENDIRI MURID-MURID YANG TINGGAL DALAM KAWASAN YANG BERISIKO

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Abstract

The aim of this study is to study effect of group counseling and guidance intervention on locus of control and self concept for pupils staying in risky area using 3 X 5 factorial design. A total of 108 pupils were selected by using purposive sampling. Samples were divided to three different groups that is group counselling (n=36), group guidance (n=36), and control group (n=36). Two instruments used for the purpose of data collection were The Piers-Harris Children's Self-Concept Scale (2[nd]ed) (Piers-Harris 2) and The Nowicki-Strickland Locus Of Control Scale For Children (N-SLCS). The treatment process carried out by using five modules based on Cognitive Behavior Therapy (CBT). ANOVA repeated measure was used to analyze data. Result analysis on score locus of control showed that there were significant differences main effect between group $[F(1, 403.66)=27.09, p<.05]$; and time occasion $[F(3.83, 857.94)=66.38, p<.05]$; and interaction effect between and time occasion $[F(9.33, 857.94)=14.15, p<.05]$. At the same time, result analysis on score self concept showed that there is significant difference main effect between group $[F(14, 2823.97)=7.29, p<.05]$; and time occasion $[F(2.46, 4279.71)=15.84, p<.05]$; and interaction effect between group and time occasion $[F(9.81, 4279.71)=7.30, p<.05]$. Overall, the result of the analysis showed that group counselling (KK) intervention is more effective compared to group guidance (KB) and control group (KW), while group guidance (KB) intervention does not show significant difference with the controlled group (KW).

A. PENDAHULUAN

Dadah bukanlah isu yang baru dalam kehidupan manusia kerana penggunaannya telah dikesan sejak berabad-abad yang lalu. Dadah adalah bahan yang digunakan untuk tujuan perubatan yang apabila memasuki badan boleh mengubah keadaan sama ada fungsi badan atau struktur organisma (Allister, 2003; Carroll, 1989; George, 1990; Ghafar, 1995). Dadah merupakan masalah sosial paling rumit yang sedang dihadapi di Malaysia dan di negara-negara lain di dunia. Penggunaan dadah di Malaysia telah wujud seawal abad ke-19 (Jamaludin, 2007; AADK, 1997) dengan kemasukan pendatang Cina untuk dijadikan buruh di kawasan perlombongan bijih timah dan pendatang dari India Selatan dijadikan buruh di

ladang-ladang getah dan lada hitam semasa pemerintahan British di Tanah Melayu pada ketika itu. Pada ketika itu penggunaan candu amat berleluasa berlaku. Penggunaan candu adalah bertujuan untuk mengubati penyakit lelah, batuk kering, paru-paru, cirit-birit, malaria dan mengisi waktu kelapangan oleh pendatang berbangsa Cina, manakala ganja dibawa masuk oleh pendatang berbangsa India (Syed Ibrahim, Jamaludin, 2007; Ghafar, 1995). Di samping itu, orang Melayu pula menggunakan candu bagi membantu mereka meneruskan kerja-kerja harian seperti nelayan dan petani (Pasukan Petugas Anti Dadah, 1992).

Namun demikian, penggunaan candu telah berubah menjelang akhir tahun 1960-an dari tujuan untuk mengubati penyakit telah berubah kepada penagihan yang keterlaluan. Semenjak itu, penyalahgunaan dadah (candu) mula melibatkan pelbagai lapisan masyarakat golongan yang berpendapatan rendah, bahkan telah merebak kepada golongan yang lebih mewah serta merentasi umur dan jantina (Ibrahim, 1997; dalam Mahyuddin & Azizah, 2011). Semenjak dari itu, bilangan belia yang terlibat dalam penyalahgunaan dadah semakin meningkat. Semenjak tahun 1970 hingga 1982, seramai 42,977 orang penagih baru atau purata seramai 3,306 orang penagih baru setahun telah dikenal pasti (NADI, 1983).

1. Latar Belakang Kajian

Penyalahgunaan dadah semenjak kebelakangan ini tidak hanya melibatkan golongan belia ataupun dewasa sahaja malah penyalahgunaan dadah ini mula melibatkan murid-murid yang tinggal dalam kawasan yang berisiko. Penyalahgunaan dadah adalah satu keadaan apabila dadah diambil lebih daripada apa yang telah ditetapkan. Carrol (1989) mentakrifkan penyalahgunaan sebagai penggunaan sengaja bahan kimia bagi sebab lain daripada tujuan perubatan dan boleh menyebabkan kemerosotan fizikal, mental, emosi atau sosial pengguna. Moronkola (2003) membuktikan bahawa sesetengah bahan mengubah minda, mengubah perasaan, persepsi dan tingkah laku apabila digunakan kerana kesan mengenakan tindakan ke atas otak. Menurut laporan *Substance Abuse and Mental Services Administration* (2002) mendapati lebih enam juta kanak-kanak hidup atau tinggal bersama keluarga sekurang-kurangnya seorang daripada ahli keluarga bergantung pada alkohol atau dadah. Ini termasuk sekitar sepuluh peratus daripada kanak-kanak yang berusia lima tahun atau lebih muda, lapan peratus kanak-kanak berusia enam tahun hingga sebelas tahun, dan remaja berusia 12 tahun hingga 17 tahun. Di samping itu, menurut *National Survey on Drug Use and Health Report* (2004), menunjukkan sekitar lima juta orang dewasa bergantung atau penyalahgunaan alkohol mempunyai sekurang-kurangnya seorang anak di bawah umur 18 tahun tinggal di rumah yang sama. Kajian menunjukkan kanak-kanak yang tinggal bersama dengan ibu bapa yang menagih dadah mempunyai risiko yang tinggi untuk terlibat juga dalam menyalahguna dadah yang memberikan kesan yang negatif terhadap fizikal dan mental (*The National Center on Addiction and Substance Abuse*, 2005).

Kebanyakan kes penggunaan dadah dan penyalahgunaan berasal daripada sebab-sebab psikososial. Ahire (1990) menyatakan bahawa gangguan personaliti dan persekitaran sosioekonomi adalah penentu utama penglibatan mangsa dalam penyalahgunaan dadah. Keterlibatan kanak-kanak dalam penyalahgunaan dadah tidak boleh dipandang ringan oleh semua pihak. Kegagalan institusi kekeluargaan dalam memberi pendidikan kepada kanak-

kanak perlu ditangani oleh semua pihak khususnya pihak sekolah. Di sekolah kanak-kanak diberi pendidikan sebaik mungkin bagi membolehkan mereka mengharungi kehidupan yang lebih bermakna pada masa hadapan. Menyedari keadaan ini pihak Kementerian Pelajaran Malaysia telah mewujudkan perkhidmatan bimbingan dan kaunseling di sekolah rendah seluruh negara. Antara perkhidmatan lain yang disediakan ialah perkhidmatan perkembangan, perkhidmatan pencegahan, pengurusan krisis dan perkhidmatan pemulihan.

2. Terapi Kognitif Tingkah Laku (CBT)

Terapi Kognitif Tingkah Laku (CBT) diasaskan oleh Beck pada tahun 1960-an ketika beliau menjadi pakar psikiatri di Universiti Pennsylvania. Ketika berusia 20-an, Beck menamatkan pengajian di peringkat Ijazah Sarjana Muda di Universiti Brown, menerima ijazah perubatan dari Universiti Yale, dan menyelesaikan residensi patologi dan psikiatri (Weishaar, 1993). Pada tahun 1970-an Terapi Tingkah Laku muncul sebagai satu terapi yang terkenal di dalam psikologi. Terapi CBT diperkenalkan setelah Beck membuat kajian dan mengamalkan psikoanalisis. Beliau telah mereka dan menjalankan eksperimen untuk menguji konsep psikoanalitik kemurungan. Akhirnya memperkenalkan Terapi Kognitif Kemurungan (Beck, Rush, Shaw & Emery, 1979). Penyelidikannya menghasilkan satu konsep baru dalam ilmu falsafah kemurungan iaitu mendapati bahawa pesakit yang murung mengalami aliran pemikiran negatif yang seolah-olahnya timbul secara spontan. Menurut Beck (1970) kemurungan adalah akibat daripada fikiran negatif kemurungan yang melihat diri sendiri, pengalaman dan masa depan sebagai suram dan kosong. Beck mencipta istilah 'pemikiran automatik' untuk menggambarkan pemikiran yang berlaku secara spontan sepanjang hari. Ini menunjukkan kemurungan pemikiran adalah bersifat negatif dan termasuk dalam gangguan kognitif negatif. Beck mendapati bahawa pemikiran automatik pesakit jatuh kepada tiga kategori. Pesakit-pesakit mempunyai idea-idea yang negatif tentang diri mereka, di dunia dan pada masa hadapan. Matlamat terapi adalah untuk membantu klien menerima kesakitan yang dialami dan bertindak dengan cara yang betul (Christine, 2004).

3. Pernyataan Masalah

Laporan statistik penagihan dadah oleh Sistem Maklumat Dadah Kebangsaan (BIONADI) menunjukkan golongan belia merupakan golongan yang paling ramai terdedah kepada risiko penagihan. Ini dapat dibuktikan melalui perangkaan di mana majoriti penagih yang dikesan sepanjang Januari hingga Jun 2011 adalah golongan belia iaitu seramai 4,925 orang (78.98%). Golongan ini merupakan 0.03 peratus berdasarkan unjuran penduduk Malaysia yang berusia antara 15 hingga 64 tahun (19,516,900 orang). Belia yang berumur antara 19 hingga 24 tahun mencatatkan bilangan penagih teramai iaitu 1,779 orang (28.53%).

Semenjak kebelakangan ini penyalahgunaan dadah mula menular kepada kanak-kanak berusia 13 tahun ke bawah. Mengikut laporan AADK (Jun 2011) yang dikeluarkan oleh Sistem Maklumat Dadah Kebangsaan (BIONADI) menunjukkan seramai 14 orang kanak-kanak di bawah usia 13 tahun terlibat dalam menyalahgunaan dadah. Laporan AADK (September 2010) menunjukkan seramai dua orang kanak-kanak di bawah usia 13 tahun terlibat dengan penyalahgunaan dadah.

Sementara laporan akhbar melaporkan pihak polis telah menangkap 72 orang kanak-kanak di bawah usia 13 tahun yang terlibat dalam penyalahguna dadah (Berita Harian, 2011, 25 Ogos). Data ini memperjelaskan bahawa ancaman dadah telah menular dalam kalangan kanak-kanak di peringkat sekolah rendah lagi. Walaupun bilangan yang terlibat tidak begitu ramai tetapi jumlahnya semakin meningkat, namun isu ini tidak boleh dipandang ringan. Menurut Obot (1992) melaporkan bahawa kadar merokok dalam kalangan remaja terutama pelajar adalah tinggi dan seolah-olah semakin meningkat.

Di sekolah, hasil temu bual dengan guru besar di beberapa buah sekolah di Daerah Kulim didapati bilangan guru bimbingan dan kaunseling tidak mencukupi dan kurang daripada aspek kemahiran ilmu serta program untuk mengatasi permasalahan ini. Contohnya, kuota 500 orang murid di sesebuah sekolah akan dibekalkan seorang guru bimbingan dan kaunseling. Apa yang dilihat tiada usaha yang mantap dilaksanakan, tiada modul yang mantap diketengahkan dan keperluan melakukan kajian sama ada proses kaunseling kelompok, kaunseling individu atau bimbingan yang terbaik untuk menangani permasalahan ini.

4. Objektif Kajian

Berdasarkan pernyataan masalah di atas, objektif utama kajian adalah untuk mengkaji kesan intervensi kelompok kaunseling dan bimbingan terhadap lokus kawalan dan konsep kendiri murid-murid yang tinggal dalam kawasan yang berisiko. Secara khususnya kajian ini mengkaji:

a. Mengkaji kesan utama antara kelompok kaunseling, kelompok bimbingan dan kelompok kawalan terhadap skor lokus kawalan dan konsep kendiri murid-murid yang tinggal dalam kawasan yang berisiko.

b. Mengkaji kesan utama antara masa terhadap skor lokus kawalan dan konsep kendiri murid-murid yang tinggal dalam kawasan yang berisiko.

c. Mengkaji kesan interaksi antara kelompok dan masa terhadap skor lokus kawalan dan konsep kendiri murid-murid yang tinggal dalam kawasan yang berisiko.

5. Soalan Kajian

Kajian ini dijalankan menerusi kajian kuantitatif dan diharapkan dapat menjawab persoalan kajian yang berikut:

a. Adakah terdapat perbezaan kesan utama antara kelompok kaunseling, kelompok bimbingan dan kelompok kawalan terhadap skor lokus kawalan murid-murid yang tinggal dalam kawasan yang berisiko?

b. Adakah terdapat perbezaan kesan utama antara masa terhadap skor lokus kawalan murid-murid yang tinggal dalam kawasan yang berisiko?

c. dakah terdapat perbezaan kesan interaksi antara kelompok dan masa terhadap skor lokus kawalan murid-murid yang tinggal dalam kawasan yang berisiko?

d. Adakah terdapat perbezaan kesan utama antara kelompok kaunseling, kelompok bimbingan dan kelompok kawalan terhadap skor konsep kendiri murid-murid yang tinggal dalam kawasan yang berisiko?

e. Adakah terdapat perbezaan kesan utama antara masa terhadap skor konsep kendiri murid-murid yang tinggal dalam kawasan yang berisiko?

f. Adakah terdapat perbezaan kesan interaksi antara kelompok dan masa terhadap skor konsep kendiri murid-murid yang tinggal dalam kawasan yang berisiko?

6. Hipotesis Kajian

Berdasarkan tinjauan bacaan dan kerangka teoritikal, beberapa kenyataan yang boleh diuji dapat dilihat. Dalam kajian ini, hipotesis berikut diwujudkan untuk menguji hubungan antara pemboleh ubah tidak bersandar dan pemboleh ubah bersandar. Justeru kajian ini adalah dinyatakan hipotesis kajian dalam bentuk Hipotesis Nul (Ho) untuk diuji kebenarannya.

Ho_1 : Tidak terdapat perbezaan yang signifikan dari segi kesan utama antara kelompok kaunseling, kelompok bimbingan dan kelompok kawalan terhadap skor lokus kawalan murid-murid yang tinggal dalam kawasan yang berisiko.

Ho_2 : Tidak terdapat perbezaan yang signifikan dari segi kesan utama antara masa terhadap skor lokus kawalan murid-murid yang tinggal dalam kawasan yang berisiko.

Ho_3 : Tidak terdapat perbezaan yang signifikan dari segi kesan interaksi antara kelompok dan masa terhadap skor lokus kawalan murid-murid yang tinggal dalam kawasan yang berisiko.

Ho_4 : Tidak terdapat perbezaan yang signifikan dari segi kesan utama antara kelompok kaunseling, kelompok bimbingan dan kelompok kawalan terhadap skor konsep kendiri murid-murid yang tinggal dalam kawasan yang berisiko.

Ho_5 : Tidak terdapat perbezaan yang signifikan dari segi kesan utama antara masa terhadap skor konsep kendiri murid-murid yang tinggal dalam kawasan yang berisiko.

Ho_6 : Tidak terdapat perbezaan yang signifikan dari segi kesan interaksi antara kelompok dan masa terhadap skor konsep kendiri murid-murid yang tinggal dalam kawasan yang berisiko.

7. Kerangka Konsep Kajian

Berdasarkan kerangka konsep kajian dalam Rajah 1.3, intervensi kelompok terhadap lokus kawalan dan konsep kendiri dapat dilihat melalui soal selidik, sesi kaunseling kelompok dan bimbingan kelompok yang dijalankan. Oleh itu penyelidik memastikan kesesuaian modul, masa, kelompok, interaksi, aktiviti, intervensi kelompok yang dijalankan dapat meningkatkan daya tahan dan membentuk watak pelajar yang diharap-harapkan.
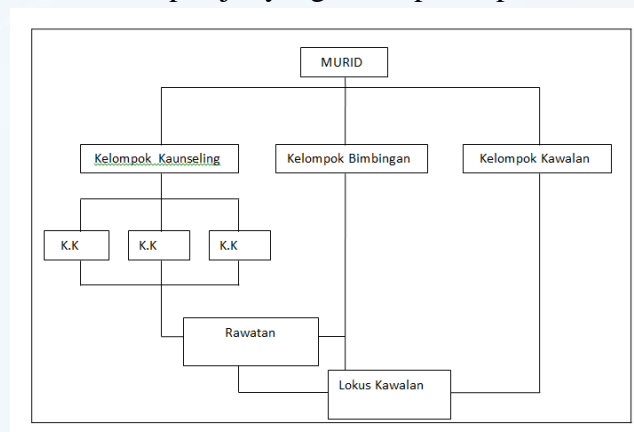
Rajah 1.3. Kerangka Konsep Kajian.

Seramai 108 orang murid dari sekolah rendah yang berumur di antara 10 hingga 12 tahun akan terlibat dalam kajian. Kajian ini melibatkan proses kaunseling kelompok, bimbingan kelompok dan kelompok kawalan. Responden dibahagikan kepada 36 orang murid yang akan melalui proses kelompok kaunseling, 36 orang murid kelompok bimbingan dan 36 orang murid kelompok kawalan. Responden kelompok kaunseling dibahagikan kepada tiga kelompok iaitu 12 orang murid setiap satu kumpulan untuk menjalankan sesi kaunseling kelompok. Manakala bilangan responden yang akan menjalankan sesi bimbingan kelompok adalah seramai 36 orang murid. Responden kelompok kaunseling dan kelompok bimbingan akan menjalankan proses rawatan. Responden kelompok kawalan seramai 36 orang murid akan menjalankan ujian tidak melibatkan sesi atau rawatan. Proses rawatan dan ujian dijalankan untuk melihat kesan lokus kawalan dan konsep kendiri ke atas responden.

8. Kepentingan Kajian

Ancaman dadah di Malaysia dianggap sebagai satu masalah yang utama dan serius. Ancaman dadah masih merupakan ancaman nombor satu manusia dan merupakan masalah sosial paling rumit yang sedang dihadapi oleh negara. Statistik yang dipaparkan dalam 1.5 pernyataan masalah menunjukkan penyalahgunaan dadah mula menular kepada kanak-kanak berusia 13 tahun ke bawah dan kanak-kanak di peringkat sekolah rendah. Oleh yang demikian satu kajian perlu dijalankan untuk mengkaji kesan intervensi kelompok kaunseling dan bimbingan terhadap lokus kawalan dan konsep kendiri murid-murid yang tinggal dalam kawasan yang berisiko. Diharapkan dapatan kajian boleh memberi manfaat kepada pihak yang terlibat secara langsung dalam menjalankan penyelidikan ini seperti Kementerian Pelajaran Malaysia (KPM), guru, kaunselor, guru bimbingan dan kaunseling, dan pelajar.

B. REKA BENTUK KAJIAN

Penyelidik menggunakan pendekatan kuantitatif dalam melaksanakan kajian ini. Dalam kajian ini penyelidik mengaplikasikan pendekatan kuasi-eksperimen dengan menggunakan kaedah reka bentuk faktoral (*faktorial design*) bertujuan untuk penganalisian data. Menurut Kerlinger (1986) kuasi-eksperimen merujuk kepada suatu reka bentuk yang bertepatan sesuai digunakan ketika penyelidikan pendidikan di mana pemilihan rawak dilakukan bukan sahaja di sekolah atau di bilik darjah.

Kajian ini menggunakan reka bentuk faktoral 3 X 5 yang melibatkan dua jenis rawatan iaitu kelompok kaunseling (KK), dan kelompok bimbingan (KB). Kelompok kawalan (KW) tidak mendapat sebarang rawatan. Semua kelompok melalui lima peringkat pengukuran berulang iaitu ujian (UPra, UP1, UP2, UP3, & UP4). Tujuan lima peringkat pengukuran berulang dilakukan untuk mengetahui tahap perubahan variabel lokus kawalan dan konsep kendiri murid-murid yang tinggal dalam kawasan yang berisiko. Alat ukur yang digunakan untuk mengukur variabel lokus kawalan adalah Instrumen *The Nowicki-Strickland Locus Of Control Scale For Children* (N-SLCS) (Nowicki & Strickland, 1973) dan bagi konsep kendiri pula menggunakan Instrumen *The Piers-Harris Children's Self-Concept Scale (2nd ed)* (Piers-Harris 2) (Piers, 1968).

C. RUMUSAN

Keputusan analisis kesan utama kelompok (KK, KB, & KW) terhadap skor lokus kawalan murid-murid yang tinggal dalam kawasan yang berisiko. Analisis dijalankan dengan menggunakan ANOVA dua hala ujian berulangan.

Keputusan analisis mendapati dari segi praktikalnya kelompok kaunseling (KK) lebih menunjukkan peningkatan terhadap lokus kawalan antara masa ujian berbanding dengan kelompok bimbingan (KB) dan kelompok kawalan (KW) murid-murid yang tinggal dalam kawasan yang berisiko. Sementara itu, kelompok bimbingan (KB) lebih menunjukkan peningkatan terhadap skor min terhadap skor lokus kawalan antara masa ujian berbanding skor min kelompok kawalan (KW) walaupun berlaku penurunan skor min UP1 dan UP4. Kelompok kawalan (KW) berlaku penurunan pada skor min pada UP1 dan peningkatan skor min pada UP4. Keadaan ini membuktikan daripada tiga kelompok didapati intervensi kelompok kaunseling (KK) lebih berkesan berbanding intervensi kelompok bimbingan (KB) dan kelompok kawalan (KW).

Keputusan analisis kesan utama kelompok (KK, KB, & KW) terhadap skor lokus kawalan didapati terdapat perbezaan yang signifikan antara kelompok dengan kesan saiz yang besar. Keputusan Ujian *Post-Hoc Bonferroni* antara kelompok (KK, KB, & KW) terhadap skor lokus kawalan menunjukkan terdapat perbezaan skor min yang signifikan antara kelompok kaunseling (KK) dan kelompok kawalan (KW) manakala kelompok kaunseling (KK) dan kelompok bimbingan (KB). Hasil daripada analisis membuktikan bahawa intervensi kelompok kaunseling (KK) adalah lebih berkesan berbanding dengan kelompok bimbingan (KB) dan kelompok kawalan (KW) dalam meningkatkan lokus kawalan murid-murid yang tinggal dalam kawasan yang berisiko. Keputusan analisis ujian penyelarasan *df* menggunakan nilai *Huynh-Feldt* menunjukkan terdapat perbezaan yang signifikan skor min lokus kawalan, kesan utama masa ujian dengan kesan saiz yang besar. Sementara itu, kesan interaksi antara kelompok (KK, KB, & KW) dan masa ujian (UPra, UP1, UP2, UP3, & UP4) terhadap lokus kawalan menunjukkan perbezaan yang signifikan dengan kesan saiz yang besar.

Keputusan analisis kesan utama kelompok (KK, KB, & KW) terhadap skor konsep kendiri murid-murid yang tinggal dalam kawasan yang berisiko. Analisis dijalankan dengan menggunakan ANOVA dua hala ujian berulangan. Keputusan analisis mendapati kelompok kaunseling (KK) lebih menunjukkan peningkatan skor min terhadap skor konsep kendiri antara masa ujian berbanding dengan kelompok bimbingan (KB) dan kelompok kawalan (KW) murid-murid yang tinggal dalam kawasan yang berisiko walaupun berlaku penurunan skor min pada UP2 dan UP4. Sementara itu, kelompok bimbingan (KB) lebih menunjukkan peningkatan dalam skor min terhadap skor konsep kendiri antara masa ujian berbanding skor min kelompok kawalan (KW) walaupun berlaku penurunan skor min pada UP2 dan UP3. Keadaan ini membuktikan daripada tiga kelompok didapati intervensi kelompok kaunseling (KK) lebih berkesan berbanding kelompok bimbingan (KB) dan kelompok kawalan (KW). Manakala intervensi kelompok bimbingan (KB) didapati lebih berkesan daripada kelompok kawalan (KW).

Keputusan analisis kesan utama kelompok (KK, KB, & KW) terhadap skor konsep kendiri didapati terdapat perbezaan yang signifikan antara kelompok dengan kesan saiz yang

besar. Keputusan Ujian *Post-Hoc Bonferroni* antara kelompok (KK, KB, & KW) terhadap skor konsep kendiri menunjukkan terdapat perbezaan skor min yang signifikan antara kelompok kaunseling (KK) dan kelompok kawalan (KW) manakala kelompok kaunseling (KK) dan kelompok bimbingan (KB). Hasil daripada analisis membuktikan bahawa intervensi kelompok kaunseling (KK) adalah lebih berkesan berbanding dengan kelompok bimbingan (KB) dan kelompok kawalan (KW) dalam meningkatkan konsep kendiri murid-murid yang tinggal dalam kawasan yang berisiko.

Keputusan analisis ujian penyelarasan *df* menggunakan nilai *Huynh-Feldt* menunjukkan terdapat perbezaan yang signifikan skor min konsep kendiri, kesan utama masa ujian dengan kesan saiz yang besar. Sementara itu, kesan interaksi antara kelompok (KK, KB, & KW) dan masa ujian (UPra, UP1, UP2, UP3, & UP4) terhadap konsep kendiri menunjukkan perbezaan yang signifikan dengan kesan saiz yang besar.

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KAUNSELING VOKASIONAL BAGI GOLONGAN BEKEPERLUAN KHAS: SATU ANALISIS

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Abstrak

Artikel ini bertujuan untuk membuat analisis terhadap keperluan kaunseling vokasional bagi golongan bekeperluan khas (GBK). Antara isu utama yang seringkali membelenggu golongan ini adalah diskriminasi masyarakat dan penyediaan peluang pekerjaan. Di Malaysia, sebanyak 5.8% daripada peluang pekerjaan di sektor awam telah diperuntukkan kepada GBK. Namun statistik menunjukkan hanya 20.7% sahaja daripada bilangan GBK yang berdaftar berjaya mendapat pekerjaan tersebut sehingga petengahan 2012. Hal ini membawa kepada persoalan dan implikasi tertentu. Selain daripada sikap majikan dan persepsi masyarakat, tahap keyakinan diri yang rendah dalam kalangan GBK sendiri dikenalpasti sebagai punca kepada statistik yang rendah ini. Isu tahap kecekapan dan kurang mahir juga menjadi salah satu faktor penyumbang selain daripada isu latihan. Implikasinya, GBK akan sentiasa ketinggalan dalam arus kemajuan dan kepesatan yang melanda masyarakat. Meskipun banyak perancangan dan peluang pekerjaan diwujudkan kepada golongan ini pada masa akan datang, usaha yang bersepadu bagi menangani isu-isu sampingan yang ada perlu ditangani secara segera dan berkesan. Kaunseling vokasional dijangka dapat membantu menyelesaikan masalah dan isu yang timbul dengan memberi pendedahan dan persediaan awal kepada GBK sebelum memasuki dunia pekerjaan sebenar. Melalui kaunseling vokasional, pelbagai persediaan dari aspek mental, emosi dan fizikal akan disiapkan selaras dengan tahap keupayaan sebenar GBK sebagai pekerja dalam *setting* sebenar pekerjaan itu nanti. Melalui analisis literatur yang dijalankan, maka dicadangkan tiga fasa utama dalam memperkasakan kaunseling vokasional di Malaysia khususnya iaitu; Latihan Kaunselor Vokasional, Penempatan Kaunselor Vokasional dan Pembinaan Modul Kerjaya GBK.

Kata kunci: kaunseling vokasional, golongan bekeperluan khas, modul kerjaya.

KUALITI INTELEKTUAL PELAJAR PRA UNIVERSITI DI MALAYSIA: KONSEP PEDAGOGI, TEORI BERKAITAN DAN PERSPEKTIF KAJIAN
(Pre-University Student Intellectual Quality in Malaysia: Pedagogical Concepts, Related Theory and Research Perspective)

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Abstract
Intellectual capital is an important domain to produce human capital with critically and creatively think which can be done through the implementation of the school curriculum. This concept paper describes the concept of intellectual quality of among pre-university students and also the learning theories and research perspective associated with the implementation of the intellectual quality of pre-university students in Malaysia. Critical and creative force need to be developed to the optimum level so that students are able to produce creative and quality ideas and inventions, and thus become the practice and culture of Malaysian life in the future. Individuals with high intellectual qualities are assets that can contribute to the development of society, community, nation and religion.

Keywords: intellectual quality, pre-university student, human capital

A. PENDAHULUAN

Kejayaan matlamat pembangunan negara amat bergantung kepada kualiti modal insan dari segi intelektual. Intelektual dan kebolehan berfikir secara kritis dan kreatif dalam kalangan pelajar telah lama menjadi matlamat pendidikan formal. Tahap intelektual pelajar perlu ditingkatkan dalam manghasilkan modal insan yang kritis, kreatif, kritikal, analitik dan berinovasi. Menurut Lim Yoke Poh dan Muhamed Awang (1986), semakin tinggi tahap pendidikan seseorang, semakin tinggi tahap perkembangan intelektual yang dimilikinya. Sebelum memasuki universiti, pelajar terlebih dahulu telah menerima pendidikan formal sama ada di peringkat Sijil Tinggi Pelajaran Malaysia (prauniversiti tingkatan enam), Matrikulasi atau Asasi.

Intelektual merupakan satu potensi yang dimiliki oleh semua pelajar. Namun begitu, tidak semua pelajar boleh mencapai tahap intelektual yang tinggi. Peningkatan intelektual dalam kalangan pelajar pra universiti perlu dibangunkan semasa proses pengajaran dan pembelajaran kerana pendidikan di peringkat pra universiti merupakan asas yang penting dalam melahirkan modal insan yang berkualiti dari aspek perkembangan minda. Hal ini adalah untuk menyokong matlamat pendidikan negara iaitu untuk memperkembangkan daya intelek dan kerohanian pelajar pra universiti ke peringkat maksimum. Ciri-ciri pemikiran

intelek jelas diberikan perhatian dalam kurikulum pendidikan pra-universiti di Malaysia yang menekankan pelajar supaya suka menyoal dan mencari jawapan, melihat hubung kait, menjangka peristiwa yang akan berlaku, membuat spekulasi tentang kemungkinan, meneroka idea, berfikir secara literal, dan sentiasa membuat refleksi secara kritikal tentang idea, tindakan dan hasil (Bahagian Pembangunan Kurikulum, Kementerian Pelajaran Malaysia, 2011).

Selaras dengan hasrat penjenamaan semula program prauniversiti tingkatan enam, tugas guru adalah untutk melengkapkan pelajar dengan keupayaan intelektual tinggi melalui amalan pemikiran kritis dan kreatif. Amalan pemikiran kritis dan kreatif yang dimiliki pelajar membolehkan pelajar menyelesaikan masalah secara logik dan rasional bagi mengamalkan pembelajaran sepanjang hayat. Keberkesanan pengajaran guru bergantung kepada amalan pedagogi yang digunakan di dalam bilik darjah. Kajian Aminah Ayob, Hazri Jamil, Halim Ahmad, Maznah Ismail dan Farouk Abdul Majid (2004), menunjukkan bahawa amalan pedagogi guru merupakan faktor yang signifikan dalam mempengaruhi peningkatan tahap intelektual pelajar. Pemilihan dan penggunaan pedagogi adalah bertujuan untuk mengubah tingkahlaku pelajar daripada pasif kepada aktif di samping dapat meningkatkan pemikiran kognitif tinggi sehingga boleh membawa kepada perubahan dan pembinaan pengetahuan pelajar.

B. KONSEP KUALITI INTELEKTUAL BERDASARKAN KERANGKA PEDAGOGI PRODUKTIF

Dalam penulisan ini, konsep kualiti intelektual yang dibincangan adalah berdasarkan dimensi kualiti inteletual yang terkandung dalam konsep pedagogi produktif yang menggabungkan pelbagai pendekatan, kaedah, teknik dan strategi yang digunakan guru dalam proses pengajaran dan pembelajaran (Lingard, 2007). Konsep kualiti intelektual yang difokuskan dalam penulisan ini telah diperkenalkan oleh sekumpulan pengkaji dari *University of Queensland*, Australia. Kumpulan penyelidik ini telah menjalankan kajian *'The Quuensland School Reform Longitudinal Study'* (QSRLS) (Lingard dan Ladwig, 2001). Hasil kajian mendapati elemen kualiti intelektual boleh diguna pakai di dalam pengajaran bagi membantu pelajar menguasai konsep dan isi kandungan pelajaran. Kualiti intelektual membina perhubungan antara pedagogi dan pengetahuan (Luke & Hogan, 2006). Terdapat empat dimensi amalan pedagogi produktif (Lingrad et al., 2001) seperti yang dijelaskan di dalam Rajah 1.

(1) *Dimensi Kualiti Intelektual*: Pengajaran yang bertujuan untuk meningkatkan kualiti intelektual iaitu melalui pembinaan kemahiran intelek yang berkualiti dengan menggalakkan pelajar mahir berfikir pada aras tinggi. Dimensi kualiti intelektual memberi penekanan kepada pengetahuan dan pemahaman pemikiran yang mendalam melalui perbincangan yang bernas serta menggalakkan perdebatan tentang sesuatu isu atau idea dengan menggunakan laras bahasa yang tepat dan sesuai;

(2) *Dimensi Perkaitan*: Dimensi ini menjelaskan hubungkait pelajaran dengan pengalaman, pengetahuan, kehidupan sebenar pelajar dengan berasaskan kepada penyelesaian masalah;

(3) *Dimensi Penyediaan Persekitaran Bilik Darjah Yang Kondusif*: Mewujudkan suasana persekitaran bilik darjah yang kondusif sehingga dapat memberi sokongan terhadap setiap aktiviti yang dilakukan dalam bilik darjah;

(4) *Dimensi Menghargai dan Menangani Perbezaan*: Pengetahuan tentang perbezaan budaya yang wujud dalam kalangan pelajar dengan mengetahui dan berupaya membezakan dan menilai sesuatu budaya bagi melahirkan warganegara yang aktif.

Rajah 1. Kerangka Konsep Pedagogi Produktif (Sumber : Lingard et al., 2001)

Walau bagai manapun, penerangan terhadap dimensi kualiti intelektual yang terkandung di dalam kerangka pedagogi produktif diberi keutamaan di dalam kertas konsep ini sebagai salah satu dimensi yang meningkatkan kemahiran berfikir pelajar di peringkat pra universiti. Penerangan bagi subdimensi kualiti intelektual berdasarkan kerangka pedagogi produktif diterangkan di dalam Jadual 1.

Jadual 1.
Penerangan Subdimensi Kualiti Intelektual Berdasarkan Kerangka Pedagogi Produktif

Subdimensi	Penerangan Subdimensi
Pemikiran Tahap Tinggi	Melibatkan pengubahsuaian maklumat dan idea-idea. Pengubahsuaian ini berlaku apabila pelajar menggabungkan fakta dan idea-idea dan juga berupaya untuk mensintesis, mengeneralisasi, menerang, menghipotesis atau membuat kesimpulan dan penterjemahan.
Pengetahuan yang Mendalam	Pengetahuan yang mendalam menitikberatkan idea yang berpusat kepada topik dan kandungan yang dianggap penting.
Kefahaman yang Mendalam	Kefahaman yang mendalam akan terbentuk apabila pelajar dapat memahami perhubungan yang komplek antara konsep-konsep penting dalam sesuatu topik. Pelajar boleh membina atau

Subdimensi	Penerangan Subdimensi
	menghasilkan maklumat yang baru dengan mencari perkaitan, menyelesaikan masalah, membentuk penerangan dan membuat kesimpulan.
Perbualan yang Tetap	Terdapat interaksi yang baik antara guru dan pelajar mengenai topik yang dibincangkan. Interaksi yang wujud adalah bercorak persalingan dan mewujudkan perkongsian pemahaman.
Permasalahan Pengetahuan	Melibatkan pemahaman pengetahuan yang bukan tetap sebagai satu maklumat tetapi lebih kepada pembinaan dan juga melibatkan subjek seperti politik, social dan pengaruh dan implikasi budaya.
Laras bahasa	Melibatkan arahan yang menggabungkan perbincangan yang kerap mengenai percakapan tentang bagaimana proses percakapan dan penulisan dijalankan. Juga melibatkan kosa kata dan perkataan teknikal yang spesifik, tentang bagaimana sesuatu perkataan itu boleh digunakan atau pun tidak (sintaks dan tatabahasa).

Konsep kualiti intelektual memberi pertimbangan kepada peningkatan minat pelajar untuk menguasai mata pelajaran yang diajar dengan lebih bermakna. Hal ini bermaksud, guru secara produktif mampu memilih dan membina strategi pengajaran yang berkaitan dengan perkara yang diajar dengan menggunakan gaya dan pendekatan pengajaran yang berbeza-beza berlandaskan latar belakang pelajar. Strategi yang memfokuskan kepada kualiti intelektual dalam pengajaran guru dapat meningkatkan perkembangan dan pencapaian pelajar (Chalmers, 2000). Lingard et al. (2001) berpendapat, melalui amalan dan penekanan kepada kualiti intelektual, guru dapat melahirkan pelajar berintelektual tinggi. Guru harus mengetahui gaya pembelajaran yang diminati olah pelajarnya, mengenal pasti teknik dan strategi pengajaran dan seterusnya menguasai teknik untuk menilai strategi pengajaran yang dilaksanakan sama ada berkesan atau tidak bagi mengadakan refleksi terhadap pengajaran guru.

C. TEORI BERKAITAN KUALITI INTELEKTUAL DALAM KONTEK PENDIDIKAN

Dalam menerapkan kemahiran berfikir yang menjadi tunjang utama di dalam pembinaan kualiti intelektual yang tinggi dalam kalangan pelajar khususnya pelajar pra universiti, guru atau pendidik yang berminat perlu mengetahui teori-teori yang mendasari pengajaran dan pembelajaran kemahiran berfikir. Beberapa teori yang berkaitan dengan pengajaran pemikiran dibincangkan di dalam bahagian ini.

1. Teori Perkembangan Kognitif Piaget

Teori Pembelajaran Kognitif merupakan teori pembelajaran yang utama yang terkandung di dalam proses pengajaran dan pembelajaran dalam menghasilkan pelajar dengan kualiti intelektual yang tinggi. Teori Perkembangan Kognitif telah mula dipelopori oleh Jean Piaget (1954) yang menerangkan peringkat-peringkat perkembangan kanak-kanak dan dewasa. Piaget percaya bahawa perkembangan kanak-kanak berlaku melaui proses

tranformasi penyangkaan yang berterusan. Piaget (1954) dan Nani Menon dan Rohani Abdullah (2004) menyatakan bahawa perkembangan kognitif berlaku melalui skema. Kanak-kanak mula membentuk 'skema' semenjak lahir dan melibatkan dua proses penting iaitu 'Adaptasi' dan 'Organisasi'.

Proses 'adaptasi' atau 'penyesuaian' melibatkan aktiviti penyerapan (asimilasi) dan pengubahsuaian (akomodasi). Jadual 2 menerangkan proses penyerapan dan pengubahsuaian.

Jadual 2:

Jadual 2. Perbezaan Antara Proses Penyerapan dan Proses Pengubahsuaian

Proses Penyerapan (asimilasi)	Proses Pengubahsuaian (akomodasi)
Proses penyerapan (asmilasi) berlaku apabila pelajar menerima rangsangan daripada mentafsir dan memproses mengikut pengalaman yang sedia ada. Penyerapan adalah suatu proses di mana pengetahuan baru diserap oleh pelajar dan disimpan sebagai skema baru atau diserapkan dalam skema yang sedia ada.	Proses pengubahsuaian (akomodasi) berlaku sekiranya skema yang sedia ada tidak dapat menjelaskan persekitaran sepenuhnya. Pelajar menggunakan kedua-dua proses bagi mentafsirkan maklumat yang didapati dan persekitaran pelajar. Kedua-dua proses ini sentiasa berlaku dalam diri manusia dan menimbulkan sesuatu situasi yang memerlukan penyelesaian. Hasil daripada proses penyelesaian tersebut menghasilkan perkembangan kognitif. Melalui proses penyelesaian ini pelajar akan belajar dan memahami sesuatu konsep.

(Diadaptasi daripada Nani Menon dan Rohani Abdullah, 2004)

Proses 'organisasi' adalah suatu kecenderungan manusia menyusun konsep supaya ia menjadi lebih teratur, sistematik dan dapat digunakan semula dan berlaku secara dalaman. Apabila skema baru sudah terbentuk, pelajar akan mengaturkannya supaya terdapat perhubungan antara skema yang baru dengan skema-skema yang sedia ada. Skema yang serupa akan disusun dalam fail yang sama manakala skema yang berlainan akan disusun dalam fail yang berasingan. Perkembangan kognitif mempunyai sifat persamaan dengan perkembangan yang lain iaitu ia berkembang sangat capat pada masa bayi serta pada zaman permulaan kanak-kanak. Perkembangannya agak lambat pada peringkat pertengahan dan penghujung zaman kanak-kanak. Perkembangannya akan mula berkurangan pada zaman remaja dan seterusnya pada zaman dewasa. Perkembangan kognitif berbeza antara seorang kanak-kanak dengan kanak-kanak yang lain. Menurut Piaget, perkembangan kognitif berlaku secara berperingkat-peringkat di mana peringkat yang lebih awal adalah peringkat yang penting dan kritikal berbanding peringkat berikutnya di mana pada usia dua tahun, kematangan fizikal otak kanak-kanak sudah mencapai 70 peratus daripada otak dewasa, manakala pada usia enam tahun, kematangan tersebut adalah sebanyak 90 peratus.

Menurut Habibah Elias dan Rahil Mahyuddin (1990), komponen perkembangan kognitif membolehkan pelajar untuk :

i. Meningkatkan kemahiran berfikir dan kemahiran proses sains.
ii. Berfikir secara logikal metematik melalui manipulasi objek secara konkrit.
iii. Memperkembangkan sikap ingin tahu dan suka menyiasat.
iv. Memperkembangkan kemahiran menyelesaikan masalah dalam kehidupan seharian.

v. Memberi pelbagai peluang memegang, meneroka bahan, mengubahsuai bahan yang berkaitan dengan idea metematik.

vi. Mengambil bahagian dalam aktiviti, bermula daripada aktiviti dunia fizikal kepada idea di dunia yang abstrak.

vii. Menyedari konsep ruang, masa dan menggunakan simbol.

viii. Memberi peluang menggembangkan kemahiran mengelas, membanding, turutan, menyukat, graf, membilang dan operasi nombor.

4. Teori Perkembangan Kognitif Bruner

Teori perkembangan kognitif Bruner (1960) dan Habibah Elias dan Rahil Mahyuddin (1990) menerangkan kepentingan faktor-faktor budaya, emosi, evolusi, integrasi dan bahasa dalam pertumbuhan kognitif manusia. Bruner percaya bahawa perkembangan fungsi intelek dibentuk oleh kemajuan teknologi. Teori Bruner dapat dilihat daripada kenyataan kerana cara manusia berfikir beberapa abad lalu, sebelum perkembangan industri moden adalah berbeza daripada cara manusia berfikir sekarang. Walaupun begitu, terdapat perbezaan perkembangan kognitif antara penduduk-penduduk daripada masyarakat yang mengalamai kemajuan teknologi dengan manusia daripada masyarakat sebaliknya. Kesan kebudayaan juga penting dan bahasa memainkan peranan penting dalam perkembangan kognitif di mana evolusi proses kognitif berlaku rentetan kemajuan teknologi.

Bruner turut menekankan kepentingan integrasi di mana pematangan kognitif adalah hasil integrasi tindakan dan kemahiran-kemahiran dan manusia memerlukan satu dasar atau rancangan kombinasi yang lebih tinggi. Bahasa merupakan salah satu cara bagaimana rancangan ini dibuat. Bruner turut percaya bahawa pada asasnya manusia mengamati objek-objek dan perkara-perkara sama seperti organism-organisma yang rendah, tetapi manusia mempunyai kebolehan yang berbeza tentang membentuk gambaran dan mengingati kembali pengalaman-pengalaman.

Terdapat tiga cara yang menjadi asas bagaimana manusia menukarkan pengalaman yang baru berlaku kepada gambaran kognitif. Cara-caranya adalah :

i. Mod Enaktif

Kanak-kanak pada peringkat ini hanya memberi makna kepada objek dari segi tindakan yang dibuat ke atas objek-obejek itu. Mod enaktif ini penting bagi tingkah laku seseorang dewasa. Beberapa kemahiran seperti bermain alat-alat bunyian atau permainan yang sukar, boleh dipelajari hanya melalui pengajaran lisan. Ini berlaku kerana pengetahuan mengetahui aktiviti-aktiviti ini berlaku dalam mod enaktif.

ii. Mod Ikonik

Dalam peringkat ini, pengetahuan persekitaran berdasarkan kepada imej-imej yang melambangkan perkara-perkara pengamatan. Contohnya, gambar akan melambangkan perkara sebenar.

iii. Mod Simbolik

Mod ini adalah terakhir berkembang. Dalam peringkat ini, bahasa membekalkan cara menerangkan pengalaman dan menukarkannya kepada tafsiran kognitif. Kebanyakan pemikiran dewasa adalah di dalam mod simbolik. Bruner menganggap penguasaan bahasa

dan perkembangan keupayaan memikir dalam mod simbolik sebagai kemajuan terpenting dalam perkembangan kognitif.

5. Teori Konstruktivisme

Selain daripada teori kognitif sebagai teori yang utama yang terkandung di dalam proses pengajaran dan pembelajaran dalam menghasilkan pelajar dengan kualiti intelektual yang tinggi, teori konstruktivisme juga merupakan teori pembelajaran yang digunakan untuk reka bentuk pengajaran dan pembelajaran yang menekankan pembelajaran melalui tingkah laku dalam meningkatkan kualiti intelektual pelajar. Pembelajaran konstruktif berasaskan falsafah dan psikologi (Peter dan William, 1999). Fosnot (1996) menyatakan bahawa konstruktif melibatkan pelajar yang aktif membina pengetahuan berdasarkan pengalaman pelajar. Von Glaserfeld (1994), mengemukakan tiga epistemologi konstruktif iaitu;

i. Pengetahuan bertambah secara pasif sehingga mencapai matlamat melalui proses kognisi yang aktif oleh seseorang pelajar.

ii. Kognitif adalah proses adaptasi yang berfungsi untuk membentuk sikap individu berdaya maju.

iii. Kognitif menyediakan suasana yang dapat dirasai oleh individu berdasarkan pengalaman.

Kostruktivisme menyediakan pelajar dengan peranan yang aktif dalam mengembangkan pengetahuan, kepentingan pengalaman dalam proses membina pengetahuan dan realisasi hasil dari binaan pengetahuan sebagai gambaran terhadap situasi sebenar. Menurut Halizah Awang (2008), teori pembelajaran konstruktivis memerlukan pelajar untuk merungkai maklumat dan membina pengetahuan baru hasil dari kajian-kajian terhadap penyataan hipotesis. Pelajar dibimbing untuk mengenal pasti masalah, membangunkan idea dan membuat sintesis terhadap maklumat yang diperoleh untuk mencapai penyelesaian masalah. Pelajar dapat menyesuaikan sebarang maklumat baru dengan pengetahuan sedia ada pelajar untuk membentuk pengetahuan baru dalam mindanya dengan bantuan interaksi sosial melalui pendekatan konstruktivisme (Pusat Perkembangan Kurikulum, KPM 2001). Proses pembelajaran memberi penekanan kepada pelajar untuk mendapatkan maklumat dan mengaplikasi pengetahuan sedia ada kepada sesuatu permasalahan. Interaksi di antara maklumat, individu dan masyarakat di persekitarannya member makna kepada pembelajaran. Halizah Awang (2008) menyatakan pembelajaran konstruktivisme turut memudahkan pelajar bertukar-tukar idea dalam aktiviti penyelesaian masalah. Proses pembelajaran ini memerlukan pelajar untuk mengaplikasi pelbagai kemahiran berfikir secara konstruktif. Teori pembelajaran konstrukitivis penting dalam kajian ini kerana dengan mendedahkan pelajar kepada situasi sebenar, dijangkakan dapat merangsang pembelajaran yang lebih realistik dan bermakna dan dapat menggalakkan penglibatan sepenuh pelajar dalam setiap kumpulan.

Berdasarkan teori-teori yang dibincangkan, guru perlu mahir untuk menjadikan sesi pengajaran dan pembelajaran menjadi lebih bermakna dengan membuat perhubungan antara mata pelajaran yang diajar dengan pengetahuan sedia ada dan pengalaman pelajar. Pengajaran kemahiran berfikir dalam memupuk kualiti intelektual pelajar tidak terbatas bagi mata pelajaran tertentu sahaja. Guru seharusnya bijak mengatur strategi pengajaran yang lebih kepada memusatkan pelajar kerana dunia pendidikan sekarang mementingkan pelajar untuk tahu berfikir dan bukan sahaja untuk tahu membaca (Rajendran, 2008).

D. PERSPEKTIF KAJIAN BERKAITAN KUALITI INTELEKTUAL DI PERINGKAT PRA UNIVERSITI

Kualiti intelektual ialah keupayaan yang diperlukan oleh pelajar pra universiti untuk menjadi lebih berjaya dan cemerlang sebagai pengamal dalam bidang akademik, pekerjaan dan kehidupan (Falk & Millar 2002; Hambur, Rowe & Luc, 2002; Lublin, 2003). Keupayaan intelektual boleh diterapkan atau diintegrasikan dalam pengajaran dan pembelajaran dalam konteks subjek pengajian (Kenan, 2010). Kajian awal berkaitan ramalan memenuhi kehendak kendiri (Rist, 1970) dan kajian berkaitan 'streaming and tracking' (Oakes, Gamoran & Page, 1992), menunjukkan bahawa salah satu punca utama sesetengah pelajar tidak mendapat pencapaian akademik yang tinggi adalah disebabkan sekolah atau institusi pendidikan tidak menitik beratkan perkembangan tahap intelektual. Hal ini tidak terkecuali bagi pelajar di peringkat pra universiti.

Kajian Lingard (2007) juga mendapati bahawa guru di Australia kurang menekankan aspek dimensi kualiti intelektual. Hal ini disebabkan guru lebih memberi tumpuan menghabiskan sukatan pelajaran dalam masa yang ditetapkan atas desakan pihak atasan seperti pihak pentadbiran sekolah. Guru juga didapati memberi tumpuan kepada dimensi memberi persekitaran bilik darjah yang kondusif di Australia. Hal ini berlaku kerana guru lebih mementingkan pengajaran berpusatkan pelajar (Lingard, 2007).

Di Malaysia, kajian oleh Morshidi Sirat, Rosni Bakar, Lim Hock Wam & Mohammed Nasser Katib (2004); dan Lim Yoke Poh dan Muhamed Awang (1996) mendapati bahawa, para pelajar lepasan pra universiti yang memasuki Institut Pengajian Tinggi (IPT) kurang mempunyai kebolehan menaakul dan berfikir secara kritikal dan tidak berupaya untuk berdaya saing di peringkat antarabangsa bersama dengan pelajar daripada universiti yang lain. Hal ini dikhuatiri akan berlanjutan apabila pelajar tamat pengajian di IPT dan memasuki alam pekerjaan. Perkara yang sama turut disokong oleh laporan Kementerian Sumber Manusia (2005) dan Kementerian Pengajian Tinggi Malaysia (2006) yang mendapati faktor utama pengangguran siswazah ialah kurang kemahiran perbincangan yang bernas yang melibatkan kemahiran lisan dan kemahiran pemikiran kritikal khususnya dalam penaakulan yang berkaitan penyelesaian masalah. Faktor-faktor yang dinyatakan merupakan antara faktor yang penting terkandung di dalam aspek intelektual. Fokus meningkatkan kemahiran intelektual khususnya dalam kemahiran komunikasi dan berfikiran kritikal serta menyelesaikan masalah bukan sahaja menjadi fokus di institusi pendidikan di Malaysia tetapi juga bagi institusi pendidikan di luar negara. Kedua-dua kemahiran ini merupakan kemahiran yang merentasi kurikulum. (Rodiah Idris, Siti Rohayah Ariffin & Noriah Mohd Ishak, 2009).

Selain daripada itu, kajian oleh Hazri, Nordin, Zohir, Fadhilah dan Mohd Nor Isman (2009) mendapati, pelajar kurang terlibat dengan pemikiran aras tinggi disebabkan kebanyakan guru tidak menggalakkan pelajar berfikir secara mendalam dan terlibat secara aktif dalam bilik darjah. Pelajar hanya menerima dan mendengar segala maklumat yang diberi oleh guru dalam keadaan yang pasif. Dapatan oleh Nor Asniza Ishak (2010) dan Nor Asniza Ishak, Azman Mohd Noh, Saliza Kadir dan Siti Noor Daud @ Othman (2012) terhadap amalan pedagogi produktif dalam kalangan guru di sekolah dan pensyarah di kolej matrikulasi

menunjukkan guru dan pensyarah paling kurang mengamalkan dimensi kualiti intelektual. Namun begitu guru dan pensyarah menerapkan kualiti intelektual dalam kalangan pelajar dengan menggalakkan pelajar berfikir pada aras tinggi dengan mencabar daya pemikiran pelajar semasa proses pengajaran dan pembelajaran melalui proses penyoalan aras tinggi, pembinaan analogi dan mengaitkan pengajaran dengan pengalaman pelajar.

Penerangan di atas menunjukkan bahawa penerapan dan penekanan terhadap aspek kualiti intelektual perlu diutamakan oleh guru dan pensyarah di peringkat pra universiti bagi melahirkan pelajar yang mempunyai keupayaan berfikir yang dinamik yakni mampu berfikir secara kritis dan kreatif, berupaya untuk berkomuikasi secara intelek dan seterusnya berkeupayaan untuk menyelesaikan masalah berkaitan dengan bidang yang dipelajari.

E. KESIMPULAN

Ramai sarjana pendidikan bersetuju (Lim Yoke Poh & Muhamed Awang (1986); Brabeck (1983); dan Allen (1981)) menyatakan bahawa apabila terdapat peningkatan dalam tahap pendidikan pelajar, sepatutnya tahap perkembangan intelektual pelajar a juga perlu berkembang mengikut perkembangan fizikal dan umur. Pelajar di peringkat prauniversiti seharusnya mempunyai pemahaman yang mendalam mengenai sesuatu topik, isu atau disiplin ilmu yang dipelajari agar boleh dihubungkaitkan dengan topik, isu atau disiplin ilmu yang lain (Yadan, 1985). Yadan (1985) selanjutnya menegaskan bahawa, pemikiran pelajar dapat berkembang dengan lebih bercapah supaya membolehkan pelajar bersaing pada masa akan datang. Kenyataan yang dikemukakan ini dilihat relevan dalam konteks pelajar pra universiti di Malaysia kerana pelajar pra universiti perlu mempunyai daya saing yang tinggi bagi mencapai matlamat dan objektif dasar pendidikan negara. Malamat ini memberi tumpuan kepada penghasilan modal insan yang berkualiti dalam semua aspek kehidupan melalui kualiti intelektual dengan berlandaskan tindakan yang rasional, kesedaran sivik yang tinggi serta berperanan unggul kepada negara, masyarakat dan agama.

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PENDEKATAN BERMAIN UNTUK PERKEMBANGAN KOGNITIF DAN SOSIAL KANAK-KANAK AUTISME

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Abstrak

Secara ironinya, kanak-kanak autisme kerap kali ditempatkan dalam persekitaran pendidikan yang berstruktur, *adult-led,* dan diberikan peluang yang sedikit untuk bermain. Ini kerana kanak-kanak autisme dilihat sebagai sukar untuk berinteraksi mahupun bermain dengan rakan-rakan yang lain. Namun, mengapakah kanak-kanak autisme sukar untuk bermain? Teori yang berkaitan akan menerangkan tentang kesukaran bermain yang dihadapi oleh kanak-kanak autisme. Literatur juga mendapati bahawa bermain sebenarnya membantu perkembangan kanak-kanak autisme khususnya dari aspek kognitif, sosial, emosi dan tingkah laku. Namun apakah pendekatan yang boleh digunakan untuk membantu kanak-kanak autisme bermain ke arah mengembangkan kemahiran kognitif dan sosial mereka? Persoalan ini akan dijawab dalam kertas ini mengenai dua jenis pendekatan bermain yang boleh diaplikasikan dalam memberikan intervensi kepada kanak-kanak autisme.

Kata kunci: Pendekatan bermain, perkembangan kognitif, perkembangan sosial, kanak-kanak autisme.

A. PENDAHULUAN

Belajar melalui bermain adalah istilah yang digunakan dalam pendidikan dan psikologi. Menurut Piaget (1962), bermain adalah tingkah laku hasil daripada beberapa kemahiran, pengetahuan dan kefahaman untuk mencipta pembelajaran. Bermain bukan sahaja membina pembelajaran, malah mengembangkan aspek-aspek psikologi dalam diri kanak-kanak. Aspek-aspek psikologi yang dimaksudkan adalah dari segi (i) kognitif seperti memori, penyelesaian masalah dan membuat keputusan, (ii) sosial seperti peniruan, penyertaan bersama dan interpersonal, (iii) emosi seperti empati, dan (iv) tingkah laku. Melalui bermain, kanak-kanak dapat membina kemahiran sosial dan kognitif, mematangkan emosi, dan mendapat keyakinan diri (Kahn & Wright, 1980), membangunkan bukan sahaja kemahiran motor tetapi juga kemahiran kognitif dan sosial (Pellegrini & Smith, 1998), dan memberikan pengalaman yang diperlukan untuk kemahiran belajar seperti mengukuhkan memori dan kemahiran bahasa lisan (Leong & Bodrova, 2003).

Walaupun bermain membantu perkembangan kanak-kanak, namun hal ini berbeza dengan kanak-kanak autisme yang mengalami kesukaran dalam bermain. Ini kerana menurut *American Psychiatric Association* (1994), autisme adalah ketidakupayaan perkembangan

dalam sosial, bahasa dan tingkah laku. Manakala menurut Persatuan Autisme Kebangsaan Malaysia (NASOM, 2013) pula, individu autisme mengalami ketidakupayaan perkembangan yang menghalang pembelajaran, komunikasi bahasa, perkembangan emosi dan sosial kanak-kanak sepanjang hayat mereka. Namun begitu, terdapat kelebihan pada kanak-kanak autisme dari segi memori dan menyusun maklumat (Grandin, 1986, 1995 & William, 1996) dan kekurangan dari segi mengurus maklumat dan isyarat, pembinaan konsep dan penaakulan, merancang, menyusun, dan menyelesai masalah (Bristol et al., 1996: Minshew, 1998; Minshew, Goldstein, Quill, 1995; Taylor & Seigel, 1994). Kelebihan dan kekurangan ini menjadikan kanak-kanak autisme sebagai golongan istimewa yang perlu dibantu untuk mengembangkan potensi dan kemahiran mereka.

Kajian Geraldine et al. (2012) untuk mengukur aktiviti otak menggunakan *electroencephalograms* (EEGs) mendapati bahawa terdapat pengaktifan pada otak kanak-kanak normal terhadap stimulus sosial (memek muka) berbanding stimulus bukan sosial (alat mainan). Ini berbeza pula dalam kanak-kanak autisme yang mana terdapat pengaktifan pada otak terhadap stimulus bukan sosial berbanding stimulus sosial. Penggunaan stimulus bukan sosial seperti bermain alat permainan boleh mengaktifkan otak kanak-kanak autisme. Justeru, pendekatan bermain boleh digunakan khususnya untuk mengembangkan kemahiran kognitif dan sosial dalam kalangan kanak-kanak autisme.

B. APAKAH DEFINISI BERMAIN?

Perkataan bermain merujuk kepada suatu perbuatan atau kata kerja. Menurut Kamus Dewan edisi ke-empat (2010), bermain bermaksud berbuat sesuatu untuk menyukakan atau menyenangkan hati dengan menggunakan alat-alat tertentu atau tidak. Definisi bermain ini berbeza dengan pendapat John Dewey iaitu seorang pendidik terkemuka di Amerika. Beliau berpendapat bahawa aktiviti bermain dilakukan secara tidak sedar demi apa-apa keputusan. Menurutnya lagi, bermain merupakan semua tingkah laku yang dipamerkan oleh kanak-kanak.

Piaget (1962) pula menyatakan bahawa bermain merupakan tingkah laku yang boleh dilihat yang mengandungi elemen-elemen fungsi, simbolik dan permainan dengan peraturan. Piaget mencadangkan bahawa konsep bermain yang utamanya adalah asimilasi dengan persekitaran dan menggabungkan rangsangan ke dalam skema kognitif mereka. Apabila seseorang kanak-kanak bermain sesuatu dengan tingkah laku motor fungsi, maka mereka sebenarnya telah terlibat dalam permainan praktis. Namun jika mereka menggunakan perwakilan komunikasi seperti menggunakan isyarat atau perkataan yang mempunyai sesuatu maksud, maka ia adalah permainan simbolik.

Manakala Bateson (1981) pula mencadangkan peranan bermain sebagai *scaffolding* iaitu perancah. Beliau berpendapat bahawa konsep bermain digunakan untuk mengumpul kemahiran-kemahiran tertentu yang belum dikuasai, sehinggalah seseorang itu menguasai kemahiran-kemahiran tersebut. Sebagai contoh, penggunaan pendekatan main peranan (*pretend play*) iaitu untuk membantu memahirkan diri dengan kemahiran-kemahiran dalam bersosial.

C. MENGAPAKAH KANAK-KANAK AUTISME SUKAR BERMAIN?

Kanak-kanak autisme dilaporkan dalam banyak sumber literatur sebagai sukar untuk bermain. Ini kerana terdapat pelbagai faktor berkenaan kelemahan bermain dalam kalangan kanak-kanak autisme yang dibahaskan sama ada melalui model-model mahu pun kajian-kajian experimental (Mastrangelo, 2009). Selain daripada itu, terdapat teori yang menjelaskan tentang kelemahan yang dialami oleh kanak-kanak autisme dalam bermain.

1.   Theory of Mind (ToM)

Theory of Mind adalah keupayaan kognitif untuk memahami orang lain. Kebolehan dalam teori minda bermaksud seseorang berupaya untuk membaca minda orang lain dan menyedari bahawa orang lain mempunyai persepi yang berlainan mengenai sesuatu perkara. Namun bagi individu autisme, mereka mempunyai kelemahan dalam teori minda. Ini bermaksud mereka mengalami kesukaran untuk menduga apa yang ada dalam fikiran orang lain. Kekurangan kanak-kanak autisme dalam teori ini menyatakan bahawa mereka tidak berupaya untuk memahami fikiran, perasaan, atau niat orang lain (*National Research Council,* 2001). Ketidakupayaan ini merupakan ciri-ciri kognitif dalam individu autisme, merupakan asas dan kemungkinan yang universal terhadap individu autisme (Baron-Cohen, Tager-Flusberg & Cohen, 2000). Ini menjadi penghalang kepada kanak-kanak autisme untuk berkomunikasi dan bersosial. Kelemahan dalam interaksi sosial termasuklah (i) tingkah laku *non-verbal* iaitu hubungan mata, ekspresi wajah dan postur badan, (ii) kegagalan untuk membina hubungan yang bersesuaian, (iii) kekurangan timbal balik sosial dan emosi. Selain daripada itu, kelemahan ini juga berkait dengan masalah yang wujud dalam interaksi bermain rakan sebaya seperti kesukaran dalam komunikasi dua hala, pemahaman sosial dan perhatian bersama. Menurut Myles & Southwick (2005), kelemahan sosial yang disebabkan oleh teori ini ialah kesukaran dalam (i) menjelaskan tingkah laku seseorang, (ii) memahami emosi, (iii) meramal tingkah laku atau emosi orang lain, (iv) memahami sudut pandangan orang lain, (v) menduga niat orang lain, dan (vi) membezakan antara fiksyen dan fakta. Kajian yang dilakukan tentang teori minda menyatakan bahawa kanak-kanak autisme mempunyai masalah untuk memahami pengetahuan, empati, muslihat, lawak jenaka dan usikan, bahasa, dan kepercayaan (*belief/false belief*) (Brown & Whiten, 2000). Oleh kerana kanak-kanak autisme mempunyai kelemahan dalam teori minda, maka mereka sukar untuk bermain seperti bermain permainan olok-olok.

D. APAKAH PENDEKATAN BERMAIN UNTUK KANAK-KANAK AUTISME?

Terdapat pelbagai bentuk intervensi bermain yang lebih berstruktur dan boleh digunakan kepada kanak-kanak autisme. Namun bentuk-bentuk intervensi ini dibahagikan kepada dua jenis iaitu intervensi bermain tingkah laku dan intervensi bermain untuk perkembangan. Kedua-dua jenis intervensi ini akan dijelaskan di bawah ini.

1.   Intervensi Bermain Tingkah Laku

Pendekatan bermain ini sangat menekankan aspek tingkah laku untuk pembelajaran kanak-kanak autisme. Antaranya adalah *Applied Behavior Analysis (ABA), Discrete Trial*

Training (DTT), Pivotal Response Training (PRT) dan *Reciprocal Imitation Training (RIT).* Mengapakah intervensi ini digelar intervensi bermain tingkah laku?. Ini kerana ia memberikan intervensi terhadap tingkah laku dan bertujuan untuk mengubah tingkah laku kanak-kanak autisme ke arah yang positif.

ABA merupakan teknik yang memberikan perubahan bermakna dan positif dalam tingkah laku kanak-kanak autisme. Ia menekankan kepada prinsip yang menerangkan tentang bagaimana pembelajaran dilakukan. Salah satu prinsip dalam *ABA* adalah peneguhan. Ini kerana apabila tingkah laku itu diberikan ganjaran, tingkah laku tersebut lebih suka untuk diulangi. Ini sejajar dengan teori yang diperkenalkan oleh B.F. Skinner. Intervensi ini telah dilakukan oleh para juruterapi terhadap kanak-kanak autisme sejak tahun 1960-an lagi. Ia melibatkan *one-on-one basis* iaitu antara juruterapi dan klien. Intervensi *ABA* untuk kanak-kanak autisme tidak boleh diguna pakai kepada kanak-kanak autisme yang lain. Ini kerana kanak-kanak autisme berbeza antara satu sama lain. Dalam *ABA*, hanya juruterapi yang bertauliah iaitu yang mempunyai lesen ahli psikologi klinikal sahaja yang boleh melakukan intervensi. Ia boleh mengambil masa sehingga 40 jam dalam seminggu.

DTT telah diperkenalkan oleh Ivar Lovaas seorang ahli psikologi klinikal berdasarkan rujukan kepada B.F Skinner dalam *ABA*. Lovaas merupakan individu pertama yang mengkaji keberkesanan *ABA* terhadap kanak-kanak autisme (Ryan et al., 2001). Ia di gelar *DTT* kerana intervensi dipecahkan kepada beberapa sub kemahiran. Sebelum melakukan intervensi, juruterapi akan melakukan penilaian awal (Holding et al., 2011) untuk melihat tahap klien dalam kemahiran sedia ada. Penilaian ini bertujuan untuk memastikan terapi yang diberikan adalah efektif dan efisien (Holding et al., 2011). Dalam *DTT*, klien dan juruterapi akan duduk dengan mengadap antara satu sama lain untuk mengurangkan gangguan dan memudahkan pengawalan tingkah laku. Sebagai contoh, jika objektif intervensi adalah untuk menghasilkan bunyi percakapan yang tertentu, juruterapi akan menghasilkan bunyi. Kemudian klien diminta untuk meniru bunyi tersebut dengan bantuan fizikal. Tindakan ini akan diteruskan berulang kali sehingga juruterapi berpuas hati dengan hasil yang ditunjukkan oleh klien. *DTT* memberikan peluang kepada klien dan juruterapi untuk melakukan banyak percubaan dalam satu sesi yang dijalankan. Ini meningkatkan pendedahan dan pembelajaran (Sundberg & Partington, 1999).

Manakala PRT juga adalah terapi berdasarkan prinsip *ABA*. Namun ia sedikit berbeza kerana ia memberikan fokus kepada '*pivotal areas*' iaitu bidang penting seperti motivasi dan daya inisiatif yang berlaku dalam situasi semula jadi. *Pivotal areas* boleh difokuskan dalam intervensi kerana ia boleh memberikan pengaruh kepada bidang yang lain dalam diri kanak-kanak autisme. Sebagai contoh, apabila intervensi motivasi diberikan, kanak-kanak autisme mempamerkan peningkatan dalam kemahiran sosial seperti hubungan mata dan perhatian bersama yang mana kemahiran ini tidak diajar secara langsung. *PRT* tidak memberikan intervensi terhadap kemahiran kanak-kanak autisme. Ia hanya menekankan terhadap *pivotal areas*. Antara prinsip-prinsip yang terkandung dalam *PRT* ialah (i) jelas - menarik perhatian kanak-kanak untuk memberikan isyarat jelas tentang tingkah laku yang ingin diajar, (ii) pilihan kanak-kanak - memberikan pilihan kepada kanak-kanak dalam interaksi pengajaran untuk memastikan mereka bermotivasi, (iii) kawalan bersama - kawalan persekitaran secara

bersama demi memberikan peneguhan yang semula jadi, (iv) peneguhan luar jangkaan - memberikan peneguhan luar jangkaan apabila kanak-kanak menghasilkan tingkah laku spontan, (v) peneguhan semula jadi - memberikan peneguhan semula jadi yang disemai dalam interaksi pengajaran, (vi) membentuk - cuba membentuk dan mengukuhkan tingkah laku yang kanak-kanak masih belum mampu lakukan, dan (vii) variasi tugasan - menyelangi tingkah laku yang telah dikuasai dengan tugasan yang sedang dipelajari untuk meningkatkan motivasi. *PRT* telah digunakan untuk meningkatkan aspek bahasa, sosial, tingkah laku, akademik, dan kemahiran bermain dalam kanak-kanak autisme. Intervensi ini berbeza dengan *DTT* kerana *DTT* memecahkan beberapa kemahiran kecil dan mengajar satu kemahiran kecil pada satu-satu masa sehingga ia dapat dikuasai.

RIT adalah intervensi secara tingkah laku semula jadi dan spontan. Ia berperanan untuk mengajar peniruan kepada kanak-kanak autisme dalam konteks komunikasi sosial. Kajian menunjukkan peniruan tidak wujud dalam kanak-kanak autisme dalam persekitaran bermain yang semula jadi (Taylor, 2014). Oleh itu, RIT dikatakan kaedah yang efektif untuk mengajar kanak-kanak autisme melakukan peniruan dalam situasi bermain yang semula jadi. Terdapat dua jenis *RIT* iaitu peniruan objek dan peniruan isyarat. Dalam *RIT*, juruterapi atau ibu bapa yang telah menerima latihan akan meniru tingkah laku kanak-kanak autisme sambil menerangkan tentang peniruan yang dilakukan kepada mereka. Ini untuk menekankan bahawa juruterapi juga melakukan perkara yang sama. Begitu juga sebaliknya apabila juruterapi mahukan kanak-kanak autisme meniru kemahiran yang dipamerkan dengan menerangkan tentang tingkah laku yang dilakukan kepada mereka. Antara kriteria dalam *RIT* adalah kanak-kanak mempunyai pilihan terhadap stimulus, peneguhan yang diberikan adalah secara langsung, peneguhan yang diberikan adalah munasabah, usaha yang bertujuan dengan tindak balas yang betul, dan tindak balas betul yang segera (Stahmer et al, 2003).

Berikut adalah jadual perbandingan antara intervensi-intervensi bermain tingkah laku yang telah dibincangkan. Rujuk Jadual 1.

Jadual 1. Perbandingan Pendekatan Intervensi Bermain Tingkah Laku

Pendekatan	Kriteria	Kelebihan & Kekurangan
Applied Behavior Analysis	• Untuk mengubah tingkah laku yang positif. • Melatih kanak-kanak memadan perkataan dengan objek • Perkembangan perbendaharaan kata	**KELEBIHAN** • Intervensi yang selamat dan efektif untuk autisme • Meningkatkan komunikasi, hubungan sosial, bermain, penjagaan kendiri. • Mempunyai rekod yang baik dalam memperbaiki simptom autisme. • Terapi secara *one-on-one basis* • Penilaian awal dilakukan untuk ketahui kemahiran sedia ada dan kemahiran yang perlu dibina.

Pendekatan	Kriteria	Kelebihan & Kekurangan
		KEKURANGAN • Memerlukan juruterapi tingkah laku yang bertauliah dan terlatih. • Kanak-kanak perlu terima intervensi selama 40 jam setiap minggu, yang menyusahkan dan sangat mahal (kira-kira USD\$36,000 setahun). • Melahirkan tindak balas seperti robot dan ekspresi diri yang palsu. • Intervensi berfokus kepada respon tingkah laku kanak-kanak dan bukan kepada proses kognitif. • Kurang perhatian terhadap perkembangan sosial dan emosi kanak-kanak • Komunikasi terhad. Kanak-kanak sebagai penerima maklumat untuk melabel istilah tertentu. Kanak-kanak tidak berpeluang belajar komunikasi dua hala seperti meminta kereta untuk bermain. Kanak-kanak tidak berpeluang belajar berbicara dengan rakan (Layton & Watson, 1995) • Tidak mengambil kira aspek bahasa seperti ucapan penghormatan, bantahan, permintaan, penafian dan pemberian komen • Mengenepikan masalah neurologi (Quill, 1995) • Pendekatan tingkah laku memberikan fokus kepada respon kanak-kanak berbanding daya usaha kanak-kanak (Wolfberg & Schuler, 1993).

Pendekatan	Kriteria	Kelebihan & Kekurangan
Discrete Trial Training (1960-an)	• Sebahagian daripada intervensi ABA. • *One-on-one basis* • Sangat sesuai untuk pengajaran yang melibatkan pengulangan, untuk pengajaran yang tidak memberikan motivasi intrinsik, dan untuk membina kebijaksanaan, peniruan, dan kemahiran menerima yang solid. • Kemahiran yang kompleks dipecahkan kepada sub kemahiran yang kecil kemudian diajar melalui beberapa kali pengajaran. • Langkah-langkah diajar secara berasingan dan teratur. • Ahli terapi mengawal sesi dalam prapemilihan bahan yang digunakan • Ahli terapi menyediakan *extensive modeling* untuk respon yang dikehendaki • Peneguhan sistematik digunakan apabila kanak-kanak mencapai target	**KELEBIHAN** • Kanak-kanak autisme menerima intervensi daripada juruterapi yang bertauliah. • Mempunyai protokol pelaksanaan yang teratur, ketat dan dikawal oleh juruterapi. **KEKURANGAN** • Hanya dilakukan oleh juruterapi yang bertauliah. • Menghasilkan pelajar yang hanya mampu mengulang semula tingkah laku. • Menghasilkan pelajar yang bijak, boleh meniru dan menerima hanya pada perkara-perkara telah dipelajari sahaja. • Tidak memberikan motivasi dalaman kepada pelajar. • Protokol pelaksanaan yang ketat menjadikannya sukar untuk dilaksanakan pada tempat dan kanak-kanak yang berbeza. • Pendekatan tingkah laku memberikan fokus kepada respon kanak-kanak berbanding daya usaha kanak-kanak (Wolfberg & Schuler, 1993).
Pivotal Response Training (PRT) (Koegel, Koegel & Shrubman)	• Fokus untuk meningkatkan motivasi • Boleh digunakan di pelbagai tempat (rumah, sekolah, komuniti) • Boleh dilaksanakan oleh individu yang berurusan atau tinggal dengan kanak-kanak autisme (ibu bapa, guru, saudara kandung dll) • Digunakan untuk mencapai sasaran dalam kemahiran bahasa, kemahiran bermain dan	**KELEBIHAN** • Ibu bapa yang diberikan latihan boleh memberikan intervensi kepada anak sendiri tanpa perlu masa yang lama dengan juruterapi. • Kemahiran yang diajar semasa persekitaran semula jadi selalunya lebih berkesan terutamanya untuk kanak-kanak autisme. **KEKURANGAN** • Hanya memberikan fokus kepada motivasi kanak-kanak

Pendekatan	Kriteria	Kelebihan & Kekurangan
	tingkah laku sosial kanak-kanak autisme (Stahmer et al., 2003) • Teknik yang paling natural • Mempunyai struktur yang mencukupi untuk membantu kanak-kanak belajar kemahiran bermain yang mudah hingga kompleks. • Berkesan dalam mengajar kanak-kanak kemahiran bermain simbolik dan sosiodramatik dengan individu dewasa (Stahmer, 1995)	tanpa kepada kemahiran yang lain. • Terdapat kemahiran yang sukar diajar kepada kanak-kanak autisme yang terlalu bergantung dan dalam keadaan peneguhan semula jadi seperti mengajar akademik tahap yang tinggi. • Cabaran kepada ibu bapa untuk belajar dan menerapkan strategi intervensi tingkah laku ke dalam interaksi ibu bapa dengan anak. • PRT melibatkan banyak penyertaan ibu bapa berbanding intervensi lain. Ia memberikan tuntutan tentang apa yang berkenaan dan tidak berkenaan dengan keibubapaan yang seterusnya menyukarkan untuk dilaksanakan. • Pendekatan tingkah laku memberikan fokus kepada respon kanak-kanak berbanding daya usaha kanak-kanak (Wolfberg & Schuler, 1993).
Reciprocal Imitation Training	• Variasi daripada PRT • Untuk mengajar kemahiran meniru spontan dalam situasi bermain. • Melibatkan peniruan (Stahmer et al., 2003) • Ahli terapi atau guru meniru aksi dan suara yang dihasilkan oleh kanak-kanak autisme • *Linguistic mapping*-juruterapi atau guru juga melabel aksi yang dilakukan.	**KELEBIHAN** • Intervensi secara semula jadi. **KEKURANGAN** • Kanak-kanak autisme terlalu bergantung pada peniruan daripada perhatian bersama (*joint attention*) berbanding kanak-kanak normal (Ingersoll & Lalonde, 2010). • Pendekatan tingkah laku memberikan fokus kepada respon kanak-kanak berbanding daya usaha kanak-kanak (Wolfberg & Schuler, 1993).

2. Intervensi Bermain untuk Perkembangan

Manakala bagi intervensi bermain untuk perkembangan pula adalah pendekatan yang memudahcara kanak-kanak untuk berinteraksi. Intervensi bermain untuk perkembangan menggabungkan pengalaman, interaksi suka bermain dan berseronok dengan meningkatkan perkongsian perhatian (*shared attention*), bermain olok-olok (*pretend play*), initiatif dan respon, dan komunikasi (Bernard-Opitz, Ing & Kong, 2004).

Antara intervensi untuk perkembangan adalah *Developmental, Individual-Differences, Relationship-Based Model (DIR), Integrated Play Group Model, Miller Method* dan *Interactive Play Model*. Mengapakah pendekatan ini digelar intervensi bermain untuk perkembangan?. Ini adalah kerana intervensi ini membimbing kanak-kanak-kanak cara untuk bermain di samping menyumbang ke arah perkembangan seperti kognitif, sosial dan emosi.

DIR telah dibina oleh Dr. Stantley Greenspan dan rakan-rakan beliau. *DIR* juga dikenali sebagai intervensi *Floortime*. Intervensi ini dikatakan boleh menyumbang kepada perkembangan sosial, emosi dan intelektual kanak-kanak autisme. Asas dalam intervensi ini ialah individu autisme belajar untuk berkomunikasi apabila mereka terlibat pada tahap mereka sendiri, dan dengan perkara-perkara yang menarik minat mereka. Interaksi yang dibina semasa bermain merangsang perkembangan sensori melalui apa yang dilihat dan didengari, kemahiran motor melalui aktiviti fizikal, perkembangan emosi dan kognitif seperti membimbing kanak-kanak mengetahui perasaan orang lain, dan berkomunikasi. Juruterapi akan cuba untuk membina hubungan dengan kanak-kanak autisme melalui respon yang diberikan sama ada secara verbal atau bukan verbal. Namun, hubungan yang digelar sebagai kitaran komunikasi ini boleh terbuka dan tertutup bergantung kepada kanak-kanak tersebut.

Pendekatan perkembangan yang kedua adalah *Integrated Play Groups Model (IPG)* yang dibina oleh Wolfberg dan Schuler (1993). *IPG* adalah model bermain yang membantu kanak-kanak autisme untuk bermain dengan kanak-kanak lain dan adik beradik dalam situasi sosial yang biasa. Ia juga berfungsi untuk membantu perkembangan sosial, komunikasi, bermain dan imaginasi dalam kalangan kanak-kanak autisme melalui perhubungan yang dibina secara semula jadi. Pelaksanaan model ini telah diperluaskan melalui drama, seni, video, pergerakan dan aktiviti kreatif yang lain. Disalvo dan Oswald (2002); Iovannone (2003); Darling-Hammond et al. (2005); *American Speech-Language-Hearing Association* (2006); dan *National Autism Center* (2009) telah mengangkat model ini sebagai salah satu model yang hebat. Pada awalnya model *IPG* dibina untuk kanak-kanak berusia antara tiga hingga sebelas tahun digunakan dengan meluas di sekolah-sekolah dan program komuniti di luar negara. Namun sekarang model ini telah diadaptasi kepada populasi yang lebih berumur dengan menerapkan aktiviti kreatif dan boleh dimain secara semula jadi.

Manakala Intervensi *Miller* pula merupakan pendekatan bermain untuk perkembangan kognitif kanak-kanak autisme. *Miller Method* dibina berdasarkan teori perkembangan kognitif oleh Piaget (1948, 1954, 1962), Von Bertallanfy (1968), Vygotsky (1962), Werner (1948), dan Werner dan Kaplan (1963) (Miller & Miller, 1999). Pendekatan ini dikatakan bersifat kognitif kerana ia berkaitan dengan cara bagaimana kanak-kanak mengatur tingkah laku mereka, membina konsep masa dan ruang, menyelesai masalah, dan membina hubungan dengan orang lain. *Miller Method* bermatlamat untuk (i) menilai keupayaan kanak-kanak

untuk berinteraksi dengan orang lain dan objek, adaptasi untuk berubah, dan belajar daripada pengalaman, (ii) membina kesedaran dirinya terhadap objek dan orang lain, (iii) membimbing kanak-kanak untuk meluaskan jaringan interaksi yang tertutup (berseorangan dan lingkungan ibu bapa) kepada pertukaran sosial dan komunikasi, dan (iv) menyediakan peralihan yang diperlukan daripada konkrit kepada simbolik abstrak seperti membaca, menulis, konsep nombor, permainan simbolik dan aktiviti dalam kelas. Pendekatan ini memberikan sedikit struktur dengan berpusatkan kanak-kanak untuk bermain. Greenspan dan Wieder (2000) merujuk pendekatan ini sebagai semi-struktur apabila ia berpandukan kepada inisiatif kanak-kanak dan intervensi yang diberikan oleh guru atau juruterapi. Menurut Miller dan Miller (1989), jika kanak-kanak autisme bermain dengan individu lain ia mestilah distruktur secara berhati-hati sebelum mereka boleh belajar untuk memulakan aktiviti dengan sendiri. Intervensi ini menjurus kepada orientasi tindakan. Ia menyatakan bahawa kanak-kanak akan belajar dengan lebih baik apabila mereka bergerak dan melakukan sentuhan secara fizikal dengan benda dan orang lain.

Akhir sekali adalah *Interactive Play for Children with Autism* yang dibina oleh Diana Seach (2007). Intervensi ini berorientasikan orang dewasa dan kanak-kanak dalam pengalaman bermain bersama. Ia berlandaskan prinsip (i) meluahkan kepada kanak-kanak autisme keinginan untuk bermain bersama, (ii) mempamerkan keseronokan dan kegembiraan bermain bersama, (iii) memberi peluang untuk reaksi spontan terhadap stimulus, (iv) menggalakkan tindak balas yang berbeza terhadap stimulus, (v) menyelaras tingkah laku kanak-kanak autisme, dan (vi) membenarkan kawalan kanak-kanak dalam interaksi (Seach, 2007). Ia dikatakan dapat membantu dalam perkembangan komunikasi, sosial dan kognitif kanak-kanak autisme. Selain daripada itu, model ini dianggap sebagai bersifat natural, berorienstasikan kanak-kanak, berasaskan perkembangan, berasakan perhubungan dan memberikan fokus terhadap interaksi sosial, komunikasi, dan bermain. Intervensi ini telah dibina dan diuji sejak bertahun-tahun dengan pembinaan yang baik (Wolfberg, 2009). Model ini dibina berlandaskan teori Feuerstein dan Laevers. Menurut Seach (2007), asas kepada perkembangan sosial, emosi dan kognitif dalam *Interactive Play Model* ini adalah emosi, kesedaran kendiri, motivasi, perkongsian bahasa, empati, tingkah laku, kelenturan, dan kesedaran terhadap orang lain. Seach percaya bahawa kognitif merupakan perhubungan antara sensori, interaksi, dan kepekaan emosi dan ia bertindak sebagai kunci kepada perkembangan konsep dan cara berfikir (Hobson, 2002).

Jadual 2 menunjukkan perbandingan pendekatan intervensi-intervensi bermain untuk perkembangan kanak-kanak autisme.

Jadual 2. Perbandingan Pendekatan Intervensi Bermain untuk Perkembangan

Pendekatan	Kriteria	Kelebihan & Kekurangan
The Development, Individual-Difference, Relationship-Based Model	• Komunikasi kanak-kanak boleh ditingkatkan dengan membina kekuatannya semasa bermain bersama-sama atas lantai.	**KELEBIHAN** • Ibu bapa boleh memberikan intervensi sendiri dengan mempelajarinya daripada - buku berkaitan seperti "*The*

Pendekatan	Kriteria	Kelebihan & Kekurangan
(DIR) *(Wieder & Greenspan, 2003)*	• Untuk melihat perkembangan kanak-kanak dalam konteks biologi, hubungan kekeluargaan dan corak interaksi. • Mengambil kira profil individu dan profil sensori kanak-kanak • D = keupayaan perkembangan yang wujud sejak awal usia termasuk perkongisan perhatian dan penglibatan, interaksi dua hala, penyelesaian masalah, penciptaan idea bermain, dan pemikiran abstrak. • I = Perbezaan individu dalam proses motor sensori dan regulasi yang perlu diberi perhatian (auditori atau visual spatial) • R= Perhubungan dan persekitaran penting untuk menyediakan interaksi yang mana perkembangan emosi, sosial dan kognitif boleh dipupuk, dipraktikkan dan ditingkatkan (Wieder & Greenspan, 2003).	*Child with Special Needs*" atau "*Engaging Autism*" dan sumber video. **KEKURANGAN** • Kesukaran mendapatkan juruterapi dan kos yang mahal. • Terapi memerlukan masa yang berjam-jam dalam sehari dan ia sukar kepada ibu bapa yang bekerja. • Mencabar untuk ibu bapa yang lakukan intervensi sendiri kerana memerlukan kesabaran, imaginasi, dan stamina. • Arahan intervensi yang khusus dan perbezaan dalam kanak-kanak autisme menjadikan ibu bapa sukar untuk mengetahui sama ada intervensi yang dilakukan itu betul atau salah.
Integrated Play Groups Model (Wolfberg & Schuler, 1993)	• Untuk perkembangan sosial, komunikasi, bermain dan imaginasi. • *IPG* memberikan garis panduan pembinaan persekitaran bermain, pemilihan bahan, pemilihan rakan bermain, pengukuran kemajuan dan bimbingan bermain. • Kanak-kanak autisme dan	**KELEBIHAN** • Kanak-kanak dibimbing oleh juruterapi yang bertauliah dan berlesen. • Dikatakan dapat membantu perkembangan sosial, komunikasi dan kognitif. • Mendedahkan kanak-kanak autisme bermain dengan ramai rakan. • Intervensi disesuaikan dengan

Pendekatan	Kriteria	Kelebihan & Kekurangan
	rakan permainan dibimbing oleh fasilitator bertauliah yang diberikan lesen *Master Guide Apprenticeship.* • Sesi intervensi disesuaikan dengan minat, keupayaan dan keperluan kanak-kanak autisme dalam situasi bermain yang direka khas. • Intervensi berdasarkan teori Vygotsky dan Rogoff. • Terdiri daripada 3-5 kanak-kanak (nisbah normal lebih tinggi daripada kanak-kanak autisme)	minat kanak-kanak autisme. **KEKURANGAN** • Intervensi hanya dapat dilakukan oleh juruterapi bertauliah dan berlesen sahaja. • Perhatian mesti diberikan untuk mematuhi garis panduan *IPG* yang telah ditetapkan.
The Miller Method	• Intervensi bersifat kognitif • Dikendalikan oleh staf yang disahkan oleh juruterapi *Miller Method.* • Sesi intervensi selama satu jam, dua kali seminggu bergantung kepada tahap kanak-kanak autisme.	**KELEBIHAN** • Dikendalikan oleh staf bertauliah (*Millers*) • Ibu bapa boleh menyertai program yang ditawarkan oleh *The Miller*. • Intervensi hanya satu jam, dua kali seminggu. **KEKURANGAN** • Kos intervensi yang mahal. • Kos program latihan intervensi yang mahal jika ibu bapa ingin memberikan intervensi sendiri di rumah.
Interactive Play Model *(Seach, 2007)*	• Mengembangkan aspek komunikasi, sosial dan kognitif kanak-kanak autisme. • Matlamat utama adalah untuk mencipta pengalaman mengembirakan yang dapat meningkatkan interaksi spontan dan kelenturan dalam pemikiran dan	**KELEBIHAN** • Merekod pencapaian kemahiran yang diperolehi dalam pembelajaran merentasi domain sosial, komunikasi dan kognitif dalam profil yang disediakan. • Guru atau ibu bapa boleh diberikan latihan tentang prinsip dan amalan

Pendekatan	Kriteria	Kelebihan & Kekurangan
	tingkah laku kanak-kanak autisme. • Lebih berperanan dalam perkembangan komunikasi dua hala dan hubungan sosio-efektif berbanding peningkatan dalam kemahiran bermain.	*Interactive Play* tanpa perlu juruterapi yang bertauliah untuk lakukan intervensi. • Tidak mengenakan kos juruterapi yang mahal seperti intervensi yang lain. **KEKURANGAN** • Hanya melibatkan intervensi *one-to-one* antara kanak-kanak dengan orang lain.

3. Perbezaan Intervensi Bermain Tingkah Laku dan Intervensi Bermain Perkembangan untuk Kanak-kanak Autisme.

Terdapat kunci perbezaan antara pendekatan bermain tingkah laku dan pendekatan bermain perkembangan untuk kanak-kanak autisme. Intervensi tingkah laku adalah lebih berstruktur, berorientasikan tugasan, memerlukan arahan orang dewasa, memberikan kelenturan yang sedikit berkaitan pilihan bermain kanak-kanak, dan banyak memberikan latihan secara '*discrete*' atau berasingan. Manakala pendekatan perkembangan pula adalah lebih memberikan pilihan kepada kanak-kanak, terarah oleh kanak-kanak, menggunakan prinsip pengajaran bersampingan dan dilaksana berdasarkan profil kanak-kanak autisme yang unik.

Kajian yang telah dijalankan oleh Kok et al. (2002) untuk membandingkan kesan intervensi bermain secara berstruktur dan melalui pemudahcaraan dalam kalangan kanak-kanak autisme prasekolah mendapati bahawa kanak-kanak autisme dengan aras mental yang lebih tinggi mempamerkan kesesuaian dengan pendekatan pemudahcaraan. Ia bermaksud, kanak-kanak autisme yang mempunyai kematangan mental yang lebih tinggi adalah lebih sesuai diberikan intervensi perkembangan. Ini kerana ramai kanak-kanak autisme mempamerkan daya inisiatif berkomunikasi dalam intervensi perkembangan, berbanding banyak respon komunikasi dalam intervensi tingkah laku. Justeru yang manakah lebih dititik beratkan, kekerapan kanak-kanak autisme menghasilkan respon komunikasi ataupun keupayaan mereka dalam daya inisiatif bermain dengan rakan? Penekanan adalah seharusnya diberikan kepada daya inisiatif mereka untuk bermain dengan rakan. Bagaimana kanak-kanak autisme bermain adalah persoalan yang lebih penting berbanding apa yang dihasilkan oleh mereka pada akhir permainan.

Salah satu cabaran terbesar dalam memberikan intervensi kepada kanak-kanak autisme adalah pemilihan pendekatan yang manakah lebih sesuai? Oleh kerana pembelajaran berlaku di usia kecil, ramai ibu bapa dan ahli professional merasakan keperluan untuk menggunakan satu pendekatan bermain sahaja untuk jangka masa yang panjang sebelum dapat melihat hasilnya. Namun mereka telah meminggirkan pendekatan-pendekatan bermain yang lain. Walau bagaimanapun atas faktor perbezaan individu, sesetengah kanak-kanak autisme tidak

bertindak balas terhadap pendekatan yang tertentu. Tambahan pula, pelbagai pendekatan bermain menghasilkan keputusan yang berbeza antara kanak-kanak autisme kerana variabiliti antara kanak-kanak autisme dan fokus kemahiran yang ingin dilihat. Kerana kanak-kanak autisme berbeza dari segi keupayaan kognitif dan sosial, adalah perlu untuk mengetahui karakter kanak-kanak autisme yang manakah bersesuaian dengan pendekatan bermain yang tertentu (Mastrangelo, 2009).

E. PENUTUP

Kepentingan bermain dalam perkembangan domain kognitif, sosial, emosi, komunikasi, bahasa, dan motor sensori telah diketahui umum. Walau bagaimanapun bagi kanak-kanak autisme, mereka terikat dengan program pendidikan yang selalunya terdiri daripada intervensi terapi dan perubatan yang ketat untuk mengurangi kelemahan mereka. Menurut Quill (1995), bermain digunakan sebagai ganjaran selepas kanak-kanak telah melakukan pelbagai program. Justeru, bermain sering dipinggirkan daripada pengaturcaraan untuk kanak-kanak autisme. Apabila bermain dihadkan oleh faktor individu dan persekitaran, keupayaan untuk belajar dan berkembang semasa bermain juga turut terhad (Anderson, Hinojosa & Strauch, 1987).

Penjelasan Teori Minda oleh Baron-Cohen (1987) adalah menyakinkan apabila terdapat jurang bermain dalam kalangan kanak-kanak autisme. Ini kerana cabaran dari aspek sosial yang dialami oleh individu autisme. Tambahan pula kelemahan mereka dalam tindakan spontan semasa aktiviti permainan olok-olok mempamerkan kegagalan mereka untuk berimaginasi.

Pendekatan bermain tingkah laku dipengaruhi oleh model perubatan yang menyarankan bahawa kanak-kanak autisme mempunyai kelemahan dalam kemahiran tertentu yang perlu diajar secara eksplisit oleh orang dewasa. Manakala pendekatan bermain untuk perkembangan pula adalah lebih kepada kekuatan kanak-kanak dan bidang yang diminati dan dimanfaatkan melalui pengalaman bermain. Justeru terpulang kepada pilihan ibu bapa atau ahli professional, bergantung kepada objektif yang ingin dicapai.

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DIMENSI GAYA PEMBELAJARAN DALAM KALANGAN PELAJAR KURANG UPAYA TUMPUAN DAN HIPERAKTIF DI MALAYSIA

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Abstrak

Gaya Pembelajaran memainkan peranan penting yang menerangkan tentang cara seseorang pelajar itu menguasai apa yang dipelajari di sekolah. Kajian adalah meninjau dimensi gaya pembelajaran pelajar ADHD Program Integrasi Bermasalah Pembelajaran di Malaysia. Dapatan kajian ini diyakini dapat memberi informasi tentang gaya pembelajaran pelajar ADHD supaya para guru dapat membuat persediaan untuk aktiviti pengajaran dan pembelajaran dengan keadaan yang lebih bersesuaian dengan keperluan pelajar ADHD. Ini akan dapat membantu guru Pendidikan Khas mempersiapkan diri bagi menghadapi pelajar ADHD dan dapat merancang strategi pengajaran yang lebih berkesan agar dapat disesuaikan dengan gaya pembelajaran pelajar. Berdasarkan dapatan kajian tinjauan menunjukkan bahawa gaya pembelajaran pelajar ADHD adalah cenderung kepada elemen rekabentuk, elemen motivasi, elemen belajar secara berpasangan, elemen makan minum, elemen kinestetik dan elemen impulsif. Dapatan kajian ini keseluruhannya menunjukkan bahawa unsur emosional dalam gaya pembelajaran adalah lebih mendominasi pelajar ADHD di Program Integrasi Bermasalah Pembelajaran diikuti unsur perseptual, unsur psikologi dan unsur persekitaran. Manakala, dapatan temubual ke atas guru Pendidikan Khas menunjukkan pelajar ADHD lebih cenderung kepada elemen suhu sama ada panas atau sejuk yang keterlaluan dan elemen bunyi bising adalah elemen gaya pembelajaran yang tidak digemari oleh pelajar ADHD. Di samping itu, dapatan temu bual juga menunjukkan sebilangan pelajar ADHD menjadi lebih agresif apabila aktiviti pembelajaran melibatkan visual berwarna-warni. Dapatan temu bual juga menunjukkan pelajar ADHD gemar belajar secara berpasangan berbanding belajar secara berkumpulan. Di samping itu, analisis temu bual menunjukkan bahawa pelajar ADHD berupaya belajar dengan lebih baik pada waktu pagi dan tumpuan pelajar terganggu apabila belajar pada waktu tengah hari. Secara keseluruhannya, dapatan kajian menunjukkan gaya pembelajaran pelajar ADHD adalah bersifat multielemen.

Kata kunci: persekitaran, emosional, sosiologi, fisiologi, perseptual, psikologi, gaya pembelajaran, ADHD, Pendidikan Khas

A. PENDAHULUAN

Pendidikan Khas di Malaysia adalah perkhidmatan pendidikan yang dirangka dan dilaksanakan kepada pelajar berkeperluan khas. Selaras dengan itu, Kementerian Pendidikan Malaysia telah menggariskan Falsafah Pendidikan Khas iaitu pendidikan sebagai satu usaha yang berterusan untuk melahirkan insan yang berkemahiran, berhaluan, berupaya merancang dan menguruskan kehidupan serta menyedari potensi diri sendiri sebagai seorang individu dan ahli masyarakat yang seimbang dan produktif (Kementerian Pendidikan Malaysia, 1997). Ini menjelaskan bahawa matlamat pendidikan khas adalah untuk menyediakan perkembangan yang optimum kepada pelajar berkeperluan khas yang merangkumi pelajar bermasalah pembelajaran agar mereka dapat menjalani kehidupan sebagai individu yang berkemahiran, berdikari, berhaluan, boleh merancang, mengurus kehidupan harian, dan boleh menyesuaikan diri dengan masyarakat.

Bagi merealisasikan matlamat tersebut, Kementerian Pendidikan Malaysia telah membentuk program pendidikan khas yang terbahagi kepada sekolah khas, program integrasi dan program pendidikan inklusif. Program integrasi dilaksanakan dengan menempatkan pelajar bermasalah pembelajaran belajar dalam sekolah harian. Pelajar bermasalah pembelajaran adalah pelajar yang mempunyai ketidakupayaan pembelajaran yang khas merujuk kepada satu atau lebih gangguan atau kecelaruan dalam aspek psikologikal asas yang melibatkan pemahaman atau penggunaan bahasa, sama ada lisan ataupun tulisan (*The Individuals with Disabilities Education Act* (IDEA) atau *Public Law 101-476* dalam Yesseldyke, Algozzine & Thurlow, 2000). Gangguan atau kecelaruan tersebut dapat dikesan melalui tahap pencapaian kemahiran mendengar, berfikir, bertutur, membaca, menulis, mengeja dan mengira pada kalangan pelajar bermasalah pembelajaran antaranya adalah pelajar kurang upaya tumpuan dan hiperaktif (ADHD).

ADHD adalah kurang upaya neurobiologikal yang kompleks dipercayai akibat kepincangan fungsi neurotransmiter (Litner, 2003). Persatuan Psikiatri Amerika Syarikat (APA), menerangkan bahawa individu yang mengalami ADHD sebagai golongan yang menunjukkan tanda-tanda kurang tumpuan, impulsif dan hiperaktif kekal dan berterusan dalam tempoh tertentu (Mash & Wolfe, 2002). Selain itu, pelajar ADHD dikaitkan dengan pelbagai kurang upaya merangkumi kognitif, psikiatri, pendidikan, emosi dan sosial (Grönlund, Renck dan Weibull, 2006). Manakala, Mohd Zuri Ghani dan Aznan Che Ahmad (2011) menjelaskan bahawa ADHD merupakan salah satu daripada ketidakupayaan dalam pembelajaran. Gejala ADHD telah memberi kesan ke atas tiga hingga tujuh peratus daripada populasi penduduk (Turkington & Harris, 2003). Menurut Kauffman dan Landrum (2009) pula, tiga hingga lima peratus daripada populasi pelajar sekolah adalah terdiri daripada pelajar ADHD.

Masalah utama pelajar ADHD adalah kesukaran dalam mengekalkan perhatian, tingkahlaku yang hiperaktif dan impulsif. Tingkah laku ini menjejaskan pembelajaran akademik dan hubungan sosial pelajar tersebut (Haliza Hamzah & Joy Nesamalar Samuel, 2009). Secara tidak langsung, permasalahan ini turut menjadi gangguan kepada pelajar lain dan proses pengajaran guru di kelas. Berikutan ketidakupayaan tersebut yang menjadi halangan kepada pencapaian objektif pengajaran dan pembelajaran, Jamila K. A. Ahmad

(2006), menegaskan bahawa pelajar-pelajar ini memerlukan kurikulum yang khusus dan kaedah pengajaran yang sesuai dengan ketidakupayaan mereka. Permasalahan ini pastinya dapat diatasi dengan cara mengenalpasti dan memberi penekanan kepada gaya pembelajaran pelajar-pelajar tersebut.

Gaya pembelajaran dihuraikan sebagai cara seseorang menggarap idea dan situasi harian, kecenderungan dan keutamaan pembelajaran seseorang, cara seseorang berfikir dan menerima serta memproses maklumat (Reif, 2007). Menurut Dunn dan Dunn (1993), gaya pembelajaran adalah set biologikal dan perkembangan ciri-ciri individu bagi mengenal pasti pengajaran yang berkesan atau tidak berkesan kepada kebanyakan pelajar. Gaya pembelajaran terbentuk kerana proses pembelajaran adalah proses yang kompleks (Mohd Sharani Ahmad, 2004). Seterusnya, Henley (1999) menjelaskan bahawa penyelidikan tentang gaya pembelajaran membantu kita untuk memahami kerumitan pembelajaran dan menghargai keperluan pelajar seterusnya menjadikan guru-guru lebih fleksibel apabila membuat keputusan atau menentukan bagaimana untuk mengajar pelajar-pelajar mengikut keperluan individu. Dengan kata lain, bagi mencapai pembelajaran yang optimum iaitu pemerolehan maklumat baru, memproses maklumat dan seterusnya memberi kesan kepada perubahan tingkah laku adalah signifikan dengan cara atau gaya pembelajaran seseorang itu. Ini menjelaskan bahawa sama ada sesuatu proses pengajaran berkesan dan bermanfaat atau sebaliknya adalah bergantung kepada cara atau gaya pembelajaran pelajar.

Justeru itu, gaya pembelajaran menjadi antara entiti penting kepada proses pengajaran dan pembelajaran. Di mana, proses pengajaran dan pembelajaran yang berlaku di dalam kelas merupakan penentu utama kejayaan masa depan negara (Kementerian Pendidikan Malaysia, 2012). Dalam konteks ini, pengajaran dan pembelajaran perlu dirancang dan dilaksanakan dengan jayanya dan berkesan. Bagi mencapai pembelajaran dan pengajaran yang berjaya dan berkesan adalah melibatkan penekanan kepada gaya pembelajaran seseorang pelajar. Ini adalah kerana gaya pembelajaran adalah pengaruh situasi akademik terhadap keberkesanan pembelajaran (Lerner, 2003).

B. KAJIAN PUSTAKA

1. Kepentingan Gaya Pembelajaran

Gaya pembelajaran seseorang pelajar dapat dikenali dengan memerhati perlakuannya yang nyata (Abdul Razak Mohamed & Abdullah Mohd Nor, 2000). Gaya pembelajaran adalah cara bagaimana seseorang mendapatkan dan mengekalkan maklumat atau kemahiran tanpa mempertikaikan bagaimana proses itu diterangkan dan amat berbeza bagi setiap individu (Dunn, 2009). Dalam konteks memahami sifat pelajar, gaya pembelajaran menjadi indikator penting bagaimana seseorang pelajar belajar dan cara memperoleh ilmu dan kemahiran atau gaya belajar yang digemarinya. Gaya pembelajaran juga dianggap sebagai strategi pengajaran kerana pemahaman tentang gaya pembelajaran seseorang pelajar memberikan maklumat tentang perancangan konteks dan kandungan pembelajaran.

Setiap pelajar sebenarnya mempunyai cara yang berbeza dalam memproses dan menyimpan maklumat. Perbezaan yang dimiliki oleh seseorang individu bererti kecenderungan dalam menerima dan memproses maklumat juga adalah berbeza (Noraini Idris

& Shuki Osman, 2009). Hakikat bahawa wujudnya perbezaan dalam gaya pembelajaran menyebabkan aspek gaya pembelajaran perlu ditekankan ketika pengajaran dirancang, direkabentuk dan diimplemen kepada pelajar ADHD. Hakikatnya, pengajaran yang berjaya memerlukan suasana pembelajaran yang produktif dan efektif (Hvozdiková, 2011). Oleh sebab itu, apabila guru mengetahui dan memahami tentang perbezaan cara seseorang pelajar ADHD belajar atau memproses maklumat akan membantu guru merangka strategi pengajaran yang bersesuaian dengan keupayaan dan keperluan pelajar ADHD.

Kebanyakan definisi ADHD menjelaskan bahawa perkembangan kurang upaya tumpuan dan hiperaktif adalah bermula pada peringkat awal kelahiran iaitu sebelum mencapai umur tujuh atau lapan tahun dan kurang upaya ini berterusan melibatkan kemahiran akademik dan sosial yang sering kali diiringi dengan kurang upaya lain (Kauffman & Landrum, 2009). Menurut Brand, Dunn dan Grab (2002), pelajar ADHD mempunyai pengalaman yang sukar dalam pembelajaran di sekolah kerana mempunyai permasalahan dari segi daya tumpuan dan kawalan impuls yang diperlukan bagi memastikan kejayaan pembelajaran mereka. Gejala ini menyukarkan pelajar ADHD memberi perhatian dan mengekalkan tumpuan kepada aktiviti pengajaran dan pembelajaran serta melengkapkan sesuatu gerak kerja yang perlu diselesaikan. Seterusnya, menurut Hvozdiková (2011), terdapat banyak faktor yang mempengaruhi gerak kerja dan proses pengajaran kepada pelajar ADHD. Bagi menangani ciri-ciri ketidakupayaan tersebut dan memenuhi keperluan mereka secara individu, Peraturan-peraturan Pendidikan (Pendidikan Khas), 1997 mengesyorkan "*guru-guru boleh menggubahsuai kaedah atau teknik pengajaran atau pembelajaran, masa bagi aktiviti dan susunan aktiviti matapelajaran dan bahan bantu mengajar bagi mencapai tujuan dan mata pelajaran pendidikan khas*" (Kementerian Pendidikan Malaysia, 1997).

Sementara itu, Bowring-Carr dan West-Burnham (1999), juga menegaskan bahawa jika strategi guru tidak sehaluan dengan gaya pelajar belajar, akan berlaku ketidakseragaman yang mengakibatkan kurangnya kesefahaman. Kesannya pelajar-pelajar tidak dapat menggunakan potensi diri mereka dengan lebih efektif dan optimum bagi mewujudkan suasana pembelajaran yang lebih bermakna. Justeru itu, pemahaman dan pengetahuan tentang gaya pembelajaran seseorang pelajar akan memberi kelebihan kepada guru mengubahsuai kaedah atau teknik, masa bagi aktiviti serta susunan aktiviti dan bahan bantu mengajar untuk mengajar pelajar mereka berlandaskan gaya pembelajaran pelajar-pelajar tersebut. Maklumat ini pastinya dapat memberi landasan kepada guru untuk menangani pelajar ADHD yang sudah dikenalpasti mempunyai ciri-ciri yang mengganggu rutin pembelajaran di kelas. Oleh yang demikian, walaupun gaya pembelajaran digarap berbeza dalam kalangan pelajar di dalam kelas, guru-guru patut berusaha untuk membuat perubahan dalam kelas mereka yang akan memberi faedah kepada setiap gaya pembelajaran pelajar.

Sementara itu, Shahabuddin Hashim dan Rohizani Yaakub (2003) menegaskan bahawa guru-guru perlu menyediakan suasana pembelajaran yang selari dengan kehendak sesuatu gaya pembelajaran pelajar. Impak daripada kepekaan guru kepada gaya pembelajaran pelajar akan berupaya membuka ruang kepada para guru membantu pelajar-pelajarnya mengatasi kelemahan dan masalah pembelajaran mereka. Oleh yang demikian, mengenal pasti dan memahami gaya belajar yang dominan dalam kalangan pelajar ADHD diyakini

dapat mempertingkatkan lagi kualiti pengajaran dan pembelajaran. Bagi mencapai matlamat ini, fokus penyelidikan adalah untuk melihat aspek gaya pembelajaran yang mana juga merupakan satu daripada aspek-aspek penting ciri perbezaan individu dari segi keupayaan, kemampuan, minat, cara menerima dan memberikan tindak balas terhadap sesuatu rangsangan. Ini menunjukkan kajian yang menyelidiki gaya pembelajaran dan kaitannya dengan proses pengajaran dan pembelajaran perlu dijalankan jika ingin mendapatkan maklumat yang lebih jelas tentang gaya pembelajaran pelajar ADHD terutamanya dalam konteks memenuhi keperluan pendidikan pelajar ADHD secara lebih holistik.

2. Objektif Kajian

Objektif kajian ini dijalankan adalah untuk mengenal pasti gaya pembelajaran pelajar ADHD di Program Integrasi Bermasalah Pembelajaran. Secara khususnya, kajian ini bertujuan:

a. Untuk mengenal pasti apakah gaya pembelajaran pelajar ADHD di Program Integrasi Bermasalah Pembelajaran.

b. Untuk mengenal pasti apakah pandangan guru tentang gaya pembelajaran yang dominan dalam kalangan pelajar ADHD di Program Integrasi Bermasalah Pembelajaran.

3. Persoalan Kajian

Gaya pembelajaran merupakan salah satu indikator penting yang masih relevan bagi memahami bagaimana pelajar ADHD menguasai ilmu dan kemahiran baru. Merujuk kepentingan gaya pembelajaran kepada perkembangan kognitif pelajar ADHD di Program Integrasi Bermasalah Pembelajaran, maka kajian ini dilaksanakan bertujuan menjawab persoalan-persoalan berikut berdasarkan objektif kajian seperti yang ditetapkan penyelidik:

a. Apakah gaya pembelajaran dalam kalangan pelajar ADHD di Program Integrasi Bermasalah Pembelajaran?

b. Apakah pandangan guru tentang gaya pembelajaran kalangan pelajar ADHD di Program Integrasi Bermasalah Pembelajaran?

C. REKABENTUK KAJIAN

Reka bentuk kajian ini adalah kajian kuantitatif iaitu kaedah tinjauan dan kajian kualitatif iaitu melibatkan kaedah temu bual. Kajian tinjauan adalah bertujuan mengenal pasti gaya pembelajaran dalam kalangan pelajar ADHD di Program Integrasi Bermasalah Pembelajaran. Kajian tinjauan menggunakan instrumen soal selidik yang diadaptasi dan diubahsuai berlandaskan item-item daripada elemen Gaya Pembelajaran oleh Dunn dan Dunn (1978) serta merujuk soal selidik yang digunakan oleh Nor Azlan (1997) dan Kutay (2006). Soal selidik tersebut telah ditadbir ke atas 230 pelajar ADHD di Program Integrasi Bermasalah Pembelajaran di sekolah menengah. Seterusnya, kaedah temu bual berstruktur dilaksanakan bagi meninjau pandangan guru berdasarkan pengalaman dan pemerhatian semasa mereka ketika mengajar pelajar ADHD tentang gaya pembelajaran pelajar tersebut. Temu bual berstruktur telah ditadbir ke atas tiga orang guru Pendidikan Khas yang terlibat

sepenuhnya mengajar pelajar ADHD di Program Integrasi Bermasalah Pembelajaran di sekolah menengah.

D. DAPATAN KAJIAN DAN PERBINCANGAN
1. Dapatan Kajian Tinjauan

Dapatan kajian ini jelas menunjukkan bahawa wujud multielemen dalam dominasi gaya pembelajaran dalam kalangan pelajar ADHD. Dapatan ini bertepatan dengan penegasan Dunn (1983) bahawa daripada lebih 200,000 yang diuji tidak ada seorangpun yang menunjukkan mereka dipengaruhi kurang daripada enam elemen gaya pembelajaran Keutamaan elemen gaya pembelajaran bagi pelajar ADHD tidak mendominasi secara tunggal sebaliknya, dapatan kajian membuktikan wujud saling bergantungan secara konsisten antara elemen gaya pembelajaran dalam kalangan pelajar ADHD.

Analisis statistik deskriptif dilaksanakan untuk menjawab persoalan pertama iaitu apakah gaya pembelajaran yang dominan mengikut persepsi guru dalam kalangan pelajar ADHD di Program Integrasi Bermasalah Pembelajaran. Gaya pembelajaran pelajar ADHD telah dianalisis dengan menggunakan nilai skor min mengikut unsur persekitaran, unsur emosional, unsur sosiologi, unsur fisiologi, unsur perseptual dan unsur psikologi.

2. Unsur Persekitaran

Banyak elemen boleh menjejaskan persekitaran, dan persekitaran secara langsung direka bentuk untuk membuatkan orang berasa gembira dan mendapat tenaga atau sebaliknya (Samani, 2011). Dalam konteks gaya pembelajaran, unsur persekitaran mengandungi empat elemen iaitu suhu, cahaya, bunyi dan reka bentuk. Dapatan kajian menunjukkan skor min tertinggi bagi unsur persekitaran ditunjukkan oleh elemen rekabentuk iaitu 3.2141 (sp = .7278) dan skor min terendah dicatatkan oleh elemen bunyi iaitu 2.4713 (sp = .7723). Dapatan ini menunjukkan elemen reka bentuk dalam unsur persekitaran bagi gaya pembelajaran lebih digemari oleh pelajar ADHD berbanding elemen cahaya, elemen suhu dan elemen bunyi. Dapatan ini menegaskan lagi dapatan kajian oleh Pilcher et. al (2002) yang menunjukkan pendedahan dalam suasana suhu terlampau sama ada sejuk atau panas akan memberi pengaruh yang tidak baik ke atas pencapaian dalam pelbagai tugasan berbeza. Di samping itu, dapatan kajian ini juga menunjukkan pelajar ADHD tidak menggemari rangsangan elemen bunyi dengan mencatatkan skor min terendah.

3. Unsur Emosional

Unsur emosional mempunyai empat elemen iaitu motivasi, ketekalan, tanggungjawab dan struktur. Skor min bagi unsur emosional bagi gaya pembelajaran pelajar ADHD di Program Integrasi Bermasalah Pembelajaran. Dapatan kajian menunjukkan skor min tertinggi dicatatkan oleh elemen motivasi iaitu 4.0215 (sp = .7225) dan skor min terendah ditunjukkan oleh elemen tanggungjawab iaitu 2.8723 (sp = .6564) bagi unsur emosional. Dapatan ini menunjukkan elemen motivasi dalam unsur emosional bagi gaya pembelajaran lebih digemari oleh pelajar ADHD. Dapatan ini juga sepadan dengan dapatan Baharin Abu, Othman Md Johan, Syed Mohd Shafiq Syed Mansor dan Haliza Jaafar (2007) yang

menunjukkan bahawa motivasi dalam unsur emosional merupakan elemen yang paling dominan bagi gaya pembelajaran pelajar. Ini menjelaskan bahawa pelajar ADHD memerlukan stimulasi motivasi yang baik bagi membentuk dan meningkatkan prestasi pembelajaran pelajar ADHD. Dapatan kajian ini juga menyokong dapatan kajian oleh Lukavská (dalam Hvozdikóva, 2011), yang mendapati bahawa pelajar hiperaktif boleh mengikut peraturan di bilik darjah sekiranya mereka diiktiraf oleh guru.

4. Unsur Sosiologi

Elemen bagi unsur sosiologi ialah bersendirian, berpasangan dan berkumpulan. Dapatan kajian menunjukkan skor min tertinggi ditunjukkan oleh elemen berpasangan iaitu 2.9571 (sp = 1.1990), diikuti elemen berkumpulan dengan skor min sebanyak 2.8846 (sp = 1.2324) dan skor min terendah dicatatkan oleh elemen bersendirian iaitu 2.8584 (sp = 1.1509) bagi unsur sosiologi. Dapatan ini menunjukkan elemen belajar secara berpasangan bagi unsur sosiologi lebih digemari oleh pelajar ADHD. Dapatan ini menjelaskan pelajar ADHD menggemari pembelajaran secara berpasangan berbanding pembelajaran secara bersendirian dan secara berkumpulan. Dapatan ini tidak selaras dengan dapatan kajian oleh Baharin Abu et al (2007) menunjukkan kebanyakan pelajar suka belajar bersendirian dan kadang kala suka belajar bersama rakan. Dapatan kajian ini juga tidak menyokong dapatan kajian oleh Lukavská (dalam Hvozdikóva, 2011), mencatatkan bahawa pelajar hiperaktif gemar belajar secara berkumpulan.

5. Unsur Fisiologi

Unsur Fisiologi mengandungi tiga elemen iaitu makan minum, waktu dan mobiliti. Dapatan kajian menunjukkan skor min bagi unsur fisiologi tertinggi dicatatkan oleh elemen makan minum iaitu 2.8355 (sp = 1.0576) dan skor min terendah dicatatkan oleh elemen mobiliti iaitu 2.6840 (sp = .8198). Dapatan kajian menunjukkan skor min tertinggi bagi unsur fisiologi dicatatkan oleh elemen makan minum, diikuti elemen waktu, dan skor min terendah dicatatkan oleh elemen mobiliti. Dapatan ini menunjukkan elemen makan minum dalam unsur fisiologi bagi gaya pembelajaran lebih digemari pelajar ADHD di Program Integrasi Bermasalah Pembelajaran ketika belajar. Dapatan ini menunjukkan pelajar ADHD dapat belajar dengan lebih baik apabila dibenarkan belajar sambil makan atau minum, atau makan dan minum, atau sambil mengunyah sesuatu.

6. Unsur Perseptual

Unsur Perseptual mengandungi tiga elemen iaitu auditori, visual dan kinestetik. Dapatan kajian skor min bagi unsur perseptual menunjukkan skor min tertinggi dicatatkan oleh elemen kinestetik iaitu 3.3117 (sp = .7682), diikuti elemen auditori iaitu 3.2902 (sp = .8454) dan skor min terendah dicatatkan oleh elemen visual iaitu 3.1634 (sp = .7771). Dapatan kajian bagi skor min unsur perseptual menunjukkan skor min tertinggi dicatatkan oleh elemen kinestetik diikuti elemen auditori, dan skor min terendah dicatatkan oleh elemen visual. Dapatan ini menyokong dapatan kajian oleh Hvozdikóva (2011) yan jelas menunjukkan pelajar ADHD lebih menggemari dimensi kinestetik untuk belajar, gemar

bergerak, dan menyentuh objek. Dapatan kajian ini juga sepadan dengan dapatan Dunn (1983) iaitu pelajar yang berpencapaian rendah lebih menggemari gaya kinestetik berbanding auditori dan visual.

7. Unsur Psikologi

Unsur psikologi bagi gaya pembelajaran terdiri daripada elemen yang mencakupi elemen analitik, global, reflektif dan impulsif. Dapatan kajian menunjukkan skor min tertinggi ditunjukkan oleh elemen impulsif iaitu 3.3090 (sp = .9632) dan skor min terendah dicatatkan oleh elemen reflektif iaitu 2.7191 (sp = 1.2220) bagi unsur psikologi. Dapatan ini menunjukkan elemen impulsif dalam unsur psikologi bagi gaya pembelajaran paling digemari pelajar ADHD. Dapatan ini adalah sepadan dengan ciri-ciri pelajar ADHD iaitu mudah mencelah, sukar menunggu giliran dan sukar mengawal tingkah laku sendiri. Seperti yang ditegaskan oleh Reif (2007), iaitu ciri-ciri utama kanak-kanak ADHD adalah melibatkan aktiviti fizikal yang keterlaluan, impulsif dan kurang tingkah laku kawalan diri, kesukaran untuk menyesuaikan diri dengan aktiviti di bilik darjah, tingkah laku agresif, kemahiran sosial adalah lebih rendah dan tahap estem kendiri yang rendah dan tahap kekecewaan yang tinggi.

E. PEMBAHASAN
1. Rumusan Dapatan Tinjauan

Dapatan kajian ini keseluruhannya menunjukkan bahawa elemen rekabentuk, elemen motivasi, elemen belajar secara berpasangan, elemen makan minum, elemen kinestetik dan elemen impulsif adalah elemen gaya pembelajaran yang mendominasi pelajar ADHD. Dapatan ini menjelaskan rangsangan elemen-elemen tersebut perlu diberi penekanan oleh para guru Pendidikan Khas ketika merangka strategi pengajaran kepada pelajar ADHD bagi mengoptimum pembelajaran golongan pelajar ini. Secara keseluruhannya, unsur emosional dalam gaya pembelajaran adalah lebih mendominasi gaya pembelajaran pelajar ADHD diikuti unsur perseptual, unsur psikologi, unsur persekitaran, unsur sosiologi, dan unsur fisiologi. Dapatan ini adalah sepadan dengan dapatan kajian oleh Baharin Abu et al (2007) yang menunjukkan gaya pembelajaran kategori emosional adalah paling dominan dalam gaya pembelajaran pelajar. Manakala, unsur fisiologi adalah unsur yang paling kurang mendominasi gaya pembelajaran pelajar ADHD. Dapatan ini membuktikan bahawa entiti dalam pembinaan iklim pembelajaran yang konduksif dan berkesan adalah perlu memberi penekanan kepada unsur emosional iaitu elemen motivasi, elemen ketekalan, elemen tanggungjawab dan elemen struktur. Ini menjelaskan bahawa pembudayaan proses pembelajaran yang berkualiti dalam kalangan pelajar ADHD perlu meletakkan elemen-elemen tersebut sebagai keutamaan ketika merancang dan melaksanakan aktiviti pengajaran dan pembelajaran kepada kumpulan pelajar ADHD.

2. Dapatan Temu Bual

Berikut adalah analisis dapatan sesi temu bual berkaitan pendapat guru Pendidikan Khas tentang dominasi gaya pembelajaran dalam kalangan pelajar ADHD di Program Integrasi Bermasalah Pembelajaran. Bagi unsur persekitaran iaitu elemen cahaya, guru

pendidikan khas berpendapat bahawa suasana pencahayaan yang terang di bilik darjah menyebabkan pelajar ADHD berupaya memberi tumpuan yang lebih kekal kepada pembelajaran. Manakala, cahaya atau suasana yang suram akan menyebabkan pelajar ADHD rasa mengantuk dan tidak cergas dalam aktiviti pembelajaran. Suasana pencahayaan yang suram di dalam kelas juga menyebabkan pelajar ADHD bertindak meninggalkan kelas dan aktiviti pembelajaran.

Seterusnya, dapatan temu bual adalah bagi unsur persekitaran iaitu elemen bunyi. Elemen bunyi adalah suasana bising iaitu elemen bunyi yang wujud di dalam kelas atau dari luar kelas. Hasil temu bual dengan guru Pendidikan Khas menunjukkan bahawa suasana bising adalah elemen yang mengganggu tumpuan pelajar ADHD. Suasana persekitaran juga merujuk kepada faktor suhu di dalam kelas. Analisis dapatan temu bual ke atas guru Pendidikan Khas menunjukkan suasana suhu yang panas di dalam kelas menyebabkan pelajar ADHD menjadi gelisah dan berasa kurang selesa seterusnya menyebabkan tumpuan pelajar teralih daripada aktiviti pengajaran dan pembelajaran.

Elemen rekabentuk kelas yang konduksif merupakan elemen penting. Berdasarkan maklum balas guru Pendidikan Khas didapati pelajar ADHD menggemari rekabentuk dari segi susunan kelas mengikut kesesuaian secara individu. Ini kerana ada pelajar ADHD yang menggemari susunan formal untuk mudah mengikut arahan guru dan terdapat pelajar yang menggemari suasana susunan kelas yang tidak formal. Seterusnya, guru Pendidikan Khas menyatakan bahawa pelajar ADHD masih boleh belajar dengan baik dan menyiapkan tugasan tanpa dimotivasi dengan ganjaran. Sebaliknya, pelajar ADHD akan belajar lebih baik dan memberi tumpuan kepada tugasan atau aktiviti pengajaran dan pembelajaran apabila tugasan atau aktiviti tersebut adalah merupakan sesuatu yang diminati mereka.

Seterusnya dari segi ketekalan, maklum balas guru Pendidikan Khas menunjukkan pelajar ADHD kurang mempunyai daya usaha berkekalan dalam menyiapkan tugasan atau gerak kerja bagi aktiviti pengajaran dan pembelajaran. Guru Pendidikan Khas berpendapat pelajar ADHD memerlukan pelaziman bagi membentuk tingkah laku pembelajaran yang positif. Dapatan temu bual menunjukkan elemen tanggungjawab mendominasi tingkah laku pembelajaran pelajar ADHD secara individu iaitu terdapat kumpulan pelajar ADHD yang dapat bertanggungjawab terhadap tugasan pengajaran dan pembelajaran dan sebilangan lagi mudah berasa bosan dengan rutin tugasan.

Seterusnya, dapatan temu bual menunjukkan pelajar ADHD lebih terdorong mengikut peraturan sendiri dan tidak berupaya mematuhi arahan pengajaran dan pembelajaran. Dapatan kajian temu bual juga menunjukkan terdapat pelajar ADHD yang menggemari visual berwarna warni, manakala sebilangan pelajar ADHD lain akan menunjukkan tingkah laku agresif apabila diberikan tugasan visual yang berwarna warni. Di samping itu, analisis temu bual terhadap guru Pendidikan Khas tentang elemen makan minum menunjukkan elemen ini berupaya mengganggu tumpuan pelajar ADHD ketika belajar. Namun begitu, terdapat guru Pendidikan Khas yang berpendapat bahawa kadang kala pelajar ADHD memerlukan rangsangan elemen makan minum untuk menyiapkan tugasan pembelajaran yang diberikan. Guru pendidikan khas juga berpendapat bahawa waktu adalah elemen yang mempengaruhi pelajar ADHD belajar. Pelajar ADHD didapati menggemari waktu pembelajaran pada sebelah

pagi berbanding belajar pada waktu tengah hari. Analisis temu bual menunjukkan bahawa tumpuan pelajar ADHD terganggu apabila belajar pada waktu tengah hari.

Guru Pendidikan Khas berpendapat bahawa elemen mobiliti meningkatkan penglibatan pelajar ADHD dalam aktiviti pembelajaran. Menurut guru-guru Pendidikan Khas ini, aktiviti pengajaran dan pembelajaran melibatkan pergerakan berupaya meningkatkan penglibatan pelajar ADHD dalam aktiviti pengajaran dan pembelajaran secara lebih produktif. Elemen sosiologi mengutarakan bentuk perlaksanaan aktiviti pengajaran dan pembelajaran sama ada belajar secara bersendirian, berpasangan atau berkumpulan. Guru Pendidikan Khas berpendapat pelajar ADHD lebih menggemari belajar secara berpasangan dan menegaskan ia juga bergantung kepada prestasi kognitif pelajar. Secara keseluruhannya, guru Pendidikan Khas berpendapat pelajar ADHD menggemari pembelajaran secara berpasangan dan tidak dapat memberi tumpuan apabila belajar secara berkumpulan.

Elemen seterusnya adalah elemen psikologi yang merangkumi rangsangan impulsif/reflektif dan global/analitik. Berdasarkan maklum balas guru Pendidikan Khas, didapati pelajar ADHD sukar mengikut arahan dan gemar memulakan tugasan tanpa menunggu arahan guru serta bergantung kepada emosi semasa mereka. Dapatan ini bersesuaian dengan ciri-ciri pelajar ADHD seperti yang diutarakan oleh Barkley (1998) iaitu individu yang mengalami ADHD lebih signifikan memperlihatkan permasalahan kurang tumpuan, impulsif dan aktif secara luar biasa. Manakala, guru Pendidikan Khas juga berpendapat elemen psikologi bergantung kepada prestasi dan kemahiran pelajar ADHD itu sendiri.

F. KESIMPULAN

Tindakan guru memberi penekanan kepada keperluan, kebolehan, dan ketidakupayaan pelajar ADHD berupaya membantu mereka belajar dengan lebih baik dengan merujuk kepada gaya pembelajaran pelajar ini. Semua individu mempunyai gaya pembelajaran dan semua individu mempunyai kekuatan gaya pembelajaran dan setiap individu berbeza mempunyai kekuatan yang berbeza (Dunn, 1990). Sesungguhnya, walaupun semua individu mempunyai ciri-ciri bio-psikologi dan sosial yang sama dalam proses pembelajaran, pilihan individu mengenai cara-cara memberi makna dan memperolehi maklumat mungkin berbeza-beza (Yilmaz-Soylu & Akkoyunhu, 2009). Dapatan kajian secara keseluruhannya menunjukkan gaya pembelajaran pelajar ADHD adalah bersifat multielemen. Ini menjelaskan bahawa pengetahuan tentang gaya pembelajaran akan dapat membantu pelajar memanipulasi kekuatan mereka untuk memperolehi ilmu dan kemahiran baru. Oleh yang demikian, penekanan kepada tindakan mengenal pasti elemen-elemen gaya pembelajaran dapat meningkatkan tumpuan pelajar ADHD terhadap aktiviti pembelajaran dan melonjak prestasi kognitif mereka seterusnya membantu mencapai matlamat transformasi pendidikan.

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GLOBAL MORALITY, MULTICULTURAL AND LOCAL WISDOM: IMPLICATION FOR CURRICULUM DESIGN

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Abstract

It is not easy to define the moral values to be taught to students when faced with the plural condition consisting of various ethnic backgrounds, cultures and religions. Too many values are believed in a plural society and the values are often in conflict, giving rise to social tension in the society. On the other hand, globalization encourages interaction in plural society and becomes meeting arena of local wisdom so that people are led to live in a multicultural state. This study discusses how globalization, multicultural and local wisdom are interrelated in determining the development or deterioration of a nation, what moral values that are needed to respond these situation and how the curriculum as a national strategic effort engage in these conditions. This study revealed the role of local wisdom in developing a country and multicultural understanding in bridging local wisdom to globalization. Curriculum as a nation strategic movement need to pay attention to social and cultural conditions that occur at this time as the cornerstone of curriculum design. Some changes that need to be considered in designing a curriculum on a global era are [1] identification, preservation and promotion of local wisdom; [2] promotion of intercultural competencies such as acquisition of knowledge of human and cultural diversity and commonality, promoting intercultural understanding and respect, reducing prejudice and discrimination, promoting peace and conflict resolution; [3] sustain and maintain human civilization through understanding that we share the same planet, develop practices to sustain and maintain Earth's resources.

Keywords: local wisdom, multicultural, globalization, curriculum design.

A. INTRODUCTION

Attention to morality and the importance of moral education in the school, grow along with the appearance of problems that arise in the community. Association of Supervision and Curriculum Development (ASCD, 1998) states on the journal of the Moral Education in the Life of the School that undoubtedly, alarm about the morality of young people is aggravated by a number of forces: fragmentation of the family, decline of trust in public institution, increasing public concern about questionable ethical practices in business and industry, the impact of the mass media, and our gradually increasing affluence. All of this forces help foster materialistic, "me first" attitude. Thomas Lickona (1991), in his book Educating for Character, also expressed regarding the symptoms of moral decline among young children [1] violence and anarchy, [2] theft, [3] fraudulent acts, [4] a waiver of the rules, [5] fight among

students, [6] intolerance, [7] bad language, [8] early sexual maturity and deviation, [9] self-destructive attitude. These symptoms arise due to the allegedly moral decline in society and moral education may be necessary to respond to the symptoms of the problem. The analysis has implications for school work as an educational institution to carry out the task.

The emergence of new task for the educational institutions to integrate the teaching of moral education in schools curriculum raises a number of questions related to what is morality? Does morality need to be taught? Can morality be taught? Can we managed to teach something in an immoral manner? (McNeil, John D, 2006.p 265). Finally, the increasing ethnic and social diversity in our population, while invigorating our nation, has brought with in an increasing variety of moral values that sometimes conflict. As a result, some educators, awash in a sea of pluralism, are wary of even trying to identify common moral values (ASCD, 1998). Responding to the ambiguity, many researcher are to support the philosophical, psychological, sociological foundation in developing the curriculum that contains common moral values. Although research and debate about morality is still an issues to this day, numbers of studies have been able to reduce resistance to change and become a cornerstone of the educational curriculum for schools to develop a curriculum that contains moral values.

It is not easy to define the moral values to be taught to students when faced with the plural condition consisting of various ethnic backgrounds, cultures and religions. Too many values are believed in a plural society and the values are often in conflict, giving rise to social tension in the society. On the other hand, globalization encourages interaction in plural society and becomes meeting arena of local wisdom so that people are led to live in a multicultural state. As curriculum developer's, the ability to assess this situation and understand how to develop curriculum that addresses the challenges in our ever-changing global community plays an important role in how we adapt to change. This study discusses how globalization, multicultural and local wisdom are interrelated in determining the development or deterioration of a nation, what moral values that are needed to respond these situation and how the curriculum as a national strategic effort engage in these conditions.

B. GLOBALIZATION, MULTICULTURAL AND LOCAL WISDOM INTERRELATION

Felix Maringe (2010) in his journal *The Meanings of Globalization and Internationalization in HE* describe globalization as a multidimensional concept that relates to creating a world in which the social, cultural, technological, political and ideological aspects of life become increasingly homogeneous and in which economic interdependence and growth are driven by the principles of the free market. Ulf Hannerz (1994:237) said that "*globalization is marked by an organization of diversity rather than a replication of uniformity ..... the world has become one network of social relationship and between it different region there is a flow of meaning as well as people and goods*" [Maurits Simatupang, 1998. *Pembelajaran Memasuki Era Kesejagatan. Towards A World Culture*. p.20]

Nowadays on global era, increasingly realized by the nations of the world that when they want to develop their nation, they cannot just rely on their culture, but rather they need

for cooperation and interdependent relationship with other culture. Culture by E.B Taylor (1871) is a complex which includes knowledge, belief, art, morals, law, customs and skills, and habits acquired by man as a member of society [Soerjono Soekanto, 2003. *Pengantar Sosiologi*. p.172]. If explored this definition illustrates the length of the cultural elements scope and everything was obtained or learned as a member of society and human interaction with the environment. To systematize a broader culture elements, anthropologist C. Kluckhon propose seven elements of culture that are considered cultural universal, can be found every culture in the world, namely [1] human life equipment and supplies (clothing, housing, household appliances, weapons, tools, transportation, etc.); [2] occupation and economic systems (agriculture, livestock production systems, distribution systems, etc.); [3] social system (system of kinship, political organization, the legal system, marriage system, etc.); [4] language (oral and written); [5] art (art, song, dance, etc.); [6] knowledge system; [7] religion (belief system) [Soerjono Soekanto, 2003. Pengantar Sosiologi. p.176].

As mentioned above, universal culture is found in almost every culture in the world, but there are nation with a more completed and advanced cultural elements rather than other nation. The differences of culture elements is what drives social interaction among nation with different culture elements to fill the gaps in order to meet the need to develop the nation, which since ancient times represented by bargaining (swap agreement). The elements of the culture is the product of bargaining among nations to develop themselves, where they fill the gaps.

How culture related to local wisdom? Quoting from the "Book of Local Wisdom Amidst Modernization" issued by the Ministry of Culture and Tourism of the Republic of Indonesia, local wisdom is a creative response to the situation of geographical - political, historical and local situation containing attitude, outlook and the ability of a society in managing spiritual and physical environment. It is an effort to provide their peoples the durability and ability to grow in an area where the community is located. Another definition given by Sumalee Sungsri in his study *"The Role Promoting Local Wisdom Longlife Learning in Thailand"*, local wisdom is knowledge and experience related to day to day living, occupation and culture had been passed on from generation to generation. These knowledge and experiences are still useful for people at present because they deeply relate to their way of live. If these local wisdom are well looked after and promoted, they can be very good sources of knowledge, information and guidelines for quality of life development of people.

Further analysis shows that the two definitions mentioned above contains a number of elements related to local knowledge that is [1] unique, local; [2] knowledge and experience related to everyday life; [3] livelihood and environmental management; [4] handed down from generation to generation; [5] are still useful today; [6] increasing the quality of life of local communities. There are many forms of local wisdom, for example the subak irrigation system in Balinese rice fields, temples architecture in Central Java, batik art, even to the Western knowledge system also includes as a form of local wisdom. Form of local wisdom shaped the cultural identity of a community or a nation.

Samovar (2006) revealed the importance of cultural identity as the basis of inter-cultural communication skills. Identity is what allows the interaction between cultures and

become an important aspect in the development of a society, especially in the era of globalization when every cultural identity realize they have complementary need among other cultural identities. Nation who lose their cultural identity will experience obstacles in interacting with other cultures because its existence has no adding value of interaction. They don't have many things to offer.

As for nation that have a well-developed cultural identity and have a high adding value of interaction, the challenges is how to interact in a sea of pluralism. Here multicultural competencies are needed to increasing the success of their interaction and can gain what they need with win-win result. Multicultural is the term given to the communities who have diverse social and cultural condition. Facing the multicultural condition, needed an ideology that carries multicultural values, which people or nation that carries the ideology will give attention to the management of multicultural condition. UNESCO (1995) describe the ideology of multiculturalism states social policies to support cultural and ethnic diversity and the existence of diverse identities. India can be a good example in carrying the slogan of diversity in unity: *In 2004, India, world's largest representative democracy, witnessed an event unprecedented in human history: A nation of more than one billion people, after the planet's largest exercise ever in free elections, saw a Catholic political leader (Sonia Gandhi) make way for a Sikh (Manmohan Singh) to be sworn in as prime minister by a Muslim (former President Abdul Kalam) in a country that is 81 percent Hindu (Luce, 2007). It's ultimately "ideological and political multiculturalism provides the most effective answers to questions of India's unity and integrity" (Bhattacharya, 2003).*

The delay of a nation in identifying threats and opportunities of a multicultural state, able to bring a number of widespread collisions in the community and loss of opportunity to empower diversity to develop a nation. Musser (2005) describe how the culture clash sparked the birth of terrorism and war, whose impact on social conditions deteriorating and destroying the culture. Mahajan (1999) in his article "The Problem" explains that multiculturalism [1] reflects the reality of the lives of people with cultural diversity; [2] how to deal with cultural diversity or pluralism; [3] belief in the importance of equality, recognition, integration, respect for tradition and diversity.

This picture will help us to understand the interrelation of global morality, multicultural and local wisdom in a global era.

Picture 1. Role of Local Wisdom
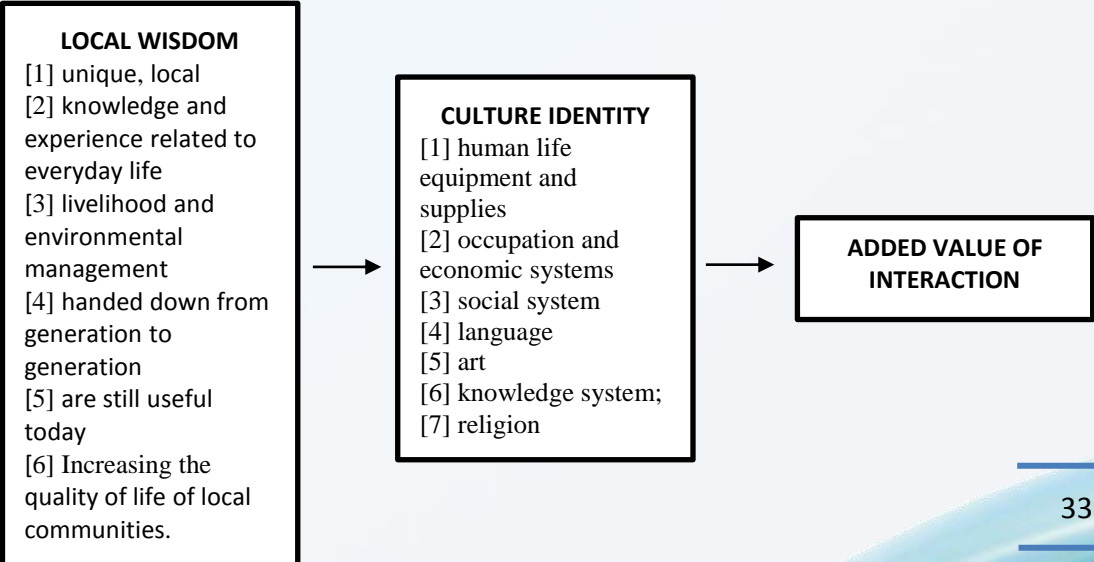
Picture 2. Multicultural, bridging culture identity to global market
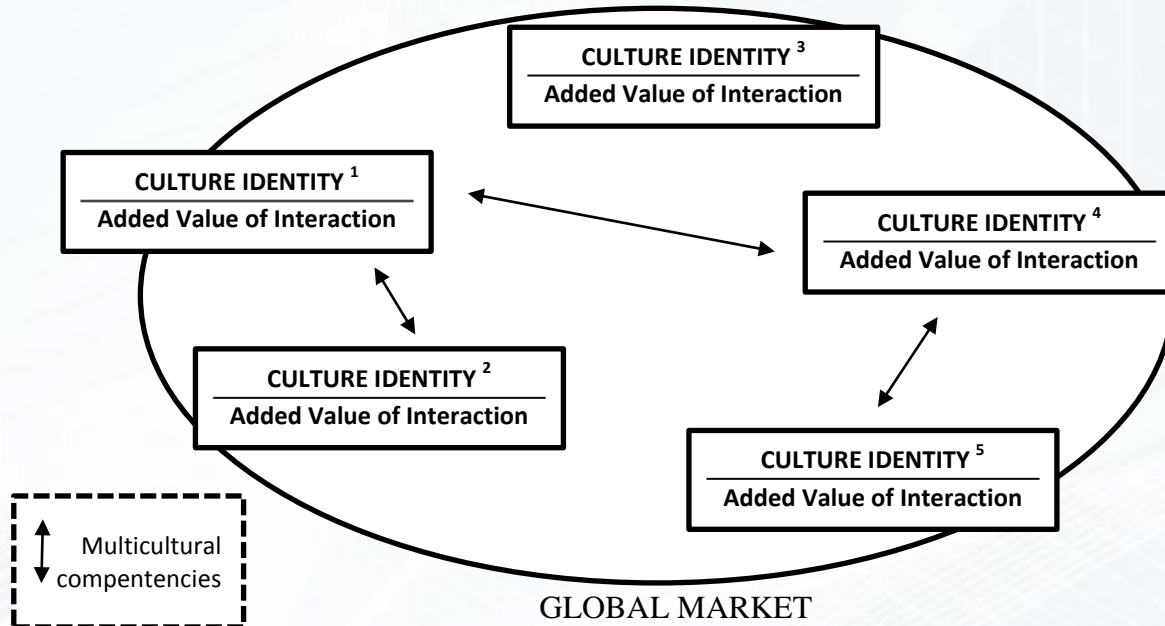
C. CONCLUSION

1. Moral Values in Global Era

Nowadays on global era, increasingly realized by the nations of the world that when they want to develop their nation, they cannot just rely on their culture, but rather they need for cooperation and interdependent relationship with other culture to fill the gaps. Local wisdom form cultural identity of a nation and adding value of interaction in global market. Multicultural competencies needed to promote a well manner interaction among different cultures.

Too many values are believed in a plural society and the values are often in conflict, giving rise to social tension in the society. On the other hand, globalization encourages interaction in plural society and becomes meeting arena of local wisdom so that people are led to live in a multicultural state. Tabel 1 explain the characteristic of moral values in global era.

Tabel 1. Characteristic of Moral Values

Moral values	Characteristic
Global morality	Sustaining life and human civilization. Future oriented.
Multicultural	Promoting civilized interaction in a world of human diversity. Present and future oriented. Control global forces or local consensus that threatening life and human civilization or the existence of local wisdom
Local wisdom	Preserve cultural uniqueness. Past oriented. Keunikan. Adding value of interaction in global market.

2. Implication for Curriculum design

Curriculum as a nation strategic movement need to pay attention to social and cultural conditions that occur at this time as the cornerstone of curriculum design. Curriculum design is concerned with the nature and arrangement of four basic parts: objectives, content, learning experiences, and evaluation [Ornstein and Hunkins, Curriculum Foundations, Principles and Issues. p. 182]. Regarding to designing a curriculum, Ralph Tyler said if an educational program is to be planned and if efforts for continued improvement are to be made, it is very necessary to have some conception of the goals that are being aimed at. These educational objectives become the criteria by which other basic parts of curriculum design are selected, outlined, developed and prepared.

"What educational purposes should the school seek to attain?" This is the opening question by Ralph Tyler on his book "Basic Principles of Curriculum and Instruction". Ralph Tyler said that many educational programs do not have clearly defined purposes. He is suggesting studies of contemporary life outside the school as a source of educational objectives, among other studies that he also mention. This suggestion give us framework to attain educational objectives from the information about what's going on in the world that hypothetically will influencing the student's life. Ornstein and Hunkins (2009), named it "society as a source", and explained by Arthur K. Ellis (2004), curriculum designer who stress society as a curriculum source believe that school (students) is an agent of society, and should draw its curriculum ideas from analysis of the social situation [Ornstein and Hunkins, *Curriculum Foundations, Principles and Issues*. 2009. p. 183].

This study gave us perspective on what educational purposes should the school seek to attain based on our ever-changing world. Some changes that need to be considered in designing a curriculum on a global era are [1] identification, preservation and promotion of local wisdom; [2] promotion of intercultural competencies such as acquisition of knowledge of human and cultural diversity and commonality, promoting intercultural understanding and respect, reducing prejudice and discrimination, promoting peace and conflict resolution; [3] sustain and maintain human civilization through understanding that we share the same planet, develop practices to sustain and maintain Earth's resources.

3. Research Suggestion

Finally, from this literature study, I suggested further research on how to promote local, multicultural and global content in curriculum and what should be taught as a form of local, multicultural and global content, how school can infuse this study findings in school curriculum that are already stretch to the limit? What is the proper methods to deliver this findings to students?

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MEDIA DEVELOPMENT OF CAI (*COMPUTER ASSISTED INSTRUCTION*) ON JAPANESE COURSE OF TOSYOSHITSU DE HON O YOMIMASU MATERIALS AT CLASS X SEMESTER 1 OF SMAN 1 CIANJUR

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Abstract

Based on the previous result of the preliminary study in senior high school 1 Cianjur particularly in Japanese course, it was found some problems, such as the lack of teaching media use and the lack of instruction media for increasing students' interest and achievement in learning. This makes students' outcome in tosyoshitsu de hon o yomimasu materials become under standard score in this case 75: 5 persons got 50, 7 persons got 55, 7 persons got 60, and 11 persons got 66. Therefore, to solve the case, CAI is considered important to be developed as a teaching media. The aim of this development is to produce teaching media for Japanase course at class X semester I in senior high school 1 Cianjur. This learning media development is based on R&D model. Based on the result of data analysis it was found out that there were 83,3 % scoring very good for material expert, 63,33% scoring good for media expert, and 78,7% scoring good for small group try out, as well as 79,11 scoring good for big group try out. Based on the result of pre-test and post-test, it is seen clearly that t_{count} (12.804) $>$ t_{table} (1.6909). Therefore, it can be conluded that there is a significant effect in the development of the media for teaching Japanese course on the materiasl of Tosyoshitsu de hon o yomimasu in senior high school 1 Cinajur.

Keywords: development, CAI media, Japanese course

A. INTRODUCTION

Our national consitution number 20 year 2003 verse 1 article 1 states that education is the conscious eefort to create a learning circumstacne and learning process so that students actively develop their potency to have spiritual power, self-control, good personality, intelleigence, noble charity, that are needed by themselves, society and the nation. For each skill, personality, and intelligence, an individual must be related to the developing education nowadays especially in the snior high school as an institution to will prepare the the higher level so that the education process must be optimized by making use o the existing learning components. Media is one integral

component that supports the teaching activity in the classroom

In the teaching activity, media is not only treated as a supporting tool, but also treated as a message transfer from teacher to the students. Teaching media is used and developed by the teacher in the teaching process in the light of there will be an increasing of students' achievement so that they can compete in the global era.considering the importance of the media in the teaching activity, teachers are expected to help students in the teaching activity based on their function as motivator, facilitator, and evaluator.

The role of teaching media as a source for studying is strengthene by the statement from Edgar Dale in Warsita (2008: 11) about "experience cone". This cone describes the level of learning experience from direct to verbalic symbol that become the interval from something concerete to something more abstract. This statement gives the basic about the relationship between learning theory and the media (Warsita, 2008:12). This cone also unites the education theory from Dewey with the concepts of psychology (Warsita, 2008).
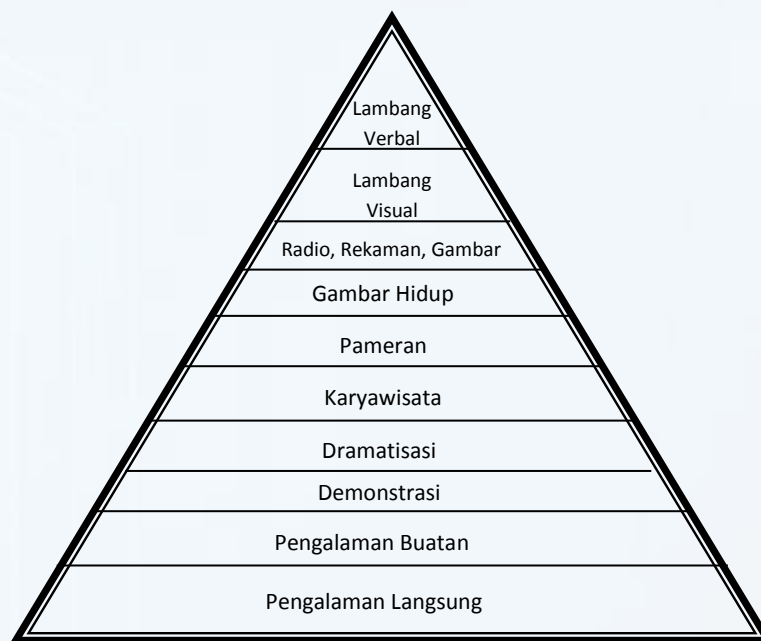
Figure 1. Cone of Experience by Edgar Dale

The cone of experience by Edgar Dale becomes the basic for eveloping the teaching media. Meanwhile, the function of the media itself is to:

1. Settle the restriction of experience possessed by the students
2. Go beyond the classroom space
3. Enable the direct interaction between the students and their environments
4. Produce uniformity in observation
5. Impart the basic concept which is correct, concrete, and realistic
6. Encourage students' motivation
7. Provide comprehensive experience from the concrete one to the more abstract one

Based on the result of the observation, SMAN 1 CIANJUR has 30 computers which are not used for Japanese course. There is a tendency to teach Japanese just in the classroom. Meanwhile, based on the instruction from 2013 curriculum the teaching activity should be

supported by various learning source to achieve the goal. The lack of teachin media use results in the decreasing score of the students which do not reach the target minimum score namely 75. This consists of 5 students get 50, 7 students get 55, 7 students get 60, 11 students get 66. Therefore, it is suggested to provide them with supporting teaching media to increase the learning outcomes.

In this ase, it can be said that students, teacher, the facility, and the characteristics of the materiasl can affect the teaching process, so that it is considered necessary to develop the teaching media CAI (*Computer Assisted Instruction*) in teaching tosyoshitsu de hon o yomimasu. Through the development of this media students' learning outcomes is expected to increase.

From the above reason, it is considered ecessary to develop the CAI foe Japanese course especially for tosyoshitsu de hon o yomimasu materiasl at the class X in SMAN I CIANJUR. This media has ertain specification such as systematic structure and order, explain the instructional goal to be reachers, as well as provide thematerials based on 2013 curriculum equipped with lesson plan that is used in the school and completed with the summary that can help and train students to comperehend the materials. Besides, this media also has audiovisual containing paper for placing cassette: Glossy (210mmx 297mm), CD cassette paper. Etc.

B. LITERATURE REVIEW

Media is derived from latin "medium" which means the mediator or the mediator between the carrier and the receiver. In the teaching process, media is a tool for transferring knowledge from the teacher to the studetns. *Association of Education and Communication Technology* (AECT) in Amerika llimits the media as all fomrs and channels used to deliver the message ad information (Sadiman, 2008:6). Briggs in Sadiman (2008:6), media is the all physical tool that can be used to motivate students to learn. From the explanation, media is one of information tools that is used by the teacchers to deliver their knowledge to the studnts.

1. Definition of Computer-Based Media or Multimedia

Etimologically, multimedia is derived from "multi" (Latin, nouns meaning many, varied) and "medium" (Latin meaning a thing used to deliver something). Medium in *American Heritage Electronic Dictionary* (1991) in Ariani (2010: 1) is translated as a tool to distribute and present the information. So, the subject of the multimedia is the information that is commonly categorized as knowledge.

Computer-based teaching technology is the ways to produce or disctibute something using the sources undergrounded on the microprocessor (Seels dan Richey, 1994:24). Computer media has all the superiorities possessed by other media. Other than present text, movement, sound and picture, this computer can also be used interactively, not just one direction. Even, the computer conneceted to the internet can give spece of learning beyond the time and space as well as provide the source for learning without limit.

2. The Model of Coputer Based Media or CAI

The display of computer based multimedia can be translated as a technology that optimize the role of the computer as a means to display and engineer text, graphic, and sound in an integrated display. By the combination of these things, it can be an effective technology to learn and teach the materials.

In computer-based media, there are two terms being developed namely *Computer Based Instruction (CBI) and Computer Assisted Instruction (CAI).* These media is not only interactive but also complete through the availability of sound, animation, video, text, and graphic. There are some models of interactive media: a. Drill Model: this aims at giving the learning experience which is more concrete through the creation of replica of the experience close to the real situation, b. tutorial model: this uses software like computer program containing the lesson materials. Basically, this model followa Branching type of teaching program in which the information is presented ni the small units, followed by questions. This program requires students to apply their ideas directly in the learning process, c) Simulation model: this aims at giving the learning experience which is more concrete through the creation of the replica close to the real situation. d) Games Model: this is developed based on the principle of "lovely instruction" in which the studetns are given some clues or game rules. This is sometimes called *Instructional Games* (Susilana & Riyana, 2007: 162). From the detail of the model of computer-based media, the researcher just uses tutorial model as the teaching media. Tutorial or tutoring is the guidance of learning which is academic given by the tutor to the studetns to help independent learning prcess either for each individual or group related to the lesson. Tutor is the one who teach students directly. Tutorial is done face to face or in distance based on the concept of independent learning. Independent learning in the tutorial means that such tutorial helps to learn by motivating the independence, discipline, and initiation within students in learning through minimalizing the intervention from the tutor

Basically, tutorial is the same as the guidance that aims at helping students understand their lesson. Therefore, the definition of tutorial in the computer-based instruction is an instruction strategy where the content is presented, question is risen, reposnse is given, and feedback is provided (Russell D. James, 2011:493)

This study used tutorial as the instruction and used evaluation related to the modul. However, the software used for CD in tutorial instruction used software macromedia flash. It is a program that is specially designed by the Macromedia with the ability to create 2 dimension animation.

3. The Weaknesses and The Strength of Coputer Based Media or CAI

The weaknesses are: a) Lead the user to be lost in the branched type of tutorial instruction **b)** the explanation in the tutorial is quite less so that the user can be difficult to learn and understand from that program **c)** tutorial method is one way, so that if there is any trouble shooting for operating the program, the user can not solve the problem because of the lack of the explanation in the tutorial. **The strength are: a)** ease the user to master the systems.

4. Characteristics of Senior High School Students

Teenagers is a perod in human's life which age bound is often not clear. This period is sometimes called as transition period when the person does not want again to be treated as children. The puberty phase, according to Aristotl in Suryabrata (2008:185) consists of: phase I 0-7 years old (baby), phase II 7-14 years old (children), phase III 14-21 years old (teenagers or puber period). This periodization is grouded on the symptoms of physical development.

C. METHODOLOGY

1. Research Design

This research used R & D model . the researcher chooses this model because this model is considered effective in producing the product started from the potency of the problem up to the massal production. According to Sugiyono (2008: 409), the steps in R&D are as follows:
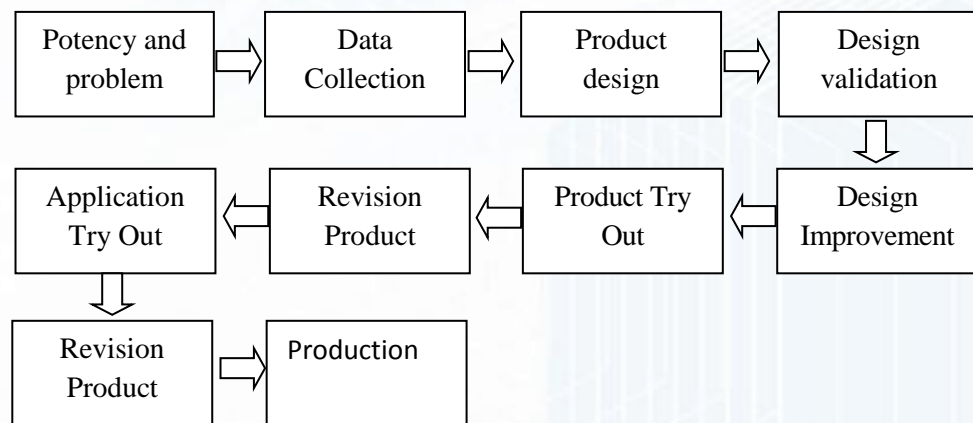
Figure 2. Flowchart

2. Technique Of Data Collection

The technique of collecting the data are:

a. Observation

Observation has specific features compared with other such as the use og interview and questionnaire. This research used structured observation.

b. Questionnaire

Questionnaire is a technique of data collection that is done by giving a list of questions to the respondents to be answered Sugiyono (2008:199).

c. Tes

This instrument is used to measure the basic competence (Arikunto, 2010:266). Fro testing the learning outcomes, it often recognized as teacher-made test and standardized test.

3. Technique of Data Analysis

a. Observation data analysis

The data from observation is just in the froms of materials from the teacher as well as the school situation.

b. *Analisys if questionnaire*

The data obtained from the material expert, edia expert, and students are calculated using rating scale that is a question followed by columns indicating the levels from strongly agree up to strongly disagree.

D. FINDINGS

1. Development Preparation

Before doing research in the field to get the data, the researcher prepares some steps.

a. *Potency and problem*

This is done by observing directly SMAN I CIANJUR that will have connection with the potency and the problem. Potency that is available there is the existence of 30 unit computers. The problem is the lack of use and the development computer-based media.

b. *Analysis of test result*

The result of the test is used to know the usage of teaching media in the Japanese course of tosyoshitsu de hon o yomimasu materials through pre-test and post-test. This is calculated using parametric statistics that is used to test comparative hypothesis from two samples if the data in the form of ratio or interval (t-test)

c. *Data collection*

After finishing the potency and problem step through observation, then data collection is done as a a mater to prepare the development. CAI materiasl is obtained from the Japanase teacher completed with additional materials from internet.

2. Implemation of the Development

After the preparation process, then the implementation process based on the model of R&D is done through the steps below;

a. *Product design*

In this step, teaching media is divided into two parts namely product materials design and CAI product design.

1) Product materials design

This design is the follow up from the data collection after collecting all the materiasl from various sources.

2) CAI product design

This dsign is done after collecting all the materials. Then these materials are processed into software macromedia flash. For the writing style, language, font type, and the clarity, is it applied flexible. The design for evaluation used software macromedia flash.

b. *Design validation*

Design validation is the process to assess the product design in order to know the weaknesses from the CAI teaching media. This is gotten from questionnaire. Product validation can be done by presenting the expert related to that product namely the maerial expert as an material evaluator as well as media expert as media evaluator.

The explanation about this desing is as follows:

1) Design validsation by the material expert

Design validation or material expert review contains the data of evaluation result from the expert in CAI media. Validation is done by the Japanese teacher.

2) Design validation by the media expert

Design validation by the media expert is the evaluation related to the media that has been developed namely CAI. This is done by media expert coming from educational technology majoring.

3. **Design Improvement**

a. *Design imporvement of material expert*

based on the validation in the initial stage done for the material epxert, the development then get a suggestion concerning the CAI that is developed.

b. *Design imporvement of media expert*

based on the initial validation process done to the media epxert, the development get suggestoin about the CAI that is developed.

4. **Product Try Out**

Product try out is divided into three parts, namely: individal test consisting of five students, small group test consisting of 12 students, and the last is big group test consisting of all students namely 30 students.

a. *Individual test*

After revising product, individual test is done. It is done to five students in SMAN I CIANJUR.

b. *Small group test*

The next step is trying out to the small group. This is done to small group of students as many as 12 students.

c. *Product revision*

Product revision is done to know the result of individual test and small group test.

d. *Big group test*

After trying out to the small group, trying out to the big group is done. This is done to the whole students of class X as many as 30 students.

E. **DATA ANALYSIS**

Before going to product revision stage, the data obtained from try out is analyzed first to know what aspect should be revised. The data are derived from the material expert, media expert, and the studeents. From the result of the analysis, there will be a conclusion to revise the media that is developed.

1. **Qualitatative data analysis of CAI material expert**

a. Attractiveness get percentage around 93.33%. this means that the attractiveness of the media is very good, so that it does not need to be reviesed.

b. The percentage of the comprehensive definition is 80%. This means that the definition is good so that it should not be revised.

c. The percentage of age appropriatenss is 66.67%. this means that the age appropriateness is good, so revision is not needed.

d. The percentage of effectivity is 93.33%. this also means very good, so the revision is also not needed.

2. Qualitative data analysis of the media expert

a. Attractiveness get percentage around 66. 67%. this means that the attractiveness of the media is good, so that it does not need to be reviesed.

b. The percentage of the comprehensive definition is 70%. This means that the definition is good so that it should not be revised.

c. The percentage of age appropriatenss is 55%. this means that the age appropriateness is good, so revision is not needed.

3. Qualitative data analysis of small group test

a. Attractiveness get percentage around 90%. this means that the attractiveness of the media is very good, so that it does not need to be reviesed.

b. The percentage of the comprehensive definition is 84%. This means that the definition is good so that it should not be revised.

c. Technique standard is around 84%. This means that the media technique is good enough and the revision is not needed.

4. Qualitative Data Analysis Of Small Group Test

Based on the result of CAI qeustionnaire, the explanation can be found below.

a. Attractiveness get percentage around 81.38%. this means that the attractiveness of the media is very good, so that it does not need to be reviesed.

b. The percentage of the comprehensive definition is 73.33%. This means that the definition is good so that it should not be revised

c. Technique standard is around 81.66%. This means that the media technique is good enough and the revision is not needed.

5. Qualitative Data Analysis Of Big Group Test

a. Attractiveness get percentage around 79.33%. this means that the attractiveness of the media is very good, so that it does not need to be reviesed.

b. The percentage of the comprehensive definition is 79%. This means that the definition is good so that it should not be revised

c. Technique standard is around 79%. This means that the media technique is good enough and the revision is not needed.

F. PRODUCT REVISION

Produt revision in the develpoment process is done using the guidance from the consutlation resutl, questionnaire as well suggestion and the criticism during the development process. Below are the product ervision explanation.

1. Revision toward the material expert

Based on the result of consultation, there is a suggestion for the CAI development toward the material expert.

2. Revision toward the media expert

Based on the result of consultation done by the development toward the media expert, then the develpoment get the suggestion toward the CAI being developed.

3. **Revision toward the individual test**

Based on the result of the consultation done by the development toward five students in class X SMAN I CINAJUR.

4. **Revision towrd the small group test**

Based on the result of try out to the small group done by the development using 12 students at class X SMAN I CINAJUR.

5. **Revision towrd the small group test**

Based on the result of the try out in the big group done by the development using 30 students at class X SMAN I CIANJUR.

G. CLOSING

1. Conclusion

Based on the analysis result of the need at SMAN I CIANJUR, there is a product resulted from the development of teaching media in the tutorial teaching for Japanese course especially for Tosyoshitsu de hon o yomimasu materials at class X in SMAN I CIANJUR. After analyzing the data, it is gotten t $_{count}$ (12.804) > tcrit (1.6909). therefore, it can be concluded that the usage of CAI media has significant effect toward the students' learning outcome.

2. Suggestion

Teacher has to use teaching media for teaching Japanesee course especially Tosyoshitsu de hon o yomimasu materials related to the standard of competence, basic competence and the indicator so that it can support students' learning.

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TEACHER'S PROBLEM IN IMPLEMENTING THE 2013 CURRICULUM: A CASE STUDY OF AN ENGLISH TEACHER IN A VOCATIONAL SCHOOL IN BANDUNG

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Abstract

Teachers' tendency to be resistant to curriculum change (Zimmerman, 2006) potentially causes problems that hinder the success of the curriculum reform. These potential problems might emerge in the pilot implementation of the 2013 Curriculum recently. In relation to this matter, a case study in one vocational school in Bandung was conducted to investigate an English teacher's problems in implementing the 2013 Curriculum. An interview and a questionnaire were used to collect the data that were then analysed and categorised using the borrowing concept of Richards' (2001) four factors in providing effective teaching. The results revealed that from the institutional factor, insufficient training, the absence of materials, and inadequate time allocation were the problems investigated. Meanwhile, from the teacher factor, the problem was the lack of colleagues to discuss the 2013 curriculum. Last, in teaching and learning factor, different view of learning between the teacher and the students was the issue. It is suggested that supervision to all the schools implementing the 2013 Curriculum are conducted gradually by the government.

Keywords: the 2013 Curriculum, teacher's problem, the implementation.

A. INTRODUCTION

1. Background

Recently, the Indonesian government has been trying out to implement a new curriculum, the 2013 Curriculum, in 6973 schools (Kemendikbud, 2013b). This curriculum changing happens due to the change of society needs, educational philosophy, and regulations (Richards, 2001; Depdiknas, 2008). However, according to several studies, curriculum changes are frequently not welcomed by teachers because of their change resistance (Zimmerman, 2006). For instance is when the existing curriculum in Indonesia, Kurikulum Tingkat Satuan Pendidikan (KTSP) or School-based Curriculum was urged to replace Competency-based Curriculum. This replacement was mentioned as a result of regional autonomy and educational decentralization at that time (Masitoh, 2012). Unfortunately, the teachers negatively respond to this change since they are more comfortable to use the old curriculum than the new one (Utomo, 2005 as cited in Atmono, 2008). In short, the teachers tend to be conservative every time the curriculum changes occur.

This conservativeness, furthermore, might cause particular problems in succeeding the implementation of the new curriculum. Ham and Sewing (1987/1988), Stevenson (1987, 1993) and Gough (1997) as cited in Lee (2000) argue that the success of curriculum change

might be impeded by the problems emerged by the teachers' resistance. In addition, if the obstacles could not be removed, the implementation phase would not run smoothly, then the outcomes expected from the curriculum change could not bee seen immediately (Cheung & Wong, 2012). Therefore, some potential problems in implemetation of the new curriculum need to be identified for a sucessful curriculum change.

The above issue indicates that in recent curriculum innovation, some possible problems might occur in the implementation process. As teachers are the implementation agents, the problems are most likely happen to them. Hence, the current research is intended to investigate problems experienced by the teacher in implementing the 2013 Curriculum, exclusively in English language teaching (ELT).

The 2013 Curriculum is a new curriculum in Indonesia which is still being tried out as an innovation of the existing curriculum, School-based Curriculum or KTSP. It is said that this curriculum is an enhanced Competency-based Curriculum (Nuh, 2013) which has several differences with the KTSP curriculum in some of its elements (Kemendikbud, 2013a). The initial modification is on instructional process. Kemendikbud (2013a) explains that in the 2013 Curriculum the instruction uses scientific method in which the students learn through observing, questioning, trying and reasoning. In addition, there is a demand that the students use 'discovery learning', meaning that they need to search what they are learning rather than being 'spoon-fed' by the teachers.

Last, the most obvious difference in curriculum 2013 stated by Kemendikbud (2013a) is the inclusion of character building. It means that in learning processes the teachers need to insert elements of characters. However, it does not necessarily mean that the teachers should teach their students the characters, but, it is more on including the values through the activities, the materials, etc.

In the meantime, the success of this curriculum reform would be determined by how the implementation is. Richards (2001) believes that to achieve the goal set by curriculum developers, the crucial element is the teaching itself or the implementation process. He proposes four factors affecting the success of this implementation, consisting of institutional factors, teacher factors, teaching factors, and learning factors. When one of the factors encounters a problem, this might affect the implementation of curriculum in general. In relation to this, Cheung & Wong (2012) reveal that school factors, teacher factors, learner factors, and external factors might either contribute or hinder the success of the implementation. Therefore, there is likelihood that the problems of curriculum implementation emerge not only from teacher factors but also from other factors. By considering the current curriculum reform from KTSP to the 2013 Curriculum and potential problems attached to its implementation, there is an urgency to identify problems that might be experienced by English teachers. Hence, using a case study, the current research is intended to investigate problems of an English teacher in one vocational school in Bandung in implementing the 2013 Curriculum as formulated in the following research question,

What are the problems experienced by the English teacher in implementing the 2013 Curriculum?

Very few studies have been conducted in relation to 2013 curriculum so far since the curriculum is still new to educational system in Indonesia. The current study is then expected to be beneficial to give portrayal of the problems encountered by the teacher in the implementation of the 2013 Curriculum as well as deeper explanation of the reasons of the problem emergence.

B. LITERATURE REVIEW

1. Descriptions of Curriculum 2013

The 2013 Curriculum is a new curriculum in Indonesia which is still being tried out as an innovation of the existing curriculum, School-based Curriculum or KTSP. This curriculum is an enhanced Competency-based Curriculum (Nuh, 2013) which has several differences with the KTSP curriculum in some of its elements (Kemendikbud, 2013a).

The initial modification of this curriculum is on the instructional process. Kemendikbud (2013a) explains that in the 2013 Curriculum the instruction uses scientific method in which the students learn through observing, questioning, trying and reasoning. In addition, there is a demand that the students use 'discovery learning', so that they need to search what they are learning rather than being 'spoon-fed' by the teachers. For example, in ELT context, this might be realized by autonomously searching for the definition and the use of a word through looking up dictionaries, instead of being told by the teacher.

Another innovation of this curriculum is in terms of the evaluation in which it is supposed to measure students' thinking order –from lower to higher, from memorizing to creating. Moreover, the teachers evaluate the students both from their processes and results of learning. For instance, in teaching writing teachers do not only assess students' product but also their draft and revision using alternative assessments. Last, the most obvious difference in curriculum 2013 stated by Kemendikbud (2013a) is the inclusion of character building. It means that in learning processes the teachers need to insert elements of characters in the learning process through the activities, the materials, etc.

In this curriculum, the Indonesian government strives to reduce teachers' workload (Kemendikbud, 2013a; Kemendikbud, 2013c). This is realized by the government through providing syllabus and textbooks both for the teachers and the students (Kemendikbud, 2013c, Syahmadi, 2013). Even, Kemendikbud (2013a) emphasizes that unlike in KTSP curriculum, in the new one syllabus, and textbook provision is an absolute responsibility of the government in order that the teachers could be more focused on the teaching process.

2. English Curriculum for Vocational Schools

There are several alterations concerning English subject for vocational schools. First, the content of English for vocational schools is equivalent to those in senior high schools (Kemendikbud, 2013). As a consequence, in the Curriculum 2013, the English taught in vocational school is not as specific as in the KTSP curriculum, in which the students might learn English relevant to their specific major. Second alteration is the time allocation. As described in the structure of curriculum, in the 2013 curriculum the time allocation for English subject in vocational schools is much reduced into two credit hours per week only

(Kemendikbud, 2013a). Syahmadi (2013) also asserts that in the 2013 curriculum the content is more emphasized in terms of communicative competence to express ideas and knowledge. In short, the most obvious differences in English curriculum of vocational schools are in its time allocation and its contents.

3. An issue in Curriculum Reform

Every time the curriculum changes, some issues almost always arise in teacher's circle. However, the prime issue in the curriculum reform is negative responses from teachers due to their resistances. They tend to be conservative since they are more comfortable with the existing curriculum (Utomo, 2005 as cited in Atmono, 2008). Futhermore, this might occur because the alteration is likely to require so much energy from teachers to study the new curriculum well and to adapt their teaching consistent with the new curriculum requirement (Zimmerman, 2006). This resistance, furthermore, might cause particular problems in succeeding the implementation of the new curriculum. Ham and Sewing (1987/1988), Stevenson (1987, 1993) and Gough (1997) as cited in Lee (2000) argue that the success of curriculum change might be impeded by the problems emerged by teachers' resistance. In addition, Cheung and Wong (2012) argue if the obstacles could not be removed, the implementation phase would not run smoothly.

4. Several Factors for Successful Curriculum Implementation

Curriculum implementation success might be supported as well as hindered by several factors (Posner, 1992). With regard to it, Richards (2001) proposes four factors determining the success of teaching processes in particular and the implementation of curriculum in general.

First factor is the institutional factors, which might refer to schools as well as governments. In this study, the institutional factor is more on the government party. Richards (2001) argue that this factor has to do with several things such as training or seminar provision for the teachers, the availability of course materials as well as management of time allocation. He believes that the quality institutions are those which give opportunities for teacher development. Besides that, the institution is also responsible for providing course materials both for teachers and the students (Richards, 2001). The availability of course materials such as textbooks is mentioned by Posner (1992) as a proximal factor. He asserts that this factor is one of the frame factors which sometimes functions as constraints on teaching learning as well as the curriculum implementation. The absence of materials might hamper the teachers to teach in the classroom.

The last thing about the institutional factor is regarding time allocation. Posner (1992) considers time as the valuable resources for teaching. However, the time is always limited or allocated for the teaching learning process. So, the teachers generally have to encounter coverage versus mastery dilemma. If they prefer to cover all of the curriculum contents, they will put aside the students' mastery of the skills required and vice versa.

Besides, the institutional factor, the teacher factor is also a determinant factor for succeeding curriculum implementation. In this curriculum implementation case, the essential

thing is the existence of colleagues to discuss instructional matters as well as the new curriculum. Richards (2001) asserts that there must be a moment when teachers need feedback about what they have done either it is an accomplishment or a problem. This feedback giving might leads to teacher collaboration which can function as a way to improve several elements in teaching learning (Richards and Farrel, 2006). Furthermore, Wanchai (2012) states that this collaboration could reduce the isolation feeling of the teachers.

The last factors are teaching and learning factors per se. The teachers usually deal with differences among the student such as their background and learning style. These learners diversity, which is mentioned as personal factor by Posner (1992), might hinder the curriculum implementation (Cheung and Wong, 2012). With this learning diversity, the teachers need to give special attention to their characteristics in order to optimize the teaching learning process. Besides, the problem might arise in this factor is the different expectation and view of learning between the teachers and the students.

Several studies in investigating problems in implementing have been conducted. Cheung and Wong (2012) examined key hampering and supporting factors in schools during the first stage of the curriculum reform (2001-2006) in Hong Kong. This study was the large scale study which involves 150 primary and 120 secondary schools with 7,869 key stakeholders including principals, curriculum leaders, teachers, and students. The results revealed that each investigated factor have its own potential problems. The problems found in the study were teachers' heavy workloads, learning style differences in class, and teachers' insufficient of the curriculum reform.

B. METHODS
1. Research Design

Since the research objective is investigating problems in curriculum implementation, a case study was utilized in the present study. Yin (1994: 137) reveals that the use of case studies has been conducted in association with decisions, programs, and a reformation of organization also the implementation process. Furthermore, Bell (2005) mentions that individual researchers are regarded more appropriate to use case study because of the chance to examine one certain aspect in particular depth. It means that the case studies enable researchers to study the problem, including about implementation process, more deeply. Thus, considering that this study is the research investigating comprehensively a single research problem about the implementation, the most appropriate research design is the case study.

2. Data Collection
a. Samples

The location of the study was in one vocational school in Bandung involving one English teacher of tenth grade students. The teacher has been implemented the 2013 Curriculum for one year from 2013.

b. Instrumentations

An interview and a questionnaire were the instruments of this research. The interview conducted was a semi structured interview. Bell (2005) states that in this kind of interview the researcher prepare a list of items to discuss and some inquires as reminder the problems that

they expect to cover. So, by using this semi-structured interview, the researcher provided some questions as guidance without really being attached to it. In addition, in this interview the questions can be adaptable to the respondent answers (Nunan, 1992). Therefore, the researcher might also develop the questions during the interviews undertaken.

The list of questions inquired consists of several primary subjects. They contained (1) comprehension of the Curriculum 2013, (2) several problems based on several factors in the implementation proposed by Richard (2001) (*See* Literature review), and (3) suggestions for the government regarding the Curriculum 2013.

The questionnaire was also used in this research. This was functioned to get the additional information about the implementation of the Curriculum 2013 as well as to crosscheck the results of the other instruments. The questionnaire cover the background questions, the closed-ended questions and the open-ended questions. Background questions are used to obtain personal characteristics of the respondents (Fraenkel and Wallen, 2006). So, these included the class that the respondent teaches and how long she has been teaching. Close-ended questions, on the other hand, were used to pose some questions about material, syllabus, lesson plan and supervision as well. Here, in each question the researcher provided options for the respondent to choose (Fraenkel and Wallen, 2006). Also, the open-ended questions were made to obtain more profound information about some problems in implementation associated with teaching learning activities, lesson plan making and evaluation. Additionaly, the open-ended questions are in which the researchers do not provide any options (Fraenkel and Wallen, 2006) and the respondents are more freely to impart their response "within their cultural and social experiences" (Neuman, 2002 as cited in Fraenkel and Wallen, 2006: 399).

c. Data Analysis

To attain the objective of the research, the data obtained need to be classified and analysed. The data from interview would generate interview transcript and the questionnaires would produce questionnaire data. Those data are then analysed through some processes proposed by Renner (2003), namely: (1) get to know the data, (2) focus the analysis, (3) categorise information, (4) identify patterns and connection within and between categories, and (5) interpretation.

In the first step, the researcher recurrently read the data and made some impressions about it (Renner, 2003). The second step, the researcher would focus on the analysis. Here, the researcher re-examined the aim of the research then sought the elements of data which were believed to be the answer of the research question (Renner, 2003). The third, the researcher categorized the information. This step is also mentioned by Lodico et.al (2004) as coding data into categories. Before coming to the categories, the researcher needs to identify patterns and themes then arrange them into logical categories (Creswell, 2008; Renner, 2003). So, the data analysed by the research were labelled become themes and they are, later on, managed into possible categories. The fourth step is identifying patterns and connection within and between categories. In this study, the categorization would be based on Richards' four-factors contributing effective and successful curriculum implementation: institutional factors, teacher factors, teaching factors, and learning factors (*See* Richard, 2001). The last is

interpretation. In this step, the researcher tried to re-collect the themes and connections to explain the finding. It is so called "interpreting the data—attaching meaning and significance to the analysis" (Renner, 2003: 5). Thus, the categorisation made is interpreted in such a way in association with the research question stated.

C. FINDINGS AND DISCUSSIONS

1. Teachers problems in implementing the Curriculum 2013

Curriculum change is not always rejected by teachers. In this study, it is proven by the enthusiastic acceptance of the teacher regarding the try-out of new curriculum, the 2013 Curriculum. The teacher believed that every change, including curriculum change, must lead to improvements and it must have been considered carefully by the government. This response is, however, in contrast with Zimmerman's (2006) statement that curriculum reform is frequently unwelcomed by teachers either due to the comfort using previous curriculum (Utomo, 2005 as cited in Atmono, 2008) or due to their insensitiveness of the need of change (Greenberg & Baron, 2000).

Nevertheless, the absence of the teacher's resistance does not necessarily mean that the teacher is detached from the problems in implementation. The teacher in this study confessed that there were some problems encountered in implementing the 2013 Curriculum. They are presented in the following table:

Table 4.1 Problems of the Teacher in Implementing the 2013 Curriculum

No	Factors	Problems
1	Institutional	a. Insufficient training b. The absence of materials needed including textbooks c. Inadequate time allocation
2	Teacher	Lack of colleague to discuss the curriculum and to give feedback
3	Teaching and learning	Different views of learning between the teacher and the students

2. Problems in relation to institutional factors

a. Insufficient training

In terms of institutional problems, the problem faced by the teacher was insufficient training. According to interview results, the teacher admitted that, as far, she only joined an in-house training (IHT) organized by the schools about the 2013 Curriculum, but she was dissatisfied with it. She revealed that in this training, all of the teachers, including non-users of the 2013 Curriculum, were involved and the descriptions of the curriculum were too general. Besides, the instructors of the training were not from the same field as hers. Therefore, the teacher could not inquire several specific questions in association with the English subject.

This dissatisfaction is followed by some expectations from the teacher about the training. The teacher actually expected a training which allows her to probe a lot of things regarding how to the design and what content of English lesson plan or other administration stuffs are. In addition, she also desired an expert instructor who knows well what the English

teachers really need in implementing the 2013 Curriculum. Therefore, she admitted that she needed the curriculum training for English teachers in particular. It is not surprising that the training is desirable and mentioned as one of the factors necessary for succeeding the curriculum implementation (Fullan and Pomfret, 1977; Waugh and Punch, 1987 as cited in Cheung and Wong, 2012). In addition, providing teacher training is also regarded as a way to develop teachers' skill and qualification as well as an indicator of a quality institution (Richards, 2001).

b. The absence of materials needed

Another problem was identified in this study was the absence of materials such as textbooks. The teacher conveyed that she needed the materials to teach in the classroom. She was afraid that what she had taught was inappropriate. Hence, because of the absence of materials that "should have been given" by the government, the teacher strived to seek and explore the materials that she believed to be appropriate for teaching. Based on questionnaire results, the resources from which the teacher searched the materials were the internet and magazines—which is applicable for teaching. However, since the English contents of vocational schools are equivalent with those in senior high schools (Kemendikbud, 2013a), the teacher's problem is not really obvious considering that the teacher was previously an English teacher in senior high schools. Therefore, she might use the previous relevant materials used in her former school.

Corresponding to this issue, Kemendikbud (2013a) states that providing textbooks for teachers and students in the 2013 Curriculum is an absolute responsibility of the Indonesian government. Therefore, the teachers are only responsible for additional textbooks or materials. Additionally, Syahmadi (2013) mentions that the availability of government-developed textbooks in the curriculum 2013 is intended for alleviating teachers' overburden. This effort might be a solution for teachers' problem in developing materials in the previous curriculum, the KTSP curriculum. It is since in the KTSP curriculum, teachers must develop syllabus and lesson plans as well as select textbooks and materials in accordance with the immediate region needs (Haeruddin, et.al, 2009). So, by providing textbooks, the government could ease teachers' works. The teacher only need to develop lesson plan from the given syllabus and take the materials from the textbook provided.

According to the above explanation, it seems that a gap between the plan and practice –in terms of material or textbook provision— does exist. This problem might possibly happen because the implementation of curriculum 2013 is still in a try-out phase, so the supports are not readily distributed or perhaps the government are running out supply. Moreover, as it can be observed previously, this dilemma could emerge teachers' confusion and also hinder the success of curriculum reform. Exactly similar to Posner's (1992: 188) assertion, availability of textbooks (proximal) as one of frame factors can "function as limitations or constraints on teaching and thus curriculum implementation." It means that if the institutions disable to provide the textbooks, then it will possibly limit curriculum implementation in general.

c. Inadequate time allocation

The next problem revealed from this study is inadequate time allocation. The amount of time allotted for English subject in the 2013 Curriculum based on Kemendikbud (2013a) is

only two credit hours per week. The teacher expressed, "…because of the National Exam, so there should be provided more chances and time to do the practices and also to learn this and that…" It means that as one of tested subject in the National Examination, English should have more time allocation to impart the English competence required by the 2013 Curriculum as well as to pass the examination. To acquire these intentions, the students need more practices and spending more time than those subjects which are not involved in the National Examination.

Posner (1992) says that time is indeed a valuable treasure for teachers in teaching but the teachers are almost always problematic in association with the amount of it. In the aforementioned case, the teacher encountered dilemma to prepare the students with English practice in order to meet the national standard and the limited time given by the government. This problem should be carefully noticed since it usually results in a misdirected situation, in which the teachers intentionally miss the language classes for only teaching the standard skills needed to pass the test (Bailey, 1998; Pizzaro, 2009 as cited in Sukyadi and Mardiani, 2011).

Dilemma for being coverage- or mastery-oriented teachers is also triggered by the insufficient time allocation (Posner, 1992). If the teachers prefer teaching all the content coverage to the students, then they will put aside the students' mastery of the skills. In contrast, if the teacher emphasizes on the mastery of skills, then only several contents will be covered. However, this dilemma is not really faced by the teacher in this study. She expressed that the time allocation is actually satisfactory for covering the content required by the 2013 Curriculum. This is due to the strategies used in conveying the materials.

By using segmentation of the standard competences, the teacher believed that the children would be more focused to learn the materials and master the competences because the number of materials was achievable. Parralel with this, Posner (1992: 189) also mentioned that "with so much to cover and so little time, teachers…trying to strike reasonable balance between breadth and depth—that is between covering the required content and seeing to it that most students master that content." It means that at last the teachers should conduct the teaching where they give the equivalent attention to both coverage and mastery without putting aside one of them.

d. Problems in relation to teacher factors

The second problem found in this study was lack of colleagues to discuss the curriculum 2013 and to give feedback. By examining the data from the interview, it can be seen that the cause of this problem was not because of the reluctance of the teacher's colleagues to talk about the curriculum, but it was since all of the English teachers have a really tight schedule. Hence, they could only discuss administrative matters.

Another expectation of the teacher was feedback from her colleagues to improve the works. Feedback is viewed by Richards (2001: 214) as an imperative matter in teacher factors since there is a necessity for teachers "to be told when they are doing well and when there are problems with their performance." The feedback of the teacher's work with respect to the curriculum 2013 is less likely to be given because the teacher in this study is the only English teacher who uses the 2013 Curriculum. Moreover, since the teacher is a relatively new teacher in Bandung, there is no likelihood to request feedback from other- school English teachers.

The lack of feedback from the colleagues is an unfortunate. It is since collegiality (Posner, 1992) or help lines (Richards, 2001) or peer coaching (Richards and Farrell, 2006) is considered vital in determining the success of new curriculum implementation. Richards and Farrell (2006) asserts that this peer coaching is a teachers' collaboration functioned to improve several elements of teaching learning activities.

e. Problems in relation to teaching and learning factors

Different views of learning between the teacher and the students

In the meantime, in terms of teaching and learning factors, the initial issue was the difference of view of learning between the teacher and the students. In this research, the teacher conveyed that the 2013 Curriculum requires teachers to use scientific approach and discovery learning in their teaching. Here, she appreciated this idea since the students have more possibilities to be the source of information instead of only being information recipient. However, she believed that this kind of method would be successful if only both teachers and students have the same view of learning and the good cooperation among them in realizing the effective instruction. She said that sometimes it was exhausting for the teacher to interact with the "special" students who were not really responsive to the active learning or discovery learning proposed in the 2013 Curriculum. At last, they would still expect to be spoon-fed and learn passively although now they had bigger chance to be an information source.

Nevertheless, different views of learning between the teacher and the students is deemed natural phenomenon. This is reflected in Richards' (2001: 223) idea that "learners enter a course with their own views of teaching and learning and these may not be identical to those of their teachers." One of the examples in ELT setting is revealed by Alcorso and Kalantzis (1985) as cited in Richards (2001: 223) who discovered that teachers appreciate more communicative activities while the students prefer "grammar exercises, copying written materials, memorizing, and drill work." It is plausible that the students' preference to be involved in non-communicative activities is affected by their insufficient English proficiency (Wanchai, 2012). Hence, the focal matter in this case is actually how the teacher could guide the students discovering and learning things regardless of their learning views.

D. CONCLUSIONS AND RECOMMENDATIONS

To conclude, this study has revealed that several problems were encountered by the English teacher in the 2013 Curriculum implementation. There were three problems in relation to the institutional factor consisting of the insufficient training as well as the in adequate time allocation for English subject, also the absence of materials such textbooks for the instruction. Meanwhile, from the teacher factor and teaching learning factor per se, the problems were only the lack of colleagues for discussing the 2013 Curriculum and different view of learning between the teacher and the students.

This indicates that the dominant problems were from the institutional factor, in this case it refers to the government as the sponsor of the 2013 Curriculum implementation. This might happen possibly because the 2013 Curriculum is still in try-out phase. So, the efforts of Indonesian government to fulfil the needs of the curriculum implementation are not mature

yet. Moreover, perhaps the government is attempting to give what the schools needed gradually since the implementation per se is about a process.

Therefore, there are several suggestions in terms of the 2103 Curriculum implementation. First is for the Indonesian government. It is vital for the government to make some supervision to all the schools implementing the 2013 Curriculum, especially in the teaching learning activities, to find out what problems the teachers face as well as the sufficiency of supporting facilities. In addition, re-examine whether the time allocation for the subjects in the 2013 Curriculum, especially English, is sufficient to cope all the contents in the curriculum and to prepare students facing National examination. Second is for English teachers in general. It is suggested that the English teachers re-learn the demand of the curriculum and what makes it different to the KTSP curriculum. Hence, the desired results of the curriculum reforms will be achieved. Besides, it is essential for the English teachers not to hesitate to consult other English teachers and related parties whenever encounter problems in the 2013 Curriculum implementation.

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SMART KIDS BAD KIDS: A QUALITATIVE STUDY ON THE DIFFERENCE OF IDEAL-SELF BETWEEN HIGH AND LOW ACHIEVERS STUDENTS IN PENANG.

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Abstract

It is common in Malaysian public secondary school to group their students based on academic reports; students with high academic reports are assigned to different classrooms from those with lower academic reports. This qualitative study aims to explore their differences related to the ideal-self, and how the difference occurred. Semi-structured interviews have been done to participants consisted of public secondary school students from high and low achievers classrooms and their teachers. In Vivo and Thematic analyses have been done, and it was discovered that students of the high achievers classrooms picture their ideal-self in general terms, such as financially-successful, behaviorally-excellent, and generally happy person, while their counterparts from lower achievers classrooms tend to portray their ideal-self as being socially functional by stating clearly what function they will hold in the society, such as a nurse, a police officer, or a homemaker. It was also discovered that internal locus of control contributes to the students' ideal-self, together with teachers' classroom behavior in schools with such grouping system.

A. INTRODUCTION

The most common student-grouping practice in Malaysian public secondary schools is to group students in separate classrooms for most subjects, according to their level of ability, which refer to their general academic achievements in the past (Saleh, Lazonder, & DeJong, 2005). Often, the reason behind such practice is because it is more challenging for teachers to teach in a classroom where students with high and low academic abilities are mixed (Ireson & Hallam, 2001; Slavin, 2006).

In the context of secondary schools, such grouping practice affect the students' perceptions of teachers' expectancy, where high achievers perceived that their teachers expect them to achieve high, and the low achievers perceived that their teachers expect them to have disciplinary problems (Hazri, Prihadi, & Hairul, 2010; Ismail & Majeed, 2011; Prihadi, Chin, & Lim, 2011), and this difference led the high achievers to possess more adequate self-esteem than the lower achievers (Prihadi & Chua, 2012; Prihadi, Hairul, & Hazri, 2010). Meanwhile, difference in perceiving teachers expectancy also affects their internal locus of control (iLoC, the tendency to credit or blame oneself for one's success or failures), where the high achievers possess more internal locus of control and the lower achievers more external (Prihadi & Hairul, 2011). The latter also advocated that iLoC mediates the influence of perceived teachers' expectancy on the students' self-esteem.

Thus, it can be concluded that through a long process, the grouping process based on the past academic record sets the self-esteem differences between students from HAG and LAG. However, all the aforementioned studies were done quantitatively. While quantitative findings offer statistical understanding about the research phenomenon, it will not cover the actual voice of the populations and the depth of the understanding. Moreover, it will not let the researchers and educational stakeholders know what exactly needs to be done next.

For instance, the aforementioned quantitative findings led to the knowledge that academic records-based grouping set significant difference between LAG and HAG students in terms of self-esteem, and improving the students' iLoC might protect their self-esteem. However, no information can be obtained about how the phenomenon occurred exactly, how it develops, and how it should be taken care of.

One of the components of self-esteem that cannot be measured quantitatively is the ideal-self. Ideal-self refers to one's perception of "How I supposed to be", and the gap between it and actual self (How I am now) serves as self-esteem (Robins, et al, 2001). However, data related to ideal-self cannot be quantified, because the individuals should explain about it themselves; thereby, the actual voices of the students should be collected in order to obtain the knowledge. Thus, a qualitative study needs to be done to capture the actual voices of the students and teachers related to the phenomenon that sets the significant self-esteem difference among the students. Moreover, qualitative approach might lead to deeper knowledge in practical level (Wiersma & Jurs, 2005), that allows stakeholders to develop problem-specific solution steps.

This current study aims to explore the difference between the LAG and HAG in terms of their ideal-self, along with the cause of it. Findings that self-esteem of the HAG tends to be more adequate than LAG (Prihadi & Chua, 2012; Prihadi, Hairul, & Hazri, 2010) suggested that these groups are different in term of their ideal-self; however, because ideal-self cannot be numerically analyzed, qualitative approach is the only way to evaluate this difference. Contextually, this study aims to answer the following questions:

1. What is the ideal-self of the students from LAG and HAG?
2. How does iLoC form the students' ideal selves?
3. What is the teachers' role in determining students' ideal-self?

B. LITERATURES

Based on the theory of symbolic interactions, the way individuals see themselves is highly influenced by how they perceived about others' expectation towards them (Stryker & Vryan, 2003). In line with that, a quantitative study by Hazri, et al (2010) indicates that students from HAG and LAG perceived that their teachers set different expectancy towards each group; HAG students perceived that they are expected to achieve high academic achievement, while the LAG students perceived that they are expected to be involved in disciplinary problems. Accordingly, the students' perception of their teachers' expectancy affects the way they see themselves; thereby, the HAG students see themselves differently from the LAG students (Prihadi, Chin, & Lim, 2011; Prihadi, Hairul, & Hazri, 2010).

Oppositely, the theory of symbolic interaction has been denied by Prihadi and Hairul (2011); they advocated that the self-esteem of students in HAG is not affected by their perception that they are expected to achieve high, although students in LAG is affected by their perception that they are expected to be problematic. Furthermore, the same study reported that internal locus of control mediates the influence between perceptions of others' expectancy on self-esteem. In other words, when the students iLoC is high, they would not likely to be affected by what they think their teachers expect them to be.

Another point of view came from the theory of self-discrepancy (Robins et al, 2001), which stated that self-esteem refers to the discrepancy between ideal-self and actual-self; the wider the gap, the lower the self-esteem. Therefore, because their self-esteem adequacies are significantly different, it can be hypothesized that students from LAG and HAG are different from each other in terms of their ideal-self. The same study also reported that individuals with more adequate self-esteem tended to ascribe socially desirable traits to themselves. In the context of this study, students from HAG tend to see themselves as more expected by the society compared to their LAG counterparts.

C. METHODS

1. Data Collection Procedures

Semi-structured conversational type of face-to-face interview was conducted to the participating teachers and students. For those whose Bahasa Malaysia or Mandarin is the mother tongue, an assistant-interpreter was invited in order to provide comfort for the participants and obtain higher level of understanding. Whenever it needed, the assistant-interpreter played a role as the main interviewer while the author played a role as an assistant, in order to maintain the comfort of the participants. Additionally, face-to-face interview is employed so that the participant will not hesitate to speak and deliver their ideas comfortably (Millar & Shevlin, 2007).

Interview questions were prepared based on the literature review in order to obtain the qualitative data related to the teachers' expectancy, iLoC, and ideal-self. Table 1 illustrated the interview protocols for the students. Other questions that arise from the situation were also asked.

Table 1
Interview Protocols For The Students

Themes	Interview Questions
Perception on teachers' expectancy	How do you think your teachers expect you to be? (Probe) Do you think that your teachers expect you to improve your academic achievement? (Probe) Do you think that your teachers might suspect you to be involved in disciplinary matters? (Probe) Why do you think your teachers behave in such a way he/she behaves in the classroom? (Probe)

Ideal-self and self-discrepancy	Ideally, as a person, how do you think you should be? (Probe) Referring to the previous question, what do you think you should do to be ideal? (Probe) How do you evaluate yourself as a person currently? (Probe)
Influence of teachers' expectancy on ideal-self	Based on your previous answer, do you think your teachers have the same opinion about you? (Probe)
Internal Locus of Control (iLoC)	Do you think that you are fully in control of your own success? (Probe) Have you ever thought that success for the students was based on their luck? (Probe) What is the more dominant factors that put you where you are now, your own efforts in the past, school regulations, or teachers capability? (Probe)
Influence of teachers' expectancy on iLoC	Related to our previous discussion, do you think your teachers have similar idea about that? (Probe)

Table 1 shows the frame of the questions for the students. Sequence-wise, the interviews were done flexibly, as long as all the themes were covered. In order to identify teachers' expectancy towards students from HAG and LAG, the participating teachers were interviewed by using the interview protocols illustrated in Table 2.

Table 2
Interview Protocols for the Teachers

Themes	Interview Questions
Demographic Factors.	How long have you been teaching in your current school? How long have you been teaching in total? Have you graduated from secondary school that practice academic grouping?
Experiences in teaching in LAG and HAG.	Based on your experience, did you find LAG students were different from HAG students? *Probe* What kind of difference (or similarity) they have in terms of their behavior? *Probe* What kind of difference (or similarity) they have in terms of their tendency to improve their academic achievement? *Probe* Do you know about academic grouping-practice in your school? Why do you think a school should practice academic grouping?
Expectancy towards the students	*Probe* As a teacher, which kind of classroom would you prefer to teach, ability-grouped or mixed? *Probe* How would you expect the next batch of LAG and HAG students would be? *Probe*

Table 2 shows the frame of the questions for the students. Sequence-wise, the interviews were done flexibly, as long as all the themes were covered.

2. Participants

Student participants were recruited from the sampled schools. Some teacher participants were recruited from the sampled school, while some others were having their graduate studies in School of Educational Studies, Universiti Sains Malaysia. Participants of this qualitative studies consisted of ten teachers who have been teaching in HAG and LAG, as well as ten LAG students and ten HAG students. All the students were coded as S1, S2…S10, while the teachers were coded as T1, T2...T20.

D. DATA ANALYSES

Two cycles of analyses were utilized in this study. In Vivo coding Strategy was utilized as the first cycle, because it contains the actual voices of the participants. Thematic analysis is employed afterwards, in order to categorize the 'actual voices' collected from the previous cycle. Because the actual voices of every participant were stated in different manners, thematic coding is employed in order to organize the data into categories that will be analyzed in order to support the quantitative findings and to answer the qualitative research question of this study.

In Vivo Coding requires thorough readings of every sentence and distinguish phrases or words within the responses that may help to 'crystallize and condense meanings' (Charmaz, 2006). Therefore, codes must appear next to every line of data; however, depending on the research objective, In Vivo Codes can be applied with less frequency, such as one word or phrase for every three to five sentences (Saldaña, 2009). Most importantly, In vivo Codes could be used as the sole coding method for small-scale studies (Charmaz, 2006; Saldaña, 2009).

Thematic analysis, or search for themes in the data, is conducted after the In Vivo Coding done to the data. A theme might be identified at the manifest level (observable in the response) or at the latent level (underlying the phenomenon) (Boyatzis, 1998). At manifest level, a theme plays its role as a common denominator to group and organize a set of data (Auerbach & Silverstein, 2003). At a latent level, themes are interpretive and insigthful discoveries of the nature or meaning of the daily life (van Manen, 1990). Overall, themes capture the phenomenon being investigated, and help the researchers to get deeper understanding.

Schema, such as Table 3, was used to code, arrange, and organize the data from the participants' responses.

Table 3
Example of Schema

S/T	Demographic Factors	Responses (Actual Voice)	In Vivo Codes	Theme	Analyses
S1	15y.o; HAG; Govt School	I'm not sure. But I think they don't expect students from the weakest class to perform well[7]. They put all of the responsibility to us[8].	[7]they don't expect students from the weakest class to perform well [8]They put all of the responsibility to us.	[7,8]High Academic Expectancy	HAG students perceived that their teachers expect them to perform well.

As depicted in Table 3, sample of the excerpt includes the actual responses from the student. The student's actual response was coded by using In Vivo Coding method (the superscript numbers), where the actual voice of the participant is noted. Sequentially, from the in vivo codes, the theme was given in order to be analyzed. The analyses reported in the subsequent column.

E. FINDINGS

1. Ideal-self differences among LAG and HAG Students

In Vivo and thematic analyses have been done to the entire interview excerpt. In this paper, the broken English grammar and the accent of the participants are remain unchanged in order to understand the way the voiced their minds out. Table 4 depicts the schema used to code, arrange, and organize the data related to the theme of ideal-self. Sample of the excerption are taken from S3, who represents HAG and S5, who represents LAG.

Table 4
Excerpt from the Analyses of Ideal-Self

S/T	Demographic Factors	Responses (Actual Sample)	In Vivo Codes	Theme Mentioned	Analyses
S3	15y.o; HAG; Govt. School	I think I have to be a good person. Nice person, with good job or maybe business... Good life[6].	[6]Nice person, with good job or maybe business... Good life.	[6]Ideal Self (Nice and successful)	It is perceived that the ideal-self is represented by financial success (good job or business, good life) and behavioral excellence (nice person) Self-discrepancy is perceived to be reachable.

His remarks on |
| | | I have to study, go to university, and study hard[7]... Work in a good company or running a good business, than safe my income, so I can be rich[8]. | [7]I have to study, go to university, and study hard

[8]Work in a good company or running a good business, | [7, 8, 9] Perceived self-discrepancy. | |

S/T	Demographic Factors	Responses (Actual Sample)	In Vivo Codes	Theme Mentioned	Analyses
			than safe my income, so I can be rich		the way to reach the ideal-self indicated his perception that he knows what it takes to reach his goal.
		I think... Not difficult... But still not very easy too[9].	[9]Not difficult... But still not very easy too		
S5	15y.o; LAG; Govt.School	When adult, I want to be police[10]. Catch bad people. … They sell drug to my friend, my friend become crazy you know[11].	I want to be police[10]. They sell drug to my friend, my friend become crazy you know[11]	[10, 11]Ideal-Self (police officer, socially functional) [12, 13] Perceived self-discrepancy	Ideal-self is perceived as being socially functional. As long as exam results are not involved, the discrepancy between ideal-self and actual-self was perceived reachable.
		Yes, finish school, go to police academy. Easy[12], no need straight A[13], just pass exam, finish.	Easy[12] no need straight A[13]		

HAG students are likely to portray their ideal-self as financially successful, behaviorally excellent, and balanced, as sampled in Table 4. Their ways to mention that the ideal-self is achievable are such as sampled below:

- "*I think... Not difficult* (to achieve the ideal self)... *But still not very easy too...*"(S3)
- "*I think I can go to a good university later.*" (S1)

Furthermore, their statements related to being aware of what it takes to achieve the ideal-self are such as,

- "*I have to study, go to university, and study hard... Work in a good company or running a good business, than safe my income, so I can be rich.*" (S3)
- "*We should be nice to everyone, fair, and we have to have a good score at school, so we can live happy later.*" (S2)

On the other hand, LAG students are likely to picture their ideal-self as being socially functional, and financially secured with others' support. Compared to their counterparts from HAG, students from LAG voiced out that their ideal-self is less-achievable, takes external supports, or uncertain. It can be understood from some of their remarks such as:

- "*I don't know...Getting married, have children, rich husband…*" (S11)
- "*I don't know la... Difficult... Have to pass exam first…*" (S16)

Nonetheless, some of them showed some belief that the ideal-self is achievable by confidently saying "*When adult, I want to be police… Yes, finish school, go to police academy. Easy, no need straight A, just pass exam, finish…*" (S5)

Another remark from another LAG student, "*I want to be a nurse*" (Stated by S17) fits the indication that her ideal-self is being socially functional. In terms of self-discrepancy, LAG students tend to believe that their ideal-self is achievable as long as academic excellence is not involved, or there is support from others; without others' support and the absence of academic requirements, the self-discrepancy is considered distant.

It can be concluded that there is a wider self-discrepancy (gap between ideal-self and actual-self) among LAG students compared to their HAG counterparts. Furthermore, it was discovered that there is a different tone in stating their ideal-selves: HAG students tend to portray their ideal-self as financially successful, behaviorally excellent, and balanced, while the LAG students are more likely to picture their ideal-self as being socially functional, and financially secured with others' support.

2. Locus of Control differences among LAG and HAG students

In Vivo and thematic analyses have been done to the entire interview excerpt. Table 5 depicts the schema used to code, arrange, and organize the data related to the theme of ideal-self. Sample of the excerption are taken from S8, who represents HAG and S18, who represents LAG.

Table 5
Excerpts from the Analyses of Locus of Control

S/T	Demographic Factors	Responses (Actual Sample)	In Vivo Codes	Theme Mentioned	Analyses
S8	15y.o; HAG; Govt. School	Yes[18] (I'm in control of my success). I mean, it depends on God's will… but we still have to work.	[18]Yes.	[18, 21]High Internal LoC	She perceived that she is in control of her own success. Internal LoC was shown to be high. The role of external factors such as 'luck' and 'God' were not mentioned to be standing alone without internal effort.
		…but we can't just rely on our luck[19].	[19]We can't just rely on our luck	[19, 20] Low external LoC	
		Teachers' capability… no[20]. (not a dominant factor) I mean, they are good… but students still have to do something to get good grades[21].	[20]Teachers' capability…no [21] students still have to do something to get good grades		

S/T	Demographic Factors	Responses (Actual Sample)	In Vivo Codes	Theme Mentioned	Analyses
S18	15y.o; LAG; Govt.School	Of course[13], la (I'm in control of my success). But sometimes people unlucky[13], you know?	[12]Of course, la. [13]Sometimes people unlucky	[12,13,14] Similar attribution of internal and external LoC	Although he believes that his effort is important, he described that luck can also play important role in determining his success
		Both important la[14]. Cannot success without luck, cannot success without effort.	[14]Both important		

HAG students possess high internal LoC; as represented by S8 in Table 5. They believe that their events of failure and success depend on themselves. S8 stated that an external factor in the form of 'God' as the contributing external factor; however, they voiced out that their own efforts play more significant role than the external factors.

Other HAG students voiced out that they believe that they can do something to change their future, such as:

- "*...it depends on God's will... but we still have to work*" (S8)
- "*...they* (teachers) *are good... but students still have to do something to get good grades.*"; "*Teachers contribute some... but it depends on me, right?*" (S10)
- "*Everything is important. But the most important is my effort la, of course...*" (S6)

One of them even mentioned a simple "*Yes*" when asked, "*Do you think that you are in control of your own success?*" It is obvious that they showed some hints that they believe that their success depends on themselves.

On the other hand, LAG students voiced out that even though they believe that they can do something to change their future, something external plays more significant role. Their response towards the question of "*Do you think that you are in control of your own success?*" were ranged from :

- "*No la* (I'm not in control of my own success) *If I smart, yes. But I'm not smart... so depends on situations la.*" (S20)
- "*Of course, la* (I'm in control of my success). *But sometimes people unlucky, you know?*" (S18)
- "*But I don't know... Difficult isn't it?*" (S11)

It is shown that they do not really believe that they alone can take themselves to success; other factors (*luck,* and *situation*) should be involved.

Qualitative findings indicated that LAG students possess lower iLoC than their counterparts in HAG. In order to explore how this iLoC difference affects the difference of

their ideal-self, another double-cycle analyses have been done to the interview excerpts, and it is sampled in Table 6.

Table 6
Pattern of the iLoC and ideal-self among the students

S/T	Demographic Factors	In Vivo Codes	Themes	Analyses
S7	15y.o; HAG; Govt. School	They expect us to score higher than the students from the other classrooms	Perceived teachers' academic expectancy (PTEa)	Students from HAG, as represented by S7, showed similar patterns as follows:
		it depends on me	High Internal LoC	1. Existence of PTEa
		All teachers expect the same. they don't expect students from the weakest class to perform well	Influence of PTEa on ideal-self	2. Non existence of PTEd 3. High iLoC 4. Their PTEa affects their ideal-self
		They put all of the responsibility to us. Teachers' capability… no. students still have to do something to get good grades	Absence of the influence of PTEa on LoC	5. Their PTEa does not affect their iLoC
S13	16y.o; LAG; Govt. School	Low score they don't scold. But naughty, they scold	Perceived teachers' suspicion of disciplinary problem (PTEd)	Students from HAG, as represented by S13, showed similar patterns as follows:
		…I'm not smart… so depends on situations la.	High External LoC	1. Existence of PTEd 2. Non existence of PTEa
		[1]My teachers are bad. [2]They don't teach, just scolding. [3]Because our class stupid, la.	Influence of PTEd on ideal-self.	3. Low iLoC 4. Their PTEd affects their ideal-self
		They expect me to be nice, not naughty, pass the exam…If I smart, yes. But I'm not smart… so depends on situations la. Maybe luck.	Influence of PTEd on LoC (into becoming more external)	5. Their PTEd negatively affect their iLoC

As depicted in Table 6, different patterns of responses were evident between HAG and LAG students. Students from HAG are likely to perceive that they are expected to achieve high academic scores and not to be involved in disciplinary problems. This perception leads them to develop certain ideal-self, yet not affect their iLoC, thereby they think that their teachers do not contribute significantly to their academic achievements. On the other hand, LAG students tend to perceived that their teachers expect them to be problematic and not able to achieve good academic scores. This perception negatively affects their iLoC, and sequentially, having low iLoC affects their ideal-self.

The aforementioned findings indicated that the differences in terms of iLoC and ideal-self are started by the difference of the way they perceive their teachers' expectancy (PTEa and PTEd). Thus, it is important to understand the teachers' classroom behavior in each classroom, because their behavior will be perceived by the students as a sincere representative of expectancy (Stryker & Vryan, 2003). In line with that, analyses have been done to the excerpts of the interview with the teachers. Sample of the analyses is shown in Table 7.

Table 7
Teachers' Expectancy

S/T	Demographic Factors	Responses (Actual Sample)	In Vivo Codes	Theme Mentioned	Analyses
T10	8 Years of teaching in general; 2 years in current school; Grad from Govt School (Academic Grouping)	Students with high marks are grouped in one classroom, so we can expect them to score, la[8]. While students with no marks will be grouped in other classrooms… and we can expect them to be involved in such problems soon after they mingle with their peers[9].	[8] Students with high marks are grouped in one classroom, so we can expect them to score, la [9]we can expect them (LAG) to be involved in such problems soon after they mingle with their peers	TEa on HAG and TEd on LAG	T10 and T8 represented the teachers and indicated that they expect HAG students to be willing to improve their academic achievements. However, T8 believed that HAG students can also be problematic (do anything to get good marks)
T8	12 Years of teaching in general; 5 years in current school; Grad from Boarding School (non-Academic Grouping)	(Giggles too) You know la… students from good class are 'fighters', they will do anything to get good marks[3]… students from low class are… not to say lazy, but they don't fight hard	[3]they (HAG) will do anything to get good marks. [4]…but they(LAG) don't fight hard enough	TEa on HAG, no TEa on LAG	Towards LAG students, T10 expects that they tend to be involved in disciplinary matters, while T8 expects that they will not willing to

S/T	Demographic Factors	Responses (Actual Sample)	In Vivo Codes	Theme Mentioned	Analyses
		enough[4].			improve their academic achievements.

Although Table 7 showed only a small sample out of all the participating teachers, all of the participating teachers showed their beliefs that HAG students will excel academically, and LAG students will not. They also believe that LAG students are likely to be problematic, and the HAG students are not. This perception was gotten from long years of experiences and from the other teachers as well, as said by T7, who was only teaching for less than a year:

> *"My colleagues told me not to pay too much effort to improve the academic scores of LAG students, and it was true! I used to give my best approach, but often they don't have what it takes to perform. They are just... Not smart enough to understand some materials…"*

It can be concluded that students develop their perception of teachers' expectancy exactly like how their teachers expected them to be, because the teachers' classroom behavior obviously indicated their expectancy.

E. DISCUSSIONS

This study discovered similar facts as the previous studies, such as that iLoC is more dominant among HAG than LAG students (Prihadi & Chua, 2012; Prihadi & Hairul, 2011), that HAG students possess PTEa and LAG students possess PTEd (Chin & Lim, 2011; Hazri, Prihadi, & Hairul, 2010), and similar difference related to their self-esteem (Ismail & Majeed, 2011; Prihadi, Hairul, & Hazri, 2010).

Nevertheless, while most of the other studies indicated that academic grouping jeopardized LAG students, this current study discovered otherwise; it develops the HAG students' iLoC up to a level where they became selfish, as can be seen from the way they portray themselves. Because iLoC is higher among the HAG students, they do not feel that they will need others' contribution in order to be successful; thereby, they do not involve other people in their ideal-self. On the other hand, the external Locus of Control among LAG students drove them to picture their ideal-self in a more social way.

Students from HAG and LAG developed different kinds of ideal-self. Students of the HAG picture their ideal-self in general terms, such as financially-successful, behaviorally-excellent, and generally happy person, while their counterparts from LAG tend to portray their ideal-self as being socially functional by stating clearly what function they will hold in the society, such as a nurse, a police officer, or a homemaker.

Teachers classroom behavior in schools with academic grouping clearly show that they believe that HAG students will end up scoring high academic achievements and LAG students are prone to disciplinary problem, and it is perceived correctly by the students, which in turn will develop their ideal-self based on their perception of teachers' expectancy.

1. **Practical Implications**

    In line with the findings of this study, teachers should be equipped with the deeper knowledge in educational psychology, especially related to how the students' psychological well-being is developed in schools that practice academic grouping. More importantly, they need to be taught how to control their classroom behavior in order to avoid showing negative expectancy to the students, and always attempt to show positive expectancy. Such behavior should be easier to show when the teachers have adequate confidence that they are more eligible and influential to their students' lives. Such knowledge and ability might be delivered in teachers' training program by inserting it into the subject of educational psychology or other subjects.

2. **Suggestions**

    This current study has been done on secondary school students between 15-16 years old, therefore the students might already have had their ideal-self and iLoC developed previously. Researches on younger students group might as well be conducted due to some possibilities of different results. Another limitation is the absence of the other external factors, such as perceived parental academic supports, perceived school climate, academic self-concept, or social economic status. Thereby, future researches should be conducted to fill the gap. Finding of such researches might be significant in determining more effective methods on developing students' general self-esteem without jeopardizing the focus on academic achievements.

    Sequentially, researches on finding effective methods to improve students' internal LoC is significant to elevate students' self-esteem and academic achievement. However, because LoC is a culture-sensitive trait, different cultural settings might produce different results. Therefore, following another limitation of this study that all of the students came from the same cultural background, studies on multi-cultural schools (such as international schools) or cross-cultural studies, are as well be suggested.

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PENGGUNAAN BAHAN BANTU MENGAJAR DALAM KALANGAN GURU PENDIDIKAN KHAS MASALAH PEMBELAJARAN

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Abstrak

Kajian ini bertujuan untuk melihat tahap kekerapan penggunaan bahan bantu mengajar dalam kalangan guru pendidikan khas masalah pembelajaran. Seramai 181 orang responden telah dipilih secara bertujuan (*purposive*) bagi memenuhi keperluan kajian. Sampel yang dipilih ialah dalam kalangan guru pendidikan khas masalah pembelajaran di Pulau Pinang. Instrumen soal selidik telah digunakan bagi melihat tahap kekerapan penggunaan bahan bantu mengajar. Tahap kekerapan penggunaan bahan bantu mengajar hanya melibatkan 20 jenis bahan bantu mengajar sahaja. Hasil dapatan kajian ini telah menunjukkan bahawa tahap penggunaan bahan bantu mengajar dalam kalangan guru berada pada tahap yang sederhana. Hasil kajian ini juga telah menunjukkan bahawa terdapat perbezaan dari segi tahap kekerapan penggunaan bahan bantu mengajar dalam kalangan guru pendidikan khas masalah pembelajaran berdasarkan jantina dan berdasarkan bilangan tahun mengajar

Kata kunci: bahan bantu mengajar, guru pendidikan khas masalah pembelajaran, tahap kekerapan penggunaan bahan bantu mengajar

A. PENDAHULUAN

1. Pengenalan

Sebagai seorang guru pendidikan khas, kita juga harus mempelbagaikan penggunaan sumber, pendekatan dan strategi supaya ianya sesuai dengan murid khas yang pelbagai ketidakupayaan. Murid masalah pembelajaran ini berbeza dari segi kebolehan, latar belakang ekonomi dan budaya. Perbezaan inilah yang membuatkan mereka berbeza dari segi pengetahuan, kebiasaan, kemahiran dan pengalaman (Roselan, 2003). Disebabkan perbezaan inilah, guru-guru pendidikan harus menggunakan pelbagai kaedah pengajaran dan bahan bantu mengajar bagi membantu mengukuhkan pemahaman murid masalah pembelajaran terhadap pengajaran guru. Pengajaran dan pembelajaran yang berbantukan bahan bantu mengajar secara sistematik akan menjadikan proses pengajaran dan pembelajaran menjadi lebih realistik, menarik, berkesan dan dapat merangsangkan minat murid untuk belajar (Elamarin, 2004).

Bagi memastikan setiap murid masalah pembelajaran tidak keciciran daripada dunia teknologi serta membantu guru-guru pendidikan khas dalam menggunakan bahan bantu mengajar dalam proses pengajaran dan pembelajaran mereka, Kementerian Pelajaran telah

membekalkan bahan-bahan bantu mengajar seperti radio, televisyen, projektor lutsinar, projektor slaid dan komputer ke sekolah-sekolah. Teknologi pengajaran dan media pendidikan semakin pesat berkembang dalam dunia pendidikan. Sejajar dengan perkembangan ini, guru pendidikan khas seharusnya mengambil kesempatan ini dalam memanipulasikan penggunaannya dalam proses pengajaran dan pembelajaran mereka. Bahan bantu mengajar dalam bentuk elektronik dan bahan bercetak menjadi bahan bantu mengajar yang semakin penting dalam proses pengajaran dan pembelajaran (Elamarin, 2004). Penggunaan bahan bantu mengajar akan membantu tercapainya sesuatu objektif pembelajaran (Jeyanti, 1996). Menurut Oemar (2011), bahan bantu mengajar merupakan satu kompenen penting yang perlu ada semasa sesuatu proses pengajaran dan pembelajaran berlangsung. Bahan bantu mengajar ini merupakan alat yang menyokong pengajaran guru. Malahan bahan bantu mengajar juga merupakan media perantaraan yang digunakan oleh guru dalam proses pengajaran bagi merangsang fikiran, perasaan, perhatian dan minat belajar murid bagi memastikan proses pembelajaran dapat berjalan (Mohd Yosup, 2007). Oleh yang demikian, penggunaan bahan bantu mengajar harus digunakan sebaik yang mungkin oleh guru pendidikan khas dalam pengajaran mereka.

2.   Pernyataan Masalah

Bahan bantu mengajar merupakan bahan sokongan yang dapat membantu guru dalam memastikan proses pengajaran dan pembelajaran dapat berjalan dengan lancar. Teknik dan kaedah serta pemilihan bahan bantu mengajar yang bersesuaian amat penting bagi memastikan proses pengajaran dan pembelajaran dapat berjalan dengan jayanya khususnya kepada murid pendidikan khas (Burns, 2003). Ini kerana murid masalah pembelajaran memerlukan bahan bantu mengajar bagi mengukuhkan lagi kefahaman mereka mengenai sesuatu topik yang dipelajari disebabkan mereka mempunyai tahap *Intelligence Qoutient* (IQ) yang rendah. Guru pendidikan khas memainkan peranan yang penting dalam memastikan sesuatu objektif pengajaran itu tercapai. Kaedah yang digunakan oleh guru dalam pengajaran boleh membantu dalam kejayaan proses pengajaran dan pembelajaran, ini kerana hanya guru yang tahu kelebihan dan minat muridnya (Tracy, 2006).

Namun begitu, masih ada guru menggunakan kaedah yang sama (*strereotaip*) dalam pengajaran iaitu bercakap, menerangkan atau menjelaskan dan akhir sekali memberi latihan (Najeemah, 2006). Kaedah ini sama sekali tidak bersesuaian dengan murid masalah pembelajaran. Ini adalah kerana murid masalah pembelajaran akan menjadi cepat bosan sekiranya guru hanya mengajar bermodalkan papan hitam dan percakapan. Untuk menarik minat dan tumpuan mereka terhadap pengajaran, guru mestilah kreatif dalam mempelbagaikan bahan bantu mengajar dalam setiap proses pengajaran dan pembelajaran (Kirk et al,2009). Terutamanya kepada murid *Attention Deficit Hyperaktif Disorder* (ADHD), kerana mereka mengalami masalah untuk memberi tumpuan terhadap pengajaran guru (Anupriya, 2008). Penggunaan bahan bantu mengajar membantu mengekalkan tumpuan mereka contohnya pengajaran melalui bahan interaktif sedikit sebanyak akan dapat menarik perhatian dan tumpuan mereka terhadap pengajaran guru. Menurut kajian yang dijalankan oleh Allan dan Will (2002) mendapati bahawa guru perempuan lebih beminat untuk

menggunakan bahan bantu mengajar berkomputer dalam proses pengajaran mereka berbanding dengan guru lelaki.

Secara kesimpulannya, penggunaan bahan bantu mengajar banyak membantu guru dalam proses pengajaran dan pembelajaran. Sekiranya murid masalah pembelajaran tidak diajar berbantukan bahan bantu mengajar, ini sudah pasti akan menimbulkan masalah kepada mereka untuk memahami konsep pengajaran yang disampaikan oleh guru (Paris, 2011). Melihat kepada betapa pentingnya bahan bantu mengajar bagi menyokong dan membantu guru dalam proses pengajaran dan pembelajaran terutama sekali kepada murid pendidikan khas masalah pembelajaran, kajian ini akan meninjau tahap kekerapan penggunaan bahan bantu mengajar dalam kalangan guru pendidikan khas masalah pembelajaran.

3. Objektif Kajian

Secara umumnya kajian ini bertujuan untuk mengenal pasti tahap kekerapan penggunaan, dalam kalangan guru pendidikan khas masalah pembelajaran. Secara khususnya pula, objektif kajian ini ialah untuk:

(1) Mengenal pasti tahap kekerapan penggunaan bahan bantu mengajar dalam kalangan guru pendidikan khas masalah pembelajaran.
(2) Mengenal pasti perbezaan tahap kekerapan penggunaan bahan bantu mengajar dalam kalangan guru pendidikan khas masalah pembelajaran berdasarkan jantina.
(3) Mengenal pasti perbezaan tahap kekerapan penggunaan bahan bantu mengajar dalam kalangan guru pendidikan khas masalah pembelajaran berdasarkan bilangan tahun mengajar.
(4) Mengenal pasti perbezaan tahap kekerapan penggunaan bahan bantu mengajar dalam kalangan guru pendidikan khas masalah pembelajaran berdasarkan jenis sekolah.

4. Persoalan Kajian

Kajian ini dilaksanakan bertujuan menjawab persoalan-persoalan berikut berdasarkan objektif kajian seperti yang telah disenaraikan.

(1) Apakah tahap kekerapan penggunaan bahan bantu mengajar dalam kalangan guru pendidikan khas masalah pembelajaran?
(2) Adakah terdapat perbezaan tahap kekerapan penggunaan bahan bantu mengajar dalam kalangan guru pendidikan khas masalah pembelajaran berdasarkan jantina?
(3) Adakah terdapat perbezaan tahap kekerapan penggunaan bahan bantu mengajar dalam kalangan guru pendidikan khas masalah pembelajaran berdasarkan bilangan tahun mengajar?
(4) Adakah terdapat perbezaan tahap kekerapan penggunaan bahan bantu mengajar dalam kalangan guru pendidikan khas masalah pembelajaran berdasarkan jenis sekolah?

5. Hipotesis Kajian

Mengikut Sulaiman (2005), hipotesis adalah ramalan sementara yang tidak diketahui yang menjadi landasan kepada pengkaji untuk membuat kajian terperinci terhadap sesuatu permasalahan. Terdapat enam hipotesis yang diuji dalam kajian ini.

(a)   Hipotesis Null 1 -

Tidak terdapat perbezaan tahap kekerapan penggunaan bahan bantu mengajar yang signifikan dalam kalangan guru pendidikan khas masalah pembelajaran berdasarkan jantina.

(b)   Hipotesis Null 2 -

Tidak terdapat perbezaan tahap kekerapan penggunaan bahan bantu mengajar yang signifikan dalam kalangan guru pendidikan khas masalah pembelajaran berdasarkan bilangan tahun mengajar.

(c)   Hipotesis Null 3 -

Tidak terdapat perbezaan tahap kekerapan penggunaan bahan bantu mengajar yang signifikan dalam kalangan guru pendidikan khas masalah pembelajaran berdasarkan jenis sekolah.

B.   METODOLOGI KAJIAN

Secara ringkasnya kajian ini telah dijalankan dengan menggunakan kaedah kuantitatif. Data-data dikumpul berdasarkan soal selidik yang telah diubah suai berdasarkan borang soal selidik yang telah digunakan oleh oleh Zainudin et al (2007) dan terdapat beberapa item yang dibina sendiri oleh penyelidik. Persampelan pula dibuat secara bertujuan iaitu pengkaji telah memilih guru pendidikan masalah pembelajaran di Pulau Pinang sahaja. Analisis statistik ujian-t dan ANOVA Sehala digunakan bagi melihat perbezaan min di antara pembolehubah yang dikaji.

C.   DAPATAN KAJIAN

1.   Analisis Dapatan Deskriptif Tentang Tahap Kekerapan Penggunaan Bahan Bantu Mengajar

Tahap kekerapan penggunaan bahan bantu mengajar oleh guru dibahagikan kepada tiga tahap iaitu tahap tinggi, tahap sederhana dan tahap rendah. Pembahagian skor markat adalah seperti yang ditunjukkan dalam jadual 1.1.

Jadual 1.1

Interprestasi skor min bagi tahap kekerapan penggunaan bahan bantu mengajar

Interprestasi tahap	Min
rendah	1.00 hingga 2.33
sederhana	2.34 hingga 3.67
tinggi	3.68 hingga 5.00

(*Sumber: Ubahsuai dari Wiersma, 1995*)

Sebanyak 20 item telah digunakan untuk mengenal pasti tahap kekerapan penggunaan bahan bahan bantu mengajar. Setiap satu item merujuk kepada bahan bantu mengajar yang berlainan. Jadual 1.2 menerangkan tentang keseluruhan dapatan data bagi kekerapan penggunaan bahan bantu mengajar.

Jadual 1.2
Analisis Tahap Kekerapan Penggunaan Bahan Bantu Mengajar

Bil	Soalan	Min	Tahap
1	Buku cerita	4.06	Tinggi
2	Gambar	3.98	Tinggi
3	Kad imbasan	3.33	Sederhana
4	Surat khabar	3.15	Sederhana
5	Buku rujukan	3.27	Sederhana
6	Poster	3.24	Sederhana
7	Lukisan	3.28	Sederhana
8	Peta	2.42	Sederhana
9	Boneka	2.98	Sederhana
10	Model	3.02	Sederhana
11	Relia Asli Haiwan	2.93	Sederhana
12	Relia Asli Tumbuhan	2.97	Sederhana
13	Projektor lutsinar (OHP)	2.45	Sederhana
14	Perakam Pita Video	3.12	Sederhana
15	Televisyen	3.07	Sederhana
16	Radio	3.08	Sederhana
17	Pita audio/CD	3.07	Sederhana
18	Komputer	3.30	Sederhana
19	VCD/DVD	3.26	Sederhana
20	LCD projektor	3.20	Sederhana
	PURATA MIN	3.10	Sederhana

Dapatan menunjukkan bahawa tahap kekerapan penggunaan bahan bantu mengajar dalam kalangan guru secara keseluruhannya masih lagi berada pada tahap sederhana (Rujuk jadual 1.2). Hanya dua bahan bantu mengajar yang menunjukkan tahap penggunaan bahan bantu mengajar berada pada tahap kekerapan penggunaan yang tinggi iaitu penggunaan bahan bantu mengajar buku cerita dan gambar. Bagi 18 bahan bantu mengajar yang lain seperti surat khabar, kad imbasan, buku rujukan, poster, projektor lutsinar (OHP), peta lukisan, boneka, model, relia asli tumbuhan, relia asli haiwan, perakam pita video/CD, pita audio, televisyen, radio, komputer, VCD/DVD dan LCD projektor berada pada tahap kekerapan penggunaan yang sederhana.

Min bagi kekerapan penggunaan buku cerita dalam proses pengajaran dan pembelajaran adalah sebanyak 4.06. Ini menunjukkan kekerapan penggunaan buku cerita dalam kalangan responden berada pada tahap kekerapan penggunaan yang tinggi. Manakala min bagi kekerapan penggunaan kad imbasan dalam proses pengajaran dan pembelajaran adalah sebanyak 3.33. Ini menunjukkan kekerapan penggunaan kad imbasan dalam kalangan responden berada pada tahap kekerapan penggunaan yang sederhana.

Dapatan menunjukkan min bagi kekerapan penggunaan surat khabar dalam proses pengajaran dan pembelajaran adalah sebanyak 3.15. Ini menunjukkan kekerapan penggunaan surat khabar dalam kalangan responden berada pada tahap kekerapan penggunaan yang sederhana. Min bagi kekerapan penggunaan buku rujukan dalam proses pengajaran dan

pembelajaran pula adalah sebanyak 3.27. Ini menunjukkan kekerapan penggunaan buku rujukan dalam kalangan responden berada pada tahap kekerapan penggunaan yang sederhana.

Analisis min bagi kekerapan penggunaan gambar dalam proses pengajaran dan pembelajaran adalah sebanyak 3.97. Ini menunjukkan kekerapan penggunaan gambar dalam kalangan responden berada pada tahap kekerapan penggunaan yang tinggi. Min bagi kekerapan penggunaan poster dalam proses pengajaran dan pembelajaran adalah sebanyak 3.24. Ini menunjukkan kekerapan penggunaan poster dalam kalangan responden berada pada tahap kekerapan penggunaan yang sederhana.

Dapatan min bagi kekerapan penggunaan lukisan dalam proses pengajaran dan pembelajaran adalah sebanyak 3.28. Ini menunjukkan kekerapan penggunaan lukisan dalam kalangan responden berada pada tahap kekerapan penggunaan yang sederhana. Manakala min bagi kekerapan penggunaan peta dalam proses pengajaran dan pembelajaran adalah sebanyak 2.42. Ini menunjukkan kekerapan penggunaan peta dalam kalangan responden berada pada tahap kekerapan penggunaan yang sederhana.

Analisis menunjukkan min bagi kekerapan penggunaan boneka dalam proses pengajaran dan pembelajaran adalah sebanyak 2.98. Ini menunjukkan kekerapan penggunaan boneka dalam kalangan responden berada pada tahap kekerapan penggunaan yang sederhana. Min bagi kekerapan penggunaan model dalam proses pengajaran dan pembelajaran adalah sebanyak 3.02. Ini menunjukkan kekerapan penggunaan model dalam kalangan responden berada pada tahap kekerapan penggunaan yang sederhana.

Dapatan bagi min bagi kekerapan penggunaan relia asli haiwan dalam proses pengajaran dan pembelajaran pula adalah sebanyak 2.93. Ini menunjukkan kekerapan penggunaan relia asli haiwan dalam kalangan responden berada pada tahap kekerapan penggunaan yang sederhana. Min kekerapan penggunaan relia asli tumbuhan dalam proses pengajaran dan pembelajaran adalah sebanyak 2.97. Ini menunjukkan kekerapan penggunaan relia asli tumbuhan dalam kalangan responden berada pada tahap kekerapan penggunaan yang sederhana.

Min bagi kekerapan penggunaan projektor lutsinar (OHP) dalam proses pengajaran dan pembelajaran adalah sebanyak 2.45. Ini menunjukkan kekerapan penggunaan projektor lutsinar (OHP) dalam kalangan responden berada pada tahap kekerapan penggunaan yang sederhana. Min bagi kekerapan penggunaan perakam pita video dalam proses pengajaran dan pembelajaran adalah pula sebanyak 3.12. Ini menunjukkan kekerapan penggunaan perakam pita video dalam kalangan responden berada pada tahap kekerapan penggunaan yang sederhana.

Manakala min bagi kekerapan penggunaan televisyen dalam proses pengajaran dan pembelajaran adalah sebanyak 3.07. Ini menunjukkan kekerapan penggunaan televisyen dalam kalangan responden berada pada tahap kekerapan penggunaan yang sederhana. Dapatan min bagi kekerapan penggunaan radio dalam proses pengajaran dan pembelajaran adalah sebanyak 3.08. Ini menunjukkan kekerapan penggunaan radio dalam kalangan responden berada pada tahap kekerapan penggunaan yang sederhana.

Min bagi kekerapan penggunaan pita audio/CD dalam proses pengajaran dan pembelajaran adalah sebanyak 3.07. Ini menunjukkan kekerapan penggunaan pita audio/CD

dalam kalangan responden berada pada tahap kekerapan penggunaan yang sederhana. Analisis min bagi kekerapan penggunaan komputer dalam proses pengajaran dan pembelajaran adalah sebanyak 3.30. Ini menunjukkan kekerapan penggunaan komputer dalam kalangan responden berada pada tahap kekerapan penggunaan yang sederhana.

Min bagi kekerapan penggunaan VCD/DVD dalam proses pengajaran dan pembelajaran adalah pula sebanyak 3.26. Ini menunjukkan kekerapan penggunaan VCD/DVD dalam kalangan responden berada pada tahap kekerapan penggunaan yang sederhana. Min bagi kekerapan penggunaan LCD projektor dalam proses pengajaran dan pembelajaran adalah sebanyak 3.20. Ini menunjukkan kekerapan penggunaan LCD projektor dalam kalangan responden berada pada tahap kekerapan penggunaan yang sederhana.

2.   Dapatan Pengujian Hipotesis

Sebanyak enam hipotesis telah dibentuk untuk kajian ini dan hasil pengujiannya adalah seperti berikut.

Hipotesis 1   :Tidak terdapat perbezaan tahap kekerapan penggunaan bahan bantu mengajar yang signifikan dalam kalangan guru pendidikan khas masalah pembelajaran berdasarkan jantina.

Jadual 1.3
Dapatan Ujian t Bagi Tahap Kekerapan Penggunaan Bahan Bantu Mengajar Berdasarkan Jantina

Jantina	N	Min	Sisihan Piawai	t	df	sig.
Lelaki	74	37.27	9.81	-19.7	179	.00
Perempuan	107	81.27	17.38	-21.6	112.8	

P < 0.05

Untuk menguji hipotesis ini, ujian t tidak bersandar digunakan. Skor min tahap kekerapan penggunaan bahan bantu mengajar dalam kalangan guru lelaki adalah 37.27, manakala skor min tahap kekerapan penggunaan bahan bantu mengajar dalam kalangan guru perempuan adalah sebanyak 81.27. Ini menunjukkan bahawa min jantina guru adalah berbeza iaitu guru perempuan mempunyai min yang lebih tinggi. Perbezaan skor min antara guru perempuan dan guru lelaki adalah sebanyak 44. Dapatan kajian ini menunjukkan bahawa terdapat perbezaan tahap kekerapan penggunaan bahan bantu mengajar yang signifikan dalam kalangan guru lelaki dan perempuan. Ini kerana nilai p tersebut kurang dari aras kesignifikan yang ditetapkan iaitu p>0.05. Nilai signifikan .00 < 0.05. Oleh itu hipotesis ini ditolak.

Hipotesis 2 : Tidak terdapat perbezaan tahap kekerapan penggunaan bahan bantu mengajar yang signifikan dalam kalangan guru pendidikan khas masalah pembelajaran berdasarkan bilangan tahun mengajar.

Jadual 1.4

Dapatan Ujian ANOVA Bagi Tahap Kekerapan Penggunaan Bahan Bantu Mengajar Berdasarkan Bilangan Tahun Mengajar

Sumber	Jumlah kuasa dua	df	Min kuasa dua	f	sig.
Antara kumpulan	5376.929	3	1792.31	2.680	.048
Dalam kumpulan	118377.70	177	668.80		
Jumlah	123754.63	180			

$P<0.05$

Bagi menguji hipotesis ini, Ujian ANOVA Satu Hala digunakan. Hasil ujian ANOVA ditunjukkan dalam jadual 1.4. Didapati nilai f=2.680 dan nilai sig=0.048. Hasil kajian menunjukkan nilai signifikan lebih kecil daripada 0.05. Dapatan kajian ini menunjukkan terdapat perbezaan yang signifikan di antara tahap kekerapan penggunaan bahan bantu mengajar dalam kalangan guru pendidikan khas masalah pembelajaran berdasarkan bilangan tahun mengajar. Maka hipotesis kajian null ini ditolak.

Jadual 1.5

Keputusan Ujian Post-Hoc ANOVA sehala Turkey HSD: Tahap kekerapan penggunaan

pengalaman mengajar (I)	pengalaman mengajar (J)	perbezaan min	ralat piawai	signifikan
< 3 tahun	3-9 tahun	5.06349	4.61048	.516
	> 10 tahun	12.44358*	4.77519	.027
3-9 tahun	< 3 tahun	-5.06349	4.61048	.516
	> 10 tahun	7.38009	4.77519	.272
> 10 tahun	< 3 tahun	-12.44358*	4.77519	.027
	3-9 tahun	-7.38009	4.77519	.272

* signifikan $p<0.05$

Jadual 1.6

Min Tahap Kekerapan Penggunaan Bahan Bantu Mengajar

pengalaman mengajar	N	min	sisih piawai
< 3 tahun	63	68.82	31.00
3-10 tahun	63	63.76	23.01
>10 tahun	55	56.38	22.24
Jumlah	181	63.28	26.22

Ujian Post-Hoc ANOVA sehala Turkey HSD pada jadual 1.5 menunjukkan terdapat perbezaan skor min yang signifikan (p<0.05) tahap kekerapan penggunaan guru permulaan(m= 68.82, s.p.=31.00) dengan guru lama (m=56.38, s.p.=22.24). Dengan ini, guru permulaan (< 3 tahun) lebih berkemahiran berbanding dengan guru lama (> 10 tahun).

Hipotesis 3:Tidak terdapat perbezaan tahap kekerapan penggunaan bahan bantu mengajar yang signifikan dalam kalangan guru pendidikan khas masalah pembelajaran berdasarkan jenis sekolah.

Jadual 1.6
**Dapatan Ujian t Bagi Tahap Kekerapan Penggunaan Bahan Bantu Mengajar
Berdasarkan Jenis Sekolah**

Jenis sekolah	N	Min	Sisihan Piawai	t	df	sig.
Rendah	91	60.24	27.36	-1.575	179	0.97
Menengah	90	66.35	24.77	-1.576	177.6	

P<0.05

Untuk menguji hipotesis ini, ujian t tidak bersandar digunakan. Skor min tahap kekerapan penggunaan bahan bantu mengajar dalam kalangan guru sekolah rendah adalah 60.24, manakala skor min tahap kekerapan penggunaan bahan bantu mengajar dalam kalangan guru sekolah menengah adalah sebanyak 66.35. Dapatan kajian ini menunjukkan bahawa tidak terdapat perbezaan tahap kekerapan penggunaan bahan bantu mengajar yang signifikan dalam kalangan guru sekolah rendah dan guru sekolah menengah. Ini kerana nilai tersebut lebih dari aras kesignifikan yang ditetapkan iaitu p>0.05. Nilai signifikan .97 > 0.05. Oleh itu hipotesis ini diterima.

D. PERBINCANGAN

Kajian ini bertujuan meninjau tahap penggunaan bahan bantu mengajar dalam kalangan guru pendidikan khas bermasalah pembelajaran. Dapatan kajian menunjukkan tahap kekerapan penggunaan bahan bantu mengajar dalam kalangan guru pendidikan khas masalah pembelajaran berada pada tahap yang sederhana. Hanya dua bahan bantu mengajar yang menunjukkan tahap penggunaan bahan bantu mengajar berada pada tahap kekerapan penggunaan yang tinggi iaitu penggunaan bahan bantu mengajar buku cerita (m=4.06) dan gambar (m=3.97). Bahan bantu mengajar seperti buku cerita dan gambar adalah bahan bantu mengajar yang mudah diperolehi di pasaran pada masa kini. Ini menyebabkan guru lebih kerap menggunakan bahan bantu mengajar berbentuk buku cerita dan gambar berbanding bahan bantu mengajar yang lain.

Bagi 18 bahan bantu mengajar seperti surat khabar (m=3.15), kad imbasan (m=3.33), buku rujukan (m=3.27), poster (m=3.24), lukisan (m=3.28), boneka (m=2.98), model (m=3.02), relia asli tumbuhan (m=2.97), relia asli haiwan (m=2.93), perakam pita video (m=3.12), pita audio/CD (m=3.07), televisyen (m=3.07), radio (m=3.08), komputer (m=3.30), projektor lutsinar (OHP) (m=2.45), peta (m=2.42), VCD/DVD (m=3.26) dan LCD projektor (m=3.20) berada pada tahap kekerapan penggunaan yang sederhana.

Bahan bantu mengajar yang berteknologi seperti perakam pita video, pita audio/CD, televisyen, radio, komputer, projektor lutsinar (OHP), VCD/DVD dan LCD projektor memerlukan kemahiran untuk mengendalikannya. Sekiranya guru guru kurang berkemahiran untuk mengendalikannya, ini akan menyebabkan guru kurang untuk menggunakannya (Norizan, 2003). Terutama sekali bahan bantu mengajar yang melibatkan komputer dan LCD projektor. Setiap bahan bantu mengajar yang digunakan oleh mempunyai keistimewaannya yang tersendiri dan mampu merangsang ke arah pembelajaran yang bermakna. Ini adalah kerana setiap murid mempunyai kebolehan intelek dan gaya pembelajaran yang berbeza di antara satu sama lain. Sebagai contoh kajian oleh Droscher (2006) dan Butzlaff (2002)

membuktikan penggunaan bahan bantu mengajar audio dapat meningkatkan pencapaian murid dalam proses membaca serta dapat merangsang IQ dan perkembangan mental murid. Dapatan kajian ini selari dengan kajian yang dilakukan oleh Hayazi (2008) dan Ng Ying (2004) yang menunjukkan tahap kekerapan penggunaan bahan bantu mengajar dalam kalangan guru masih berada pada tahap sederhana.

Hasil kajian ini juga telah menunjukkan bahawa terdapat perbezaan dari segi tahap kekerapan penggunaan bahan bantu mengajar dalam kalangan guru pendidikan khas masalah pembelajaran berdasarkan jantina dan tahap kekerapan penggunaan bahan bantu mengajar dalam kalangan guru pendidikan khas masalah pembelajaran berdasarkan bilangan tahun mengajar. Dapatan menunjukkan bahawa guru perempuan lebih kerap menggunakan bahan bantu mengajar dalam proses pengajaran dan pembelajaran berbanding dengan guru lelaki. Bagaimanapun dapatan ini bertentangan dengan dapatan kajian oleh Abdul Rahim dan Hayazi (2010) yang menyatakan tiada perbezaan tahap penggunaan bahan bantu mengajar di antara guru perempuan dan guru lelaki.

Manakala min menunjukkan bahawa guru dalam lingkungan tempoh mengajar kurang daripada tiga tahun lebih kerap menggunakan bahan bantu mengajar. Perbezaan pengalaman mengajar juga mendorong kepada kekerapan penggunaan bahan bantu mengajar. Ini adalah kerana guru yang baru mengajar lebih kerap menggunakan bahan bantu mengajar dalam proses pengajaran kerana mereka lebih bersemangat mempratikkan apa yang mereka pelajari di instustisi pendidikan tinggi. Mereka juga lebih didedahkan kepada bahan bantu mengajar yang berteknologi seperti penggunaan internet dan projektor LCD serta pengajaran melalui komputer (Mojgan et al, 2009).

Kesimpulannya, semua pihak seperti pihak sekolah dan guru pendidikan khas masalah pembelajaran memainkan peranan penting bagi melancarkan proses pengajaran dan pembelajaran menggunakan bahan bantu mengajar bagi menyokong pembelajaran murid-murid pendidikan khas.

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SAMIN COMMUNITY PARTICIPATION IN NINE-YEAR EDUCATIONAL PROGRAM IN KLOPO DUWUR VILLAGE, BLORA REGENCY

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Abstract

Samin's Community in Klopo Duwur Village Blora Regency has taken formal education in a long time, but they do not participate seriously in it. This research aims to know the level of participation of Samineses in the nine-year educational program, the forms of participation of this society in the nine-year educational program, and the factors that impede this community's participation in the nine-year educational program. The result of this research shows that in this modern era, formal education is needed in this society to reach their welfare. There are several factors that influence this society in following the formal education that come from the outside and inside the society, whether from the environment or the expectations in reaching welfare. The prohibition to educate children in the society to join the formal education has been removed. Nowadays, they have joined the education based on their own capability. Nowadays, Formal education is the priority of parents to educate their children, even if some children of this society still have not received the formal education. But, there are still other factors that make these Saminese children do not follow this nine-year educational program. They do not have the capability in terms of economical and socio-cultural background in Klopo Duwur village, Blora Regency.

Keywords: participation, samin's community, nine-year educational program

A. INTRODUCTION

Education is held through a democratic and fair way without any discrimination to uphold human rights, religious values, cultural values, and national diversity, which is aimed to develop the potential of students to become a man of faith and fear of God Almighty, noble, healthy, knowledgeable, capable, independently creative and become a democratic and responsible citizen (Soegito, 2009: 10).

Based on the Indonesian Government Regulation No. 47 Year 2008 on compulsory education, should be no longer citizens who are not in school, because in this government program every citizen has the right to take their education to graduate high school (SMP). The Law No. 20 of 2003, Article 34 paragraph (1), states that: "every citizen over the age of 6 (six) years can follow the compulsory education." Whether it is from a variety of ethnics, races, cultures, religions, or who are physical, emotional, mental, intellectual, and / or social incapable in remote and underdeveloped and remote indigenous communities are entitled to

special education services, thus creating destination of Indonesia contained in the preamble of the 1945 Constitution fourth Alenia, which is to the intellectual life of the nation.

Sedulur Sikep or better known as Samin community (Samin Surosentiko) in Klopo Duwur, Blora have compulsory participation rates are low. Most of their families do not have a diploma or evidence that has passed and following a college (education), it can be said they are always out of school while attending school, but once they follow the teaching in schools, but not until they've finished school not participating in learning (not proceed).

Formal education is a rare thing in the Samin community. Samin community has a central tenet of education, the education given by parents to children which are basic principles of ethics. Samin society are not allowed to educate children through formal or non-formal schools and education (special), the child only provided informal education (education is carried out by their own parents in the household) which are basic principles of ethics (Hutomo, 1996: 170). This phenomenon is occurring in the Samin community. High dropout rate and the lack of public participation resulted Samin income or their income level is very low, because they only work as farmers, farm laborers and plantation.

B. LITTERATURE REVIEW

1. Samin Community

Samin society is a society of poor farmers. These communities are the descendants of the followers Samin Surosentiko who teaches Sedulur Sikep, recruit them rekindle the spirit of resistance against the Netherlands in a form other than violence. First scattered in the area Klopoduwur, Blora, Central Java. In 1890 Samin movement developed in two forest villages Randublatung region, Blora, Central Java.

This movement then quickly spread to other villages. Starting from the north coast of Java to the surrounding forest in mountains Kendeng, Kendeng North and South, or around the border of the province of Central Java and East Java, according to the map now. Samin groups prefer to be called Wong Sikep, because they contain the word cumin for a negative meaning. Samin outsiders often regard them as a group are innocent, like stealing, refusing to pay taxes, and often the subject of jokes especially among the Bojonegoro.

2. Samin Community Doctrine

Samin has six communities comprising teachings teachings are not in school, do not wear a cap, but wear "iket", a kind of cloth tied around the head like a Javanese people first, not polygamy, not wearing pants, and knee-length pants only, no trade, and rejection of capitalism.

C. METHODOLOGY

The approach in this study was a qualitative approach. The location of this study was in the village of Klopo Duwur, District Banjarejo, Blora. The data was obtained through interview techniques, documentation and observation—the sample of this study was emphasized on the subject who provided deeper information of the data needed, including: Samin community, village and community leader.

D. FINDINGS

1. Samin Community Participation In Nine Year Compulsory Education in Rural Klopo Duwur Blora.

Samin society was a society that is was known for its opposition to the government, the people who did not want to run what was made by the government, the people who did not want to pay taxes. They lived with nature, solitude, separated and built their own group far away from the crowds. They depended on the nature, took benefit from the nature as a source of life for them, they believed that the nature provided all their needs.

Yet, different things were shown by Samin society today, they were more open to other people who were not as Samin's descandants. Samin community now also complied with government regulations, had registered himself in the civil registry or participating in the making of ID card, beside that they were familiar with formal education, unlike the ancients who forbid their children to have eformal education. Samin community is running compulsory nine-year now.

Nine-year compulsory education program is a national movement that is implemented throughout Indonesia for Indonesian citizens aged seven to fifteen years to basic education, as a preparation for the future. All parties are entitled to a decent education as a form of attention to the welfare of the people as stated in the 1945 Constitution, Article 31 paragraph (1) that "every citizen has the right to get teaching". The program also applies to people in the village Samin Klopo Duwur Blora and Samin people are already running it, which participate in compulsory education.

Awareness of the importance of education for life made Samin community participated in the nine-year compulsory education. For them education could make them became more successful, they could make it easier to get a job and be able to add their experience to be better inside and outside the community Samin, it was in line with what was stated Setiawan (2008: 54) that education is door to prosperity.

Recently, Samin community did not want to follow the formal education because of the prohibition of their parents. It was supported by Hutomo's statement (1996: 170) that the Samin people are not allowed to educate children through formal or non-formal schools and education (special), the child only provided informal education (education is carried out by their own parents in the household) which are basic ethical principles. Actually, it is performed by Samin community motivated by a form of resistance against the Dutch.

Samin level of community participation in the nine-year compulsory education was not only done a wishful desire to attend school, but they also participated and became active in extra curricular activities, such as martial arts, music, scouts, and others. The activity was a form of public Samin role in the nine-year compulsory education other than in the classroom. Another purpose of the Samin community is also motivated by achieving success, according to the education they could deliver and facilitated them in finding a job.

2. Forms of Public Participation in the Samin Nine Year Compulsory Education.

Samin community is now participating in the nine-year compulsory education. It is not unusual when seen in the past history of personality or behavior Samin community. But this time they are included in the active participation, where they participated in the nine-year compulsory education was based on his own accord, without any coercion or encouragement from others. As expressed by Verhangen in Mardikanto (1994: 320) that the growth of community participation, is essentially determined by the absence of awareness of concerned citizens.

School for them this time is imperative. They are currently very enthusiastic in participating in the program, as well as the willingness of themselves and their parents, they are also supported by the environment in which they live. As stated by Slamet Margono in Mardikanto (1994: 320) that the psychological willingness to participate, ability to participate may arise by the intrinsic motive (from within) or extrinsic (due to stimulation, encouragement, or external pressure).

Evidence parents support their children to school are the descendants Samin not forbidden to pursue education as stipulated in Law No. 20 Year 2003 on National Education System Article 7 paragraph (2) that "the parents of children of compulsory education age, obliged to provide basic education to his son ". They are also not burdened with chores, if indeed they are the chores of his own accord, but it is the parents also took a little time to spare for drop off and pick her up at school. provide bicycle facilities both vehicles and motorcycles for transportation to school.

Seriousness in following Samin community education not only because there is the cost of government, which provide free education. They currently really want to follow the voluntary education, because in their minds this time that school is important as a preparation to find a job and becoming a successful person.

Based expressed by Adisasmita (2006: 35) that increased public participation is a form of empowerment-oriented community is actively committed to the achievement of outcomes in the community.

Conclusion that at this time people have been following compulsory Samin. They participate in compulsory education for kemauanya itself, which is driven by the ideals and goals when they graduate. It could be argued that they are an active participation, with all the activities that have been followed or executed and the growing desire of itself make them tergoling in active participation.

3. Factors Inhibiting Samin Public Participation in the Program is Compulsory Nine Years of Education.

There are two factors inhibiting participation prorgam Samin in following the nine-year compulsory economic factors and socio-cultural factors. *First*, economic factors become prohibitive Samin community in completing the nine-year compulsory education program. This can occur because of economic circumstances can be said to be under the Samin community welfare. As a result of this they do not continue their education and choose to work.

Second, socio-cultural factors. In addition to economic factors influence social culture that makes the village Klopo Duwur Samin community does not continue a nine-year compulsory education. Invitation to work out the area and the state of society Samin still want to look for well-being, they also decided to direct work and leave school in order to prosper. Indirectly neighborhoods can affect where the direction of, the views and goals in dealing with life.

E. DISCUSSION

Changing times affect the traditions Samin community. Culture formerly believed by Samin society increasingly fade over time, although not all of them. Culture is not a scary thing for Samin ancestry, culture is not a wall that must be confronted and destroyed, because Samin culture and openness has made it easier to follow the advice that has been given by the government. Culture had not forbid them to attend formal education, openness is what happens at the moment Samin community. Coexist with the wider community and comply with government regulations. Awareness of the importance of education for life make Samin community participated in the nine-year compulsory education.

For them education can make them become more successful, they can make it easier to get a job and be able to add their experience to be better inside and outside the Samin community. Only reason they have no formal training because of their ability, that is in terms of economic and socio-cultural terms. Awareness of the importance of education for life make Samin community participated in the nine-year compulsory education.

F. CONCLUSION

Based on the results of research and discussion on the Samin community participation in the nine-year compulsory education in the village Klopo Duwur Blora, the following conclusions can be drawn.

a. *First*, the level partsisipasi Samin community in the nine-year compulsory education has been seen from their engagement while following compulsory. Samin community involvement not only while in class but outside of class while attending extra curricular activities. Awareness of the importance of education make Samin community participated in the nine-year compulsory education, education for them to make them be more successful.

b. *Second*, the shape of the Samin community participation compulsory nine different years, there are caused by themselves and some are caused by environmental influences. The average of those participating in the nine-year compulsory education comes about because of itself so that it can be said Samin community has been actively participating in the nine-year compulsory education program. Parents as a source of motivation and control for their children to study in schools has been done, parents often give advice or serious in order to attend school and have always warned children to always learn Samin at night.

c. *Third*, a factor which is the bottleneck of the Samin community participation in the program's nine-year compulsory education affected the ability of the parents. Parents who only worked as a laborer led to some of the children did not attend school Samin descent to

the School of First Instance. Income parents cause they choose to help parents and looking for a job outside the area. In addition to economic factors influence social culture that makes the village Klopo Duwur Samin community does not continue a nine-year compulsory education. Invitation to work out the area and the state of society Samin still want to look for well-being, they also decided to direct work and leave school in order to prosper.

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BUILDING STUDENTS CHARACTER THROUGH FACEBOOK-BASED LEARNING TO UNDERSTAND DIGITAL CITIZHENSHIP

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A. INTRODUCTION

This come of age makes the world become smaller. Some interactions in each nation whether in mean to or no it is getting intensive. Thus what Indonesian do with some other nations in this world, and the thing that surrounds is globalization. There is strong inclined behind the process of universal that knocks down in human life. The one of common implication conveys some global life-style such as food, fashion, and music. We used to get mobile phone, laptop, Mp3 player, e-mail, short messages, internet in the real life. World education gets influenced of IT. Internet is the main actor, it is consumed like food everyday and everywhere. Internet has been a primery need and also indonesian included. The biggest of south east.,development of social media is also in one of important factor to involve the user of internet in this nation. It is proven by *Global Web Index* date riset, where indonesia has the most active users of social media in asia. 79,7% indonesia users and defeat Philiphin (78%), Malaysia (72%), China (67%). Looking the data issued by global index wave, the king of social media in Indonesia is facebook with 25% or about 62.000.000 users. Not only for adult, many more children have facebook account. Facebook social site has got pretty appreciation lately as a popular online place to take over, share, and recognize all people. (http://bebmen.com/4027/statistik-internet-sosial-media-dan-mobile-di-indonesia.html)

Students prefer to waste much time to play facebook than study or read some books. Thet do this activity all tje time, and even at school. Wijaya and Dedi (2012) "remarked that generation native digital children are they were born and got life in digital era". So, the learners nowadays have the digital blood in their body. They can take some benefits in all electronic media whether personally or get in some commuties in family and environment. So it can be concluded that they have had wide eyes open to ICT or IT. They used to use digital tools without being taught. Basicly senior high school take more control on IT benefit. But The stupid thing to face social media comes up such as posting some rude words, posting bad pictures, fight and throw some jerk words each other, and even it can be true fighting. This is a bad proof from taking benefits social media. They have no good personality in character to use technology facebook.

The roar of doubt of education quality gets any look by the majority. Where will the education flow ? Teacher is like a fisrt guardian to enlighten the education has to be, force to do more and more. By that matter, so the resistance to be a teacher is getting up. Another challenge of teacher get more consequence as a true teacher who has good ability didn't show any good result. The teacher doesn't think about what the student's passion. On seeing of majority, teacher hasduty to educate and grow on value. Through professionalism and dedication of life they have important duty to build the character till be totally mature. And

the teacher has obligation to change and prepare the young generation to move forward, face challenge in real life. The changing of value that is happened makes teacher to return what the teacher has to be. As an agen, the teacher must bring the true value of themselves. Find out the character to take along in need of generation digital children era.

Teacher needs to do the job to fill some needs of education in every era. It means making new competence (Martinez 2009:7) . It means teacher as educator should get some sense and inovation.Trilling and Fadel such ideas in education reconstruction is described to be able to survive in the 21st century there are three kinds of necessary skill categories, namely: 1) learning and innovation skills, 2) digital literacy skills, 3) life skills and career skills (Trilling, Fadel : 2009). Never let the children do what they want to without clearly direction. Teacher should be able to bring new atmosphere to change the class (study room). Specially they have more power to figure out system input and the way to think to take advantage on media information in order to get good attitude and sprituality of our young generation for the next can be effective and headshot. So, it should take any attention while the learning process at school now is fixed to take advantage of IT useful and well as fast possible. This is challenge for teacher. Specially civic teacher then. one of them is makes facebook as a medium of learning. This is a challenge for teachers, especially teachers of Citizenship Education.

B. COMBINATION OF CHARACTER DEVELOPMENT AND BASED LEARNING FACEBOOK THROUGH CITIZENSHIP EDUCATION

Basically, all form of ICT has a promising future as means of learning. But the most popular means today is facebok with easy access and free, even in some of the research has been introduced in learning also. Facebook was found to help students to interact socially and academically, which finally improve learning outcomes. Research by Selwyn (2007, 2009) analyze public posts on Facebook with students discovered that the platform is very useful in strengthening and expanding informal learning, of sharing resources and materials, social ties around educational activities, to support each other in stressful situations like preparation exam. The same with Shih (2011) his research shows that Facebook can significantly increase student interest and motivation to learn. Some researchers believe that social networks encourage to exchange ideas among students, give a structured non-formal learning, may increase students' interest in learning and capable of generating critical thinking among students which is one of the traditional goals of learning (Bugeja, 2006).

In another study, Reyes (2010) using Youtube and Facebook in an effort to develop students' creativity. According to him, Facebook has the potential to give student centered learning and task-based environment that allows discussion of the theory. In addition, Mihai, Stanciu, and Alaca (2011) conducted a study that aims to analyze impact of social networks on process education in Rumania college. Their survey revealed that social networking sites have become very popular among college students and can be considered as a valuable potential for education. Researchers have shown that learning environment must be creative (Mohammad Yusof & Hagar, 2011; Shallcross, 1981), more (Cropley, 2001) besides using the social network. Some these findings contradiction with the understanding so far that social

networking sites are the bullies that distracts concentration studied. Instead revealed that online social networking directly influences social learning and can positively influence academic learning. In a survey conducted, it is known that facebook allows students getting along with teachers and other students. They provide a platform to interact and share knowledge. Facebook also provides a facility for the students to join the group and discuss various topics, collaborate and use educational applications to manage learning activities.

Facebook as known from some the findings, as long as it provides a full multi-media and hardly used for learning. For the students facebook is a means of creative social media can give unlimited opportunities so that involvement can be used various parties for any purpose. Students compose meaningful life online with the offline world (Zoonen 2013). Facebook as space in which any distinction between online and offline activities more meaningful. When students are using technology as a tool or a support for communicating with others, they are in an active role rather than a passive role. Opportunities facebook social networking service availability is existing potential in the environment students, next, can be used as a means or source of learning. Characteristics from a successful teacher is the ability to adapt. Need to adjust teaching methods to new circumstances and according to the learning needs of students. Facebook usage in the field of education is a big challenge, we can turn it into a great learning tool for students.

This is according to Sanjaya (2010) that learning is a collaborative process between teachers and students in utilizing all the potential good and potential resources that comes from within the students themselves like interests, talents and abilities possessed base including learning styles and potential that is outside the student like the environment, infrastructure and learning resources in order to achieve specific learning goals. The advantage of using a facebook-based learning, namely: 1) Relaxed, friendly and inviting atmosphere that encourages the participation of students, 2) students feel comfortable learning via Facebook because most of them use it daily, 3) Facebook can improve social cooperation and exchanges between participants, 4) students learn outside the classroom. http://www.educatorstechnology.com. However, facebook-based learning just is not able to answer the human need to be someone who meets his function, not only for himself, but also for the community, and the world; and able to take responsibility for his actions. It needs to blend with facebook based learning character values.

Character interpreted as way of thinking and behaving are typical of each individual to live and work, both within the family, society and the nation state. Individuals are individuals of good character who can make decisions and be ready to account for any consequence from its decision. Characters can be regarded as values of human behavior related to Almighty God, ourselves, our fellow human beings, the environment and nationality embodied in the mind, attitude, feeling of, word, and deed, by religious norms, laws, manners culture, customs, and aesthetics. Lickona (1991) defines character education as a deliberate attempt designed to improve character of students. Character at studets will not develop itself, but rather depends on the environment. Environment will wrap on the student experience. Based on the experience that students will do. In respect with this, Mulyasa (2013:127) says in learning of students, teachers and modifying itself helped establish competence and character,

as well as develop and modify instructional activities.Character education emphasizes the importance of building good character three components (components of good character) which includes: first, moral knowing or knowledge of morals; second, moral feeling, a sense of morality; and third, an action moral, or immoral act. It is important that the sisiwa dangat able to understand, feel, and work well as policy values (Soemantri, 2010:17-19; Elmubarok, 2008; 110-111)

Based on the opinion of some experts, we can conclude that builds character has become education movement that supports social development, emotional development, and ethical development of the students. It is a proactive effort by both schools, and government environments to help students develop the basic core from ethical values and performance values, like concern for honesty, diligence, fairness, tenacity and endurance (fortitude), responsibility, self-respect themselves and others. In paper builds character through this facebook-based learning, focused on the character values of responsibility, good manners in communicating in online media or technology ethics.

Developments information technology in education is now possible to learn technology held by promoting ethics and morals in tech. Students are actively making choices about how to produce, obtain, manipulate, or display information. The use of technology allows more students to actively think about information, making choices, and executing skills than is typical in teacher-led lessons. This is a challenge for teachers, especially teachers of Citizenship Education (Civics).

C. DEVELOPMENTS CIVIC EDUCATION IN DIGITAL ERA

Education system in Indonesia from time to time been developing like a change in existing curriculum. In 2013 there were normative in curriculum of ICT-based education in which all subjects are set to integrate ICT into it, but it is also the presence of a character-based education. This character that will bring towards a better education, so as to produce future leaders good and smart. Any contents character education can be taught in learning civics. For subjects who had the cotent of moral values are expected to implement these characters well in everyday life and in today's digital era.

Citizenship education must be prepared to enter a new era of paradigm that citizenship education can not be separated from advancement of Information and Communication technologies that impact on the lives and practices of citizenship. As described Feriyansyah (in Nu'man Soemantri, 2001: 291) that civics should be able to develop themselves and develop interdisciplinary studies:

> *"From the scope of its objectives, Civics program not only can be seen from political democracy, but it must be seen in relation to each other interdisciplinary with other social sciences, even with religion, science, and technology. This is to allow the Civics program can attract positive influence from these sciences are closely related to efforts to foster good citizenship, "(Soemantri, 2001:291).*

This view meant that not only could Civics from eyewear of political democracy, particularly in the study of Civics (Civics lesson) as described (Wahab and Sapriyah, 2012:32) "Civic education is an extension of Civics is more emphasis on practices of

citizenship ". It is necessary for develop its study are not limited relations with citizens of the state, but the relationship of citizens with change culture, citizens with technological advances.

In digital era citizens to be smart in using the technology. Therefore it, education programs to educate citizens in digital life becomes very important. Civics as an education program to prepare citizens, is also expected to be a main program prepare digital generation become digital citizens are intelligent and well. In this case Civics have a new job to prepare for digital generation to tap into digital society. Therefore it Civics program is responsible for creating and building a smart digital citizens and good (*The Smart and Good Digital Citizens*). (Feriyansyah: 2013).

According to Mike Rible: "*Digital citizenship can be defined as the norms of appropriate, responsible behavior with regard to technology use*". There are nine themes from digital citizenship that carried as follows: 1) Digital Access*: full electronic participation in society*. 2) Digital Commerce: *electronic buying and selling of goods*. 3) Digital Communication: *electronic exchange of information*. 4) Digital Literacy: *process of teaching and learning about technology and the use of technology.* 5) Digital Etiquette*: electronic standards of conduct or procedure*.6) Digital Law*: electronic responsibility for actions and deeds.* 7) Digital Rights & Responsibilities: those *freedoms extended to everyone in a digital world.* 8) Digital Health & Wellness*: physical and psychological well-being in a digital technology world.* 9) Digital Security (self-protection*): electronic precautions to guarantee safety*.

It means of the nine themes is users need to keep in mind that there are some that may have limited access, so other resources may need to be provided.Users need to learn about how to be effective consumers in a new digital economy.One of the significant changes within the digital revolution is a person's ability to communicate with other people. Learners must be taught how to learn in a digital society. In other words, learners must be taught to learn anything, anytime, anywhere. Digital Citizenship involves educating people in a new way— these individuals need a high degree of information literacy skills. It is not enough to create rules and policy, we must teach everyone to become responsible digital citizens in this new society. Users need to understand that stealing or causing damage to other people's work, identity, or property online is a crime. There are certain rules of society that users need to be aware in a ethical society. These laws apply to anyone who works or plays online. Digital citizens have the right to privacy, free speech, etc. Basic digital rights must be addressed, discussed, and understood in the digital world. With these rights also come responsibilities as well. Users need to be taught that there are inherent dangers of technology. As responsible citizens, we must protect our information from outside forces that might cause disruption or harm. It means digital citizenship is defined as norms of appropriate behavior, responsibility with regard to the use technology. Smart digital citizens are citizens who know their rights and responsibilities in tech.

Citizenship education in the sense of citizenship education, ideally in substantive and pedagogical designed to develop intelligent and good citizens for the entire pathway and

levels of education and non-formal or informal basis in accordance with the opinion of Cogan (1999) as follows:

> *"more inclusiveterm and encompasses both these in-school experiences as well as out of school or non-formal/informal learning wich takes place in the family, the religious organization, the media etc. which help to shape the totality of the citizen (Cogan dalam Budimansyah dan Winaputra, 2007:10)*

This means that citizenship education not only includes learning experience in school. but it will be very successful if the discussion includes learning experiences outside of school or non-formal education / informal. Thus a facebook-based learning in civic education is non-formal education is necessary that students and teachers can understand and implement one of nine themes of digital chitizhensip. Based on nine themes of digital citizenship facebook-based learning has become part of the digital access, digital communication, digital literacy. For example introduced to ethics that must be observed in social media (facebook):

The *first* do not spit personal information: students and teachers need to know about the importance of privacy. Not all personal things should be published. *Second*, ethics in communication: the communication we use words decent and polite in social media accounts we have. *Third* respect other people's work: When spreading information be it be text, photos or videos belong to someone else, we should include resources as a form of appreciation for the work of someone. not necessarily copying and pasting without providing the resources. *Fourth* avoid spread of *SARA* and pornography: It's good we do not disseminate information relating to pornography and *SARA* in social media. Spread the useful things that do not cause conflicts between people on the networking site. *Fifth* truth crosscheck news: News disparaging other people very often encountered in social media.For the case of social media users are required to be smart in capturing an information, if you want to join spreading the information, it helps us do a crosscheck to the truth of information. *Sixth,* opinion based on facts and data: social media in issuing opinions on matters that wants to comment on a matter that is not forbidden, as long as we are of the opinion based on facts and data. Be careful in this regard if the negative opine on just one possibility you may be reported to the EIT Law Article 27, paragraph 3 of defamation in cyberspace.

Furthermore The teacher through facebook discussion forums are used to convey the material clear, interesting and close to students, for example post videos, pictures, links to the article that contains information related to the subject matter of civic education. Stenson (in Lickona, 2012: 10) says that children develop character through what they see, what they hear, and what they did repeatedly. From these statements it can be concluded that through interesting and good information from teachers on each posting will accustomedand develop character and good students who excel also in this case ICT skills, because the character / characters superior, is a basic and common stock must be owned future generations.

Students are also encouraged to write about the material of his citizenship and become involved in ongoing discussions with a way of generating an overall response collaborative (although assessed individually) as described (Tama Leaver, Mike Kent 2014) students can requested to share resources, information online material, criticism or review related material, or just comment on the material that emerged during the unit. So that before incoming class

students already have an idea of the material that will be explained. Besides the friendship between teachers and students in facebook can encourage good interaction between them, students can ask if experiencing difficulty in learning and teachers can control students activities and behavior through what in her post. Facebook-based learning Thus we can develop into good citizens and smart in today's digital era as it can apply and understand digital citizenship learning, especially in civic education.

D. CONCLUSION

ICT indeed demanding foresight of educators or teachers, utilizing existing learning media as optimal as possible, so that the existing media and familiar with lives of students like facebook can be utilized optimally so as to get children to build character in responsible for technology. Citizenship education in era of entering the new paradigm that citizenship education can not be separated from advancement of Information and Communication technologies that impact on the lives and practices of citizenship. Civics is not only related to citizens and the state, citizens and cultural relationship, but at also teaches about relationship with technological advances. For it teachers in civics lesson not only helps students learn to use technology with intelligent, productive way, but also help them put these tools in the context from wider community with character a responsible, and envision a healthy future and productive, both locally and globally from technology. Teachers can not do this if the teacher throwing technology from their lives.

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LOCAL HISTORY IN IMPROVING PATRIOTISM
(CASE STUDY ON PHYSICAL REVOLUTION HISTORY IN BANTEN 1945-1949)

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Abstract

History lesson is one of several lessons which is not interesting for some of students in Indonesia. This case become a serious problem for education in Indonesia. Actually, the function of history lesson is to shape youth's characters. This problem describes that condition in Indonesian's life is on trouble. Indonesia government responds this problem quickly by positioning history lesson as the major element which is emphasized on Curriculum 2013. In Curriculum 2013, history lesson is divided into two parts; Indonesia History and History (Social Knowledge). Because this situation, there is a change of duration in history lesson more than two times from the previous. Probably, this situation makes history lesson is limitless to be taught for the students. One of that subjects is local history. Local history is a history which happend in spatial or a certain locality in a community where time of the occurence can be happened simultaneously with national history. One of the example from local history is Physical Revolution History in Banten 1945-1949. This subject has less attention as part of integral in maintaining independence on National History. Historical learning by using local history as the subject is easier to be understood by the students because it can see the reality of life directly in environment. Among the students, the present life, and historical events will shape their identity and they can inherit the historical values easily. Inheritance values of Physical Revolution in Banten will be easier to shape positive values for the students, such as patriotism.

Keywords: local history, physical revolution in Banten, and patriotism.

A. INTRODUCTION

Talking about local history, there are two questions that will reveal, first, what the connection that make history is related to a certain society? And second, what are things that make history in a region can be local, national or world status?. There are two expert opinions for the first question, in his article, entitled "*Keragaman Sejarah di Indonesia Bagian Timur; Sebuah Pengamatan Awal*", Helius Sjamsuddin explained that local history is equals to "region history". It is kinds of research and process of writing history, that local history refers to a place such as village, city or politic-administrative unit division. This politic-administrative can be a district or a province where inhabited by one or more cultural-ethnic

group (Sjamsuddin, TT). According to that definition, the writer sees that the definition is more emphasize on historical research aspects; methodology and period, from that definition it can be seen that there are same patterns and titles in monograph side (resource of the history), so it can be said that politics-administrative territory is recently based on same tradition. Besides, "local or region history" has a similarity with "nation history" in period aspect, it can be seen from pre-history period until independence period (1945-1975). Furthermore, there is a conclusion that explains local history leads to nation integration in national history.

Meanwhile, Taufik Abdullah in Mulyana (2007) explains that local history is a history which happened in locality. This locality is a part of nation history unit or a country which its boundaries are determined by an agreement which is presented by the writer (Mulyana, 2007: 17). Here, we can observe that Taufik Abdullah tends to define local history by detaching it from politic-administrative, he says the meaning of this locality is not only attached on modern politic-administrative territory (such as province, regency, and so forth), but also it is attached on geographycal position, for examples "Sejarah Wilayah Sepanjang Pantai Utara" or "Sejarah Wilayah Sepanjang Sungai Cibanten" (Abdullah in Mulyana 2007: 16).

Likewise, Taufik Abdullah has same opinion about the relation of local and national history, it is on academic concept perspective that local history is a part of nation or national history unit. This definition answers the second question, if "Local History" as historical writing in last level under "National History", so the existence of "National History" is caused by the existence of "Local History" itself, and then "National History" is a part of "Regional History" too (for example South-East Asia History) and in high level there is "World History". Thus, refers to heirarchy point that the lower is a part of the higher and the higher is a part of the highest too and they connect each other. On the other hand, I Gede Widja says that local history is a study of society life or especially a study of certain neighborhood life in several aspects.

Regarding to the definition above, the writer tries to conclude that local history is typical history of a certain society or community as a sources of cultural and political identity which is limited by territory and it is a part of national history.

B. DISCUSION
1. Physical Revolution in Banten 1945-1949

After the declaration of Proclamation, there were changes of social and politic aspects in Banten. Social groups such as, clerics, youths, and *jawara* were united to take the authority from old government (*shuchokan*). These social groups were doing a coalition and they were success to take the authority. Then, Banten government was established, namely Pemerintahan Daerah Karesidenan Banten that is lead by K.H. Tb. Achmad Chatib as a Resident. This government was supported by youths, clerics, intellects, and armed forces. In protecting Banten, Badan Keamanan Rakyat was established and it was lead by K.H. Sjam'un.

On July 21st 1947, Netherlands undertake a military operation openly in RI's area, as known Agresi Militer Belanda I (AMB I). This agression was conducted with systematic and massive way. RI's areas were attacked simultaneously from three sections; land, sea, and air. First attack is conducted on July 20th 1947 from air, Netherlands dropped bombs on Lapangan Udara Gorda, Serang. Second attack is happened on July 21st 1947 at 00.00 a.m, Netherlands attacked from sea by shooting ALRI Banten's warehouse. This situation caused a battle between Bantenese and Netherlands in Leuwiliang. This is aimed to grab Electrical Energy Center in Kracak, Tanggerang.

Responding this attack, Brigade Tirtayasa commanded to attack Netherlands in Tanggerang. This attack was conducted from three sections; north, center, and south. North section attacked from Mauk, center section attacked from Balaraja-Tanggerang, and south section attacked from Tanggerang. These attacks were beginning from sunrise and all day long.

On AMB I when Netherlands arrived in Banten, Netherlands's purpose was not to dominate Banten, but Netherlands's military conducted a blokade. Banten was delibrately isolated by Netherlands from others region in order to be weak and to be disorganized. This blockade was conducted by protecting in sea and land borders tightly. Its effect made the connection between Banten Government and Indonesia Central Government in Yogyakarta was difficult to be done. There was only one way which can be passed, that was through Bayah (South of Banten).

Effect of this blockade made social, economy, and politics life in Banten were disorganized. This situation became the main Netherlands's purpose. The crisis that happened in Banten made the lack of daily needs. Although the daily needs were available, the price was so high. To solve this crisis, Bantenese created stuffs by themselves by exploiting natural resources. For example, the gasoline was exploited to be rubber. K.H. Tb. Ahmad Chatib as Banten's Resident had an idea to release URIDABS (Uang Republik Indonesia Daerah Banten Sementara), in order to solve the economy problems.

On AMB II, Netherlands had a plan to dominate Banten and their attacks were beginning on December 23rd 1948. At that time, Banten's Military only had Tentara Republik Indonesia Pelajar (TRIP) that was lead by Komando Keamanan Kota (KKK) in Serang. Since there were lack of weapons, it made Serang city was authorized by Netherlands without any resistance (Majalah *Merdeka*, Th. II, No. 4, January 22nd 1949: *Sin Po*, January 6th 1949 in Suharto: 211). Then, Netherlands commanded to make *"curfew"*. This curfew was started from 6 p.m until 6 a.m and Netherland would shoot who break this rule.

Because insisted by Netherlands, Banten Residency move to the removed area. At that time, K.H. Tb. Achmad Chatib as the Banten's resident activated the government activities together with Indonesian National Armed Forces (TNI). Pemerintahan Daerah Kabupaten Pandeglang and Lebak also conducted the same thing like what K.H. Achmad Chatib has been done. Region that conducted these activities was South of Banten; Kewedanan Cibaliung. Selecting Kewedanan Cibaliung as a place to conduct the government activities because the geographycal situation. Kewedanan Cibaliung had a lot of mountains that was

potential to be a safe place. Moreover, their society accepted and helped this struggling such as, giving some buffalos, rice, fruits, and etc.

Clerics' role became the most important role in this AMB II phase. They were believed by the citizens, they gave the examples about patience in facing troubles and difficulties. K.H. Tb. Achmad Chatib was also a cleric who had given some influences for the Bantenese. He had a strong conviction in struggling, he never give up when his workers chose to follow Netherlands, and he said :

"If every Bantenese obeys to Netherlands, just give me one weapon to maintain myself from animals disturbance. I will be happier to be a jungle man than to be Netherlands follower. But, I am sure that it will never ever happpen." (*Merdeka* Magazine, II, No. 14, April 2[nd] 1949: 7, in Suharto, 2001: 204).

K.H. Tb. Achmad Chatib's belief based on his knowledge about Bantenese who obident to their religion and clerics who became their leaders.

For two months, Banten's civil warriors and military had finished their geurrilla warfare tactics. After finishing the tactics, Civil Government, TNI, and Bantenese attacked South and North Banten. In maintaining the struggle, K.H. Tb. Achmad Chatib built "Gerilya Rakyat (Gera)" that was lead by himself. GERA consisted of civil and military elements.

In North Banten was attacked on March 10[th] 1949, those attacks happened around Serang city. Geurrilla warfare tactics in North Banten was not successful because of its geographycal factor where North Banten had several lowlands and those geurrilla tactics were useless.

Unlike in North Banten, South Banten became a difficult field for Netherlands's military. In South Banten, Netherlands's guard posts became the target to be attacked by GERA. Besides attcked Netherlands's guard posts, GERA also blocked Netherlands and put some traps. In Pandeglang district, the aggression happened almost 24 hours. Besides attcaked on Netherlands guard posts, the warriors also doing a combusition and destruction of bridges. Between Pandeglang-Menes and Rangkasbitung-Bogor became a region which avoided by Netherlands's military.

This Physical Revolution in Banten stopped when truce process between RI's Goverment and Netherlands Goverment was declared on August 10[th] 1949. This truce was the result of Roem-Royen Negotiation. Finally, Banten Civil Goverment and RI's military back to Banten.

2. The Values for Historical Study

Physical Revolution in Banten 1945-1949 subject has several values for historical study itself. Students will be able to understand the patriotism values which are depicted in those moments and historical figures. This case is agree with curriculum philosophy from *perenialism* ideology, that is in value inheritance. The writer sees that Physical Revolution in Banten is the appropriate topics for improving patriotism behavior from the glorious past. Patriotism become the major resource in conducting historical study effectively on affective (behavior) aspect. Students are taught to gain the awerness of local history moments which happened in their environment, thus local history become a booster for the students to love

their country more. This opinion is agree with Kamaraga's idea (in Mulyana, 2004: 222) that if local history are discussed from the national context which refers to nation integration, the real meaning will appear.

By learning Physical Revolution History in Banten, historical study can be attached closer with students' environment. Students can directly come and see the location where those moments happened, so it can shape their experiences. In addition, the benefit of this historical study process is able to persuade students to the past by understanding every single events in the past (recreative). Furthermore, this history local topic can touch the students because of the language used which is emotional, it makes students are getting involved to those moments.

The purposes of this Indonesia History lesson in KTSP Curriculum 2013, are to improve patriotism, to understand the citizens and society, to realize the past in the future life, and to build the future life (Hasan, 2013). By realizing and understanding the figure's role (K.H. Tb. Achmad Chatib) and Bantenese's role, the students are motivated to gain the knowledge about the past, to know the present life, and also to build the bright future. The indicator for this process is by participating the students in the activities that related to national developing.

From period aspect, Physical Revolution in Banten is a part of national history period which included in "Perjuangan Mempertahankan Kemerdekaan di Berbagai Daerah", especially AMB I and AMB II. From here, local history moments can be learned simultaneously with national history where local history gives some contributions in national history.

In Curriculum 2013, this subject applies in history lesson for 6th Grade and this subject appeals in Kompetensi Dasar (Basic Competence) KD 3.11 *"Menganalisa Perjuangan Bangsa Indonesia dalam Upaya mempertahankan Kemerdekaan dari Ancaman Sekutu dan Belanda"*. Here, the knowledge of the past is built based on understanding and analyzing toward historical facts and moments from continuity, changing, and causative aspects.

In addition, the discussions of "Perjuangan Mempertahankan Kemerdekaan diberbagai Daerah", AMB I, and AMB II showed a local figure who is characterized in against Netherlands. That figure is K.H. Tb. Achamad Chatib. He is Banten Resident in Physical Revolution period. He is described as a figure who has patriotism for his sacrifice, his loyalty to the government, and his love for his country.

3. Implementation of The Study

The writer sees the implementation of the study can apply "Constructivism" theory. This theory developed in 20[th] century. Contructivism philoshopy suggests that knowledge is the result of human and object interactions, experiences, and their environments. Knowledge is built based on the experiences and previous knowledges.

Specifically, the writer takes "Cognitive Contructivism" theory from Lev Vygotsky. Lev Vygotsky's theory is different from Piaget's "Cognitive Constructivism". Lev Vygotsky's emphasizes more on social condition, especially in cognitive developed than

personal ability. He says that studying for the students is conducted in interaction ways either social groups or physical groups.

Two main concepts in Vygotsky's theory are developing in the center zone and scaffolding. Developing in the center zone is something that cannot be done alone, but it can be done by friend's help who is more competent (for example a teacher) (Slavin, 2003: 59). Scaffolding is a term that refers to a process that is conducted by a friend or a teacher who is more competent to motivate the students in learning phases and after that they give a belief for the students (Slavin, 2013: 59).

In historical study, constructivism can be applied for all topics and subjects. "When a teacher uses this approach, they can discuss and examine the topics which are appeared by the teacher and the students at learning process" (Supriatna, 2001: 27). The function of history teacher in this constructivism is as a facilitator by giving chances for the students to improve their previous knowledges. After that, the teachers can connect the lesson to the students' conditions.

In "Perjuangan Mempertahankan Kemerdekaan diberbagai Daerah" topic, history teacher can teach the students by suggesting the early knowledge of the students about the efforts in "Perjuangan Mempertahankan Kemerdekaan diberbagai Daerah". The teachers need to induce the students about the important questions toward the historical phenomenon which related to AMB I and AMB II and then the students are given some chances to talk or to ilustrate about their understanding of AMB I and AMB moments. In addition, the students are given chances to investigate and to figure out AMB I and AMB II phenomenon by inquiry and discussion activities.

The important thing in constructivism learning is to connect the subject to students' reality life. In the discussion of AMB I and AMB II, the teachers can connect the people's struggle to the students' reality life (in this context is Bantenese) so, the students are able to find out and to investigate the information about that phenomenon. Besides, the teachers can motivate the students to study hard by connecting the spirit of hero's figure in "Mempertahankan Kemerdekaan diberbagai Daerah" phenomenon. For example in Banten, there are several figures of Proclamation who can be role models, such as K.H. Tb. Achmad Chatib, K.H. Syam'un, and Yusuf Martadilaga (Yumaga). Those figures have been remembered become the streets' name, especially in Serang city. Those names also can be used for student' groups name in class. It becomes the one way to improve their love towards national heros.

4. The Obstacles in Teaching Process

The obstacles and challenges that probably faced in improving local history topics in school are the sources, appropriate subject and evaluation. There are several obstacles and challenges in improving local history topics, especially about Agresi Militer Belanda I and II in Banten. First is source, this obstacle can appear when there are not sources, neither writing, verbal, nor map, thus local history events will be difficult to be delivered for the students who are the next generation. Lack of resources can be the major obstacles and challenges, especially the lack of human resources (teachers) who will be the main role in education.

Teachers still think that teaching process is have to be guided by the lesson's books that are given by schools. Even this Physical Revolution in Banten topic is still less attention than others topics, for examples Pertempuran di Surabaya (November 10th) and Pertempuran di Bandung (Bandung Lautan Api).

Second, the obstacle from the appropriate subject and evaluation. Local history subject which has been given, it will become a refusal when an evaluation in study is not discuss about that subject. Several questions in an examination (Government version) do not give enough a local history subject that has been taught for the students.

C. CONCLUSION

Local history as the study branch of historical knowledge become the important subject in historical developed and also in historical knowledge. As a historical phenomenon which happened in locality, local history subject has special identity. Local history subject in historical education development can complete national history unit because of its specific characteristics, local history is potential in improving and developing positive values for the students, such as patriotism.

Patriotism has several dimensions and sometimes those dimension are blended with nasionalism. Nowadays, in gaining, inspiring, and applying patriotism the students probably have some difficulties to identify patriotism in their daily life. The students probably identify patriotism in formal style such as in military's style or even the students love their contry without any evaluation. It means that the students will not aware to the social, culture, economy, and politics changes around them like an aporism "*right or wrong is my country*". This case makes the students do not know how to apply and understand the values of patriotism. According to Staub (1994), this case is called as *blind patriotism*. Through "Cognitive Constructivism" theory, creating schema, concept values, and knowledge structures happen either individually or socially.

Through the subject of Physical Revolution in Banten 1945, improving patriotism can be conducted by applying patriotism from local figures, for examples K.H. Tb. Achmad Chatib and Bantenese. The students are motivated to get the knowledge of the past that is used to know and understand the present life and to build the future life.

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BIRDS OF A FEATHER FLOCK TOGETHER: CAN ABILITY GROUPING DETERMINE STUDENTS' CHARACTERISTIC?

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Abstract

Numbers of quantitative studies have been done over decades on the students' self-esteem under the ability grouping system, and most of them advocated that students who were assigned in high-achieving groups will develop more positive self-esteem compared to those who were assigned in low-achieving groups. Referring to the two-dimensional model of self-esteem, this study aims to determine the difference of self-esteem styles between high-achieving and low-achieving students. Based on the model, self-esteem styles develop the characteristic and social tendency of individuals; therefore, knowing about self-esteem styles is more significant than self-esteem adequacy. In Vivo and Thematic analyses have been done to the interview excerpts from 10 high-achieving and 10 low-achieving students, and it was discovered that high-achieving students developed competence-based self-esteem, while low-achieving students developed worthiness-based self-esteem. It was also explained that their self-esteem were developed in such ways due to their perception of their teachers' expectancy.

A. INTRODUCTION

Self-esteem is an important factor to be considered in education (Ferkany, 2008; Flouri, 2006; Swinson, 2008). Accordingly, it is indicated that failure to recognize the academic significance of self-esteem occurs when academic achievement is taken as the only result of education (Tafarodi & Swann, 2001); however, when students' social behavior is considered as an important determinant for students' overall success, self-esteem is considered significant (Ferkany, 2008; Kammeyer-Mueller, Judge, & Piccolo, 2008; Mruk, 2006). While academic achievement might be a common measurable element of academic success, students' social behavior is an important element to be considered in developing a functional nation.

Recently defined as the integrated sum of individuals' sense of worthiness and competence (Mruk, 2006), self-esteem plays a significant role in school context; it is important to motivate students in order to be academically successful and resilient (Miller & Daniel, 2007). Thereby, facilitating students' self-esteem might be a part that supports the schools' academic goals, without making it as an educational priority (Ferkany, 2008).

Moreover, self-esteem can be seen as a construct that mediates between ability and achievement; self-esteem could influence subsequent achievement, and achievement could influence subsequent levels of self-esteem (Humphrey, 2004). Therefore, as equal as the need of education, the need of self-esteem-enhancing school environment might be equal in every student.

Malaysian public secondary schools put different kinds of students in separate classrooms based on their general academic reports in the past (Saleh, Lazonder, & DeJong, 2005). Such grouping practice affects the students' perceptions of teachers' expectancy, where high achievers perceived that their teachers expect them to achieve high, and the low achievers perceived that their teachers expect them to have disciplinary problems (Hazri, Prihadi, & Hairul, 2010; Ismail & Majeed, 2011; Prihadi, Chin, & Lim, 2011), and in turn, this led them to develop different types of self-esteem.

This qualitative study investigates the self-esteem styles of high-achieving students (HAS) and low-achieving students (LAS). Two-dimensional model of self-esteem (Mruk, 2006) is utilized to determine the types. Based on the model, individuals can be defined in the four categories as follows: low self-worth and low self-competence, low self-worth and high self-competence, high self-worth and low self-competence, as well as high self-worth and high self-competence. Each category leads the individual to show different social tendency.

In the light of that, this study is important because the knowledge obtained will make it easier for the educational stakeholders to design more suitable continuing programs for each student to keep their self-esteem at adequate levels and ensure their future success.

B. LITERATURES

Because learning could be varied in terms of method, pace, preference, and many others; in order to deliver education more effectively, many schools group students based on their common attributes (Hallam, Ireson, & Davies, 2002), in the context of Malaysia, the students grouping practice is done by assigning students to different classrooms based on their previous academic report, where they stay in the same classroom for the all subjects; this practice has been conducted for decades in order to deliver more effective and efficient education in the country (Aminuddin, Tajularipin, & Norhasni, 2009). In other words, in Malaysian public secondary schools, high-achieving students (HAS) are separated from the low-achieving students (LAS) for the entire subjects. The grouping practice as such is termed as ability grouping (AG) (Slavin, 2006).

For decades, AG is considered effective in order to gain the maximum result of academic achievement out of the HAS (Kulik, 2004) and academic achievement is one of the most important aspects to be considered in an educational system (Gamoran, 1992; Saleh, Lazonder, & DeJong, 2005). However, due to the fact that teachers under Malaysian AG practice developed different expectancy towards HAS and LAS (Prihadi K. , 2013), students from each group develop their own perception of teachers' expectancy (Prihadi & Chin, 2011; Hazri, Prihadi, & Hairul, 2010). Similar studies in different parts of the globe have reported supporting results; teachers develop different expectancy towards HAS and LAS (Ismail & Majeed, 2011; Miller & Daniel, 2007; Myers, 2008). Sequentially, it has been reported to

have negative effects on the psychological traits of LAS in Malaysian context, such as the attitude towards science (Chin & Lim, 2011; Prihadi & Chin, 2011), motivation (Saleh, Lazonder, & DeJong, 2005), locus of control (Prihadi & Chua, 2012) and self-esteem (Prihadi, Hairul, & Hazri, 2010).

Related to self-esteem, previous studies in Malaysian context indicated that HAS developed significantly more adequate self-esteem than their LAS counterparts, and the students' perceived teachers' expectancy (PTE) contribute to their self-esteem adequacies (Prihadi, et al., 2010). This finding is supported by the theory of symbolic interaction (Coopersmith, 1967), that self-esteem is significantly affected by individuals' perception of other people's expectancy, which is symbolized by overt behavior (Aksan, Kisac, Aydin, & Demirbuken, 2009; Stryker & Vryan, 2003); students value themselves based on their perception of the teachers' expectancy.

Tafarodi and Swan (2001) as well as Mruk (2006) described that individuals might fall into one of the four categories: (1) high self-worth and high self-competence, (2) high self-worth and low self-competence, (3) low self-worth and high self-competence, and (4) low self-worth and low self-competence. In each quadrant, individuals might fall into some levels where they can be considered clinical, where some clinical treatments should be addressed towards them. However, most of the individuals can also be in one of the four quadrants without being clinical, where their self-esteem can be considered acceptable by the society in general. Figure 1 illustrates the quadrant of self-esteem according to Mruk's two-dimensional model of self-esteem (2DMSE).
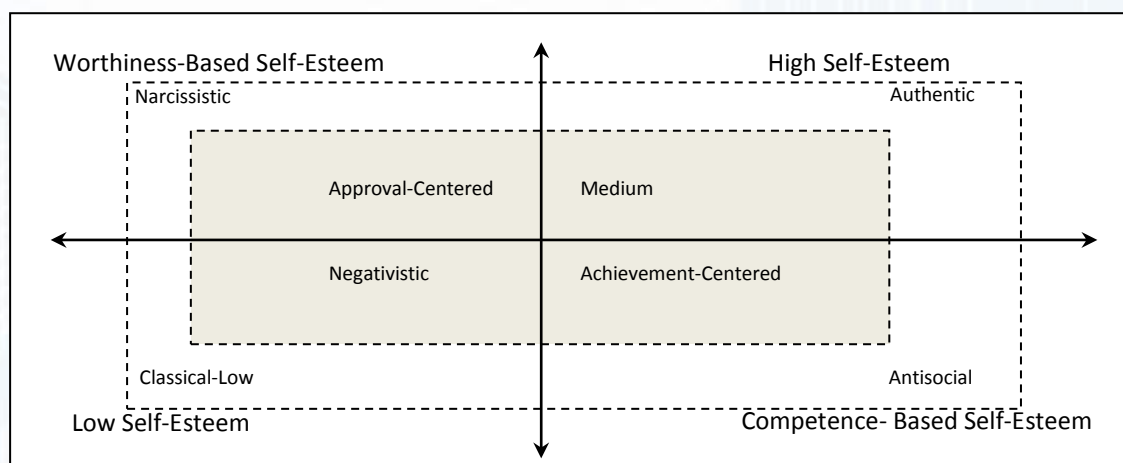
Figure 1. Quadrant of Self-Esteem based on Mruk's 2DMSE (Mruk, 2006)

Figure 1 illustrated how competence and worthiness interact with each other to create self-esteem. The x-axis (horizontal line) in the quadrant resemblance the self-competence, while the y-axis (vertical line) in the quadrant resemblance the self-worth. In general, Mruk divided the characters of every individual into 4 types of self-esteem. Those who are generally high in self-competence and generally low in self-worth are categorized as having a *Competence-Based Self-Esteem*; those who are generally high in self-worth and generally low

in self-competence are categorized as having a *Worthiness-Based Self-Esteem*. When both of an individual's self-worth and self-competence are generally high, he/she is categorized as having a *High Self-Esteem*; while if both elements are generally low, the individual is categorized as having a *Low Self-Esteem*.

The grey rectangle in the center of the quadrant of Figure 1 illustrates the socially acceptable area of individuals' self-esteem characteristics, which means that the self-worth and self-competence of such individuals fell into moderate levels (Approval-Centered; Medium; Negativistic; Achievement-Centered). When one or both of the two elements went over the grey rectangle, the individual would fell into the category of *clinical* (Narcissistic; Classical-Low; Authentic; Antisocial). Characteristics of individuals who fell into each quadrant are explained in Table 1.

Table 1
Characteristic of Individuals in Every Part of 2DMSE Quadrant

Worthiness-Based Self-Esteem	High Self-Esteem
General Type: Unstable or fragile self-esteem characterized by a low sense of competence compensated for by focusing on worthiness.	*General Type:* Relatively stable self-esteem characterized by varying degrees of openness to experience, optimism, and lack of defensiveness.
Levels a. Approval seeking: Contingent on approval from others, sensitive to criticism and rejection. b. Narcissistic: Exaggerated sense of worthiness regardless of competence level and reactive to criticism. Vulnerable to defensive acting out.	*Levels* a. Medium: Stable sense of adequacy in terms of competence and worthiness. b. Authentic: General sense of realistic competence and solid worthiness. Actively concerned with living out positive, intrinsic values.
Low Self-Esteem	**Competence-Based Self-Esteem**
General Type: Reduced level of self-esteem characterized by a concern to avoid further loss of competence or worthiness.	*General Type:* Unstable or fragile self-esteem characterized by low sense of worthiness compensated for by focusing on competence.
Levels a. Negativistic: Generally cautious style of self-regulation, focuses on protecting current level of self-esteem rather than losing it. b. Classical: Impaired functioning due to low sense of ability and worth. Vulnerable to depression, giving up.	*Levels* a. Success seeking: Contingent on garnering successes or achievements and anxious about and sensitive to failure. b. Antisocial: Exaggerated need for success or power. Vulnerable to aggressive acting out.

It can be seen in Table 1 that 2DMSE can explain how an individual might behave in the future based on their self-esteem characteristic. Compared to the previous concepts of self-esteem, 2DMSE introduced more variant of self-esteem characteristic than just high or low self-esteem.

C. METHODS
1. Data Collection Procedures
Non-structured, conversational type of interview was conducted to the participating teachers and students. For those whose Bahasa Malaysia, Hokkien, or Mandarin is the mother tongue, an assistant-interpreter was invited in order to provide comfort for the participants and obtain higher level of understanding. Whenever it needed, the assistant-interpreter played a role as the main interviewer while the author played a role as an assistant, in order to maintain the comfort of the participants. Additionally, face-to-face interview is employed so that the participant will not hesitate to speak and deliver their ideas comfortably (Millar & Shevlin, 2007). The interviews were conducted in a conversational manner, asking about the way they evaluate themselves and their perception of how others evaluate them.

2. Participants
10 HAS and 10 LAS participants were recruited from the sampled schools. Participants of this qualitative studies consisted of ten HAS and ten LAS. All the students were coded as S1, S2…S20.

D. DATA ANALYSES
Two cycles of analyses are employed to analyze the interview excerpts. In Vivo coding Strategy was utilized as the first cycle, because it contains the actual voices of the participants. Thematic analysis is employed afterwards, in order to categorize the 'actual voices' collected from the previous cycle. Because the actual voices of every participant were stated in different manners, thematic coding is employed in order to organize the data into categories that will be analyzed in order to support the quantitative findings and to answer the qualitative research question of this study (Charmaz, 2006; Saldaña, 2009). Similarly, the usage of themes can make it easier to identify the meaningsat the manifest level (observable in the response) or at the latent level (underlying the phenomenon) (Boyatzis, 1998). At manifest level, a theme plays its role as a common denominator to group and organize a set of data (Auerbach & Silverstein, 2003). At a latent level, themes are interpretive and insigthful discoveries of the nature or meaning of the daily life (van Manen, 1990). Overall, themes capture the phenomenon being investigated, and help the researchers to get deeper understanding.

Schema, such as Table 2, was used to code, arrange, and organize the data from the participants' responses.

Table 2
Example of Schema

S/T	Demographic Factors	Responses (Actual Voice)	In Vivo Codes	Theme	Analyses
S1	15y.o; HAS; Govt School	I'm not sure. But I think they don't expect students from the weakest class to perform well[7]. They put all of the responsibility to us[8].	[7]they don't expect students from the weakest class to perform well [8]They put all of the responsibility to us.	[7,8]Positive Self-Competence	HAS students perceived that their teachers expect them to perform well.

As depicted in Table 2, sample of the excerpt includes the actual responses from the student. The student's actual response was coded by using In Vivo Coding method (the superscript numbers), where the actual voice of the participant is noted. Sequentially, from the in vivo codes, the theme was given in order to be analyzed. The analyses reported in the subsequent column.

E. RESULTS

In Vivo and thematic analyses have been done to the entire interview excerpt. In order to understand the way the participants voiced their minds out, broken English grammar and the accent of the participants are remain unchanged. Table 3 depicts the schema used to code, arrange, and organize the data related to the theme of ideal-self. S2 was taken as a representative f HAS, and S16 as LAS

Table 3
Self-esteem types of LAS and HAS

S/T	Demographic Factors	Responses (Actual Sample)	In Vivo Codes	Theme Mentioned	Analyses
S2	15y.o; HAS; Mandarin-based Govt. School	I know we can (achieve) because we are from the good classes, and we go to tuition centers, and we study hard[9].	[9]I know we can…we study hard	[9]Present self-competence (Competent to study)	They evaluate their 'being better' based on their competence in achieving high academic scores. They believe that their competence can help them in the future.
		…I want to study hard, go good university, work in big company with big salary (giggles)[9, 10].	[9]I know we are smarter [10]Work in big company with big salary	[10]Future self-competence (Competent to get high posts)	

S/T	Demographic Factors	Responses (Actual Sample)	In Vivo Codes	Theme Mentioned	Analyses
S16	15y.o; LAS; Mandarin-based Govt. School	[11]The school don't think we can do (achieve high) because our score is low, ma.	[11]...our score is low.	[11] No self-competence (not competent to score high, not sure to go to the college)	They do not evaluate themselves as being better because they are labeled as LAS. However, they believe that they are worthy enough to get married and playing important social roles.
		I want to… Getting married, have children, rich husband[12] (giggles)	Getting married, have children, rich husband[12]		
		University no la... College maybe... But not U. Maybe go to college[11], and become a good mother, raising kids.	Maybe go to college[11], Become a good mother, raising kids[13].	[12] Self-worth (Worthwhile to be married by a competent man and raising kids)	

As depicted in Table 3, HAS are likely to project themselves as financially successful. Other remarks by HAS such as: "*We should be nice to everyone, fair, and we have to have a good score at school, so we can live happy later.*" (Stated by S4), and "*...then later, after university, I want to work in international company.*" (Stated by S1) showed the same indication. HAS tend to believe that their ideal-self is achievable through academic excellence, as depicted in Table 3 and other remarks from S1, "*I think I can go to a good university later.*" and S4, "*Not easy, but I think... I can, la...*" These expressions of being able to achieve ideal-self indicated adequate competence-based self-esteem.

On the other hand, Table 3 depicted that LAS are likely to picture their ideal-self as being socially functional, and financially secured with others' support. A remark from another LAS student, "*I want to be a good mother.*" (Stated by S16) supports the indication that her self-esteem is worthiness based, because no competence requirement was mentioned. As depicted in the sample of excerpts in Table 3, HAS self-esteem tends to be more competence-based, while LAS self-esteem tends to be worthiness-based.

F. DISCUSSIONS

The phenomenon can be explained by the Two-Dimensional Model of Self-Esteem (2DMSE) by Tafarodi & Swan (1995) and Mruk (1996, 2006). It was argued that self-esteem is an integrated sum of self-worth and self-competence, and 2DMSE model can be drawn in the form of a quadrant, as aforementioned in the literature review part of this paper. The ability of HAS to explain their 'road to success' can be considered that they possess high self-competence (knowing that they are competent enough). Furthermore, their self-esteem pattern was in line with Mruk's definition of *Competence-based Self-Esteem*.

Individuals who are categorized as possessing competence-based self-esteem tend to be *success-seeking*; they are contingent on garnering successes or achievements and anxious about and sensitive to failure (Mruk, 2006). The way HAS explain their way to achieve the ideal-self indicated that they relied on their competence, and because they used to perceive that they are expected to score high (Academic Perception of Teachers' Expectancy = PTEa), they focused on their academic competence. On the other hand, people with competence-based self-esteem tend to be sensitive to failure (Mruk, 2006); HAS felt the pressure from their own PTEa and tend to be anxious that they might be fail to meet their own PTEa, even though there are some possibilities that their PTEa does not represent the teachers' actual expectancy.

Individuals with extremely low self-worth might compensate it for focusing their competence (Mruk, 2006); therefore, when taken to the extreme, individuals with competence-based self-esteem might fall into the category of *antisocial*; People with antisocial tendency tend to exaggerated need for success or power without even considering others or the society (Tafarodi & Swann, Two-Dimensional Self-Esteem: Theory and Measurement, 2001). Accordingly, another fact which supports the conclusion that HAS tend to have competence-based self-esteem is that their concepts of ideal-self barely include any contribution to the society or other people, albeit positive for themselves.

Oppositely, the self-esteem pattern showed by LAS indicated that when their self-esteem is quite adequate (closer self-discrepancy). Their self-esteem is categorized as *worthiness-based self-esteem* (Mruk, 2006). Individuals with this kind of self-esteem, tend to be *approval seeking*: Contingent on approval from others, and sensitive to criticism and rejection (Tafarodi & Swann, Two-Dimensional Self-Esteem: Theory and Measurement, 2001). Because they developed perception that their teachers expect them to be involved in disciplinary problem (PTEd), they assess themselves as academically incompetent. Sequentially, they tend to look for approval from others by opting for socially-functioned figure as their ideal-self. Furthermore, because they might be sensitive towards criticism related to their academic performance, they tend to choose not to involve academic achievement in their personal goals.

The argument that individuals with worthiness-based self-esteem tend to compensate their low sense of competence by focusing on worthiness (Mruk, 2006; Tafarodi & Swann, 2001) is supported by the voices of the participating LAS; most of them avoid mentioning that academic competence is required to reach their ideal-self. Due to their possession of worthiness-based self-esteem, LAS with adequate self-esteem tend to be *approval-seeking* individuals (Mruk, 2006); their options for ideal-selves (nurse, police officer, homemaker) are more *socially-approvable*. Furthermore, when they have inadequate worthiness-based self-esteem, they might fall into the category of narcissism, a tendency to exaggerate their self-worth due to lack of self-competence. However, participating LAS had not shown any tendency to be in such situation yet.

While many quantitative findings indicated that there is a significant difference between HAS and LAS in term of self-esteem adequacy (Ismail & Majeed, 2011; Prihadi & Chin, 2012; and Prihadi, et al., 2010), the qualitative findings of this study revealed that they

are different in terms of self-esteem styles, which can be explained by 2DMSE (Mruk, 2006). Influence of PTE might have played important roles in determining the differences, and it will be discussed thoroughly in the next subsection related to the subject matter.

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LEARNING THROUGH SONGS:
THE EFFECTIVENESS OF SONGS IN TEACHING PRONUNCIATION

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Abstract

The study entitled *Learning through Songs: The Effectiveness of Teaching Pronunciation through Songs* is aimed to examine how effective the implementation of songs in class to improve students' proficiency in pronouncing English consonants /ɵ/ and /ð/, and diphthongs /aI/ and /eI/ in words. The study was carried out by using quasi-experimental design. The sample of this study was selected purposefully from the population (seventh grade of one of junior high school in Bandung). The sample was put into two groups, experimental and control groups. Each group consisted of 30 students. The treatments were given only for experimental group. The result of the t-test revealed that the obtained t was greater than critical t (t_{obt} (8.78) > t_{crit} (2.00), at $p = 0.05$), the null hypothesis was rejected. It meant that there was a significant difference between the means in the pronunciation proficiency of the target speech sounds. The pronunciation of the experimental group was better after four treatments. Thus, using songs were effective in teaching English pronunciation to the secondary students. In addition, the students' responses through the questionnaires also indicate that teaching pronunciation through songs effective in gaining students' interest in learning pronunciation.

Keywords: songs, pronunciation, secondary students

A. INTRODUCTION

English becomes one of the subjects which have to be learned by students in Indonesia from elementary up to university level. Yet there is a common assumption among Indonesian students about English as a foreign language that it is very difficult to study, particularly in pronunciation. Meanwhile, in the context of English language teaching in Indonesia, pronunciation has not received sufficient attention. How to teach pronunciation is still become one of the debatable areas in pronunciation teaching (Moedjito, 2008).

Haycraft (1978) states that students who learn English as a Foreign Language (EFL) are often mispronounced words. It is caused by the differences between their mother tongue and English sounds. In line with this, Harmer (2001) states that English is a language in which the sounds and spelling are different. As languages differ in their range of sounds, students have to learn 'physically' to produce certain sounds that unknown before.

As many studies concluded, little relationship exists between teaching pronunciation in the classroom and achieved proficiency in pronunciation; the strongest factors found to

increase pronunciation ability are any activities outside classroom (Lin, 2009). It means that teachers should find the appropriate teaching medium which is familiar with student's daily life and integrating it into daily classroom procedures. Moedjito (2008) in his article says:

> *It is accepted as axiomatic by language teachers that good pronunciation is necessary for the mastery of a new language. However, exactly how they translate this idea into the methodologies and techniques for teaching pronunciation is a question which admits much less clarity and consensus. This situation makes teachers and researchers investigate better techniques for teaching pronunciation.*

Richards (1980) states that to reinforce teaching and learning pronunciation, vocabulary, structures and sentences patterns, teachers can use songs as the medium of teaching. English songs can be used for a wide variety of EFL learning and teaching activities, particularly in helping to convince learners of the way English is pronounced (Ebong & Sabbadini, 2006).

Songs as the medium of teaching can encourage students' interest. According to Lo & Fai Li (cited in Saricoban & Metin, 2000), learning English through songs make students who usually got tense over speaking English in a classroom, finally enjoy the class. Songs create fun and relaxed atmosphere that can expose students to this difficult pronunciation area, without them realizing (Ebong & Sabbadini, 2006).

Relevant with the statements above, this study was conducted to examine whether or not songs were effective in teaching pronunciation.

B.   LITTERATURE REVIEW
1.   The Sounds of Speech

Language is used for communication. It consists of two systems, namely the system of sounds and the system of meaning. The primary medium of language is sound. There are many sounds around us, but only sounds which have meaning can be categorized as language. It was found that to make such a simple speech sounds, require many actions and careful coordination; the study is needed to investigate how the speech sounds are produced.

Both phonetics and phonology are the study of speech sounds. The phonetics concerns with the production of speech sounds. Whereas the phonology is investigates the organization of speech sounds in a particular language.

Yule (1996) states that phonetics can be divided into four areas of study, there are: 1) Articulatory phonetics; the study of how speech sounds are produced or articulated. 2) Acoustic phonetics; the study of the transmission and the physical properties of speech sounds. 3) Auditory phonetics; the study of how speech sounds are heard. At last, forensic phonetics; it is the study of how the speaker's speech sounds are identified.

2.   The Organs of Speech

The organs of speech are capable of possessing the ability to produce sounds. Huebner (1982) says that the organs of speech are the bodily organs for constructing speech. Most people think about how they actually speak only, but fewer are concerned about how to

produce sounds by their organs of speech. Indriani (2003) states that there are three areas of the body used in pronouncing words, there are chest, throat, and head.

3. Pronunciation

Pronunciation is a complex of sounds (consonants, vowels, and diphthongs), syllables (word accent and rhythm) and intonation, and each element needs attention; it is essential in teaching English, not additional or optional extra (Tench (1981). It means speech sounds can be identified through pronunciation. There are two speech sounds groups in pronunciation, there are segmental speech sounds which consists of /aI/, /o/, /eI/, /æ/, /ɵ/, /ð/, etc., and supra segmental speech sounds which consist of stress, pitch, intonation, etc. Jones (1986) classifies segmental speech sounds into three categories; they are consonant sounds, vowel sounds, and diphthongs. This study only focused on consonant sounds (/ð/, /ɵ/) and diphthongs (/aI/, /eI/).

a. Consonant sounds /ð/ and /ɵ/

Cunningham & Bowler (1990) say that to make the sounds /ð/ and /ɵ/, the back of the teeth should be touched by the tongue. If it is difficult, put index finger in front of the mouth and touching it with the tongue. The difference between sound /ð/ and /ɵ/ is in the use of sounds. Voice is needed to make the sound /ð/; it is called voice sound. Meanwhile the sound /ɵ/ is pronounced without voice or it can called voiceless sound. To pronounce those two sounds, the tongue is bitten while blowing the air.

b. Diphthongs /aI/ and /eI/

According to (Jones, 1986), in producing diphthongs the speakers have to glide the two vowel sounds. Based on Jones statement, it means there are two sounds put together; first sounds indicate the startling point, then the second shows the directing of the movement. Furthermore, Cunningham & Bowler (1990) say that the first sound is longer than the second sound.

Jones (1975) mentions some characteristics of diphthongs /aI/ and /eI/ as follows:

1) /aI/

   In pronunciation, the speaker immediately leaves the starting point /a/ and proceeds in the direction of /I/. In phonetic terminology the diphthong begins with an open unrounded vowel varying between front and midway between front and back. It proceeds in the direction of a close unrounded front position. Examples: guide /gaId/ and mine /maIn/.

2) /eI/

   A very common one begins with half-way between the half close and half open position and moves upwards in the direction of /I/. The lips are spread. The movement of the tongue is easily felt if one repeats the diphthong /eI/. Examples: pay /peI/ and gain /geIn/.

4. Teaching Pronunciation

According to Haycraft (1978), the most abandoned aspect in teaching English as a foreign language is pronunciation. Lack of attention to this aspect increased students' pronunciation problem. They don't know how to produce speech sounds correctly. Whereas,

Brown (2001) states that "learning a second language is a long and complex undertaking. Your whole person is affected as you struggle to reach beyond the confines of your first language into a new language, a new culture, a new way of thinking, feeling, and acting". Ashby (2002) says that to cope with these things, students' pronunciation problems or perception difficulties should be analyzed by EFL teachers; bearing in mind both the phonological systems of English and the learner's native language, then give students immediate practical.

5. Definition of Songs

A song is a musical composition that contains lyrics that are performed, commonly accompanied by musical instruments. Meanwhile, according to Manser (1995), song is a set of poem to music which intended to be sung.

There are many types of songs along with the differences. The differences are classified based on the songs' division purpose, style, and the time of origin. In terms of division, there are: "art songs", "popular songs", and "folk songs". By purpose, there is "sacred vs. secular", by style (dance, ballad, soul, etc) and by time of origin (renaissance, contemporary, etc).

Popular song is the one most people recognize. Murphey cited in (Kristin, 2001) analyzed the lyrics of pop songs and found that they were very effective in teaching a second language as they present a different teaching approach to second-language learners.

6. Using Songs in Pronunciation Teaching

Miyake (2009) says that pronunciation had been thought to be boring because most of teachers used audio-lingual method. By using this method, students often express anxiety about their pronunciation and it can contribute to a fear of speaking. Gaining confidence is very important to increase students' pronunciation accuracy.

Using songs can be an effective way to gain students' confidence. Songs offers a fun, non-drill based way to introduce English words. Miyake (2009) says that using songs in class is deeply enjoyable and holds students' interest and attention.

Moreover, Harmer (2001) states that music (especially song) is a teaching medium which connected among the world of leisure and the world of learning. It means that students will get both satisfactory and ability. Edden (1998) has something to say about the relationship between language and music:

> Music and language sit comfortably together…Historically, we can think of storytelling and song being used as an exchange, as entertainment, even as a work aid… With younger people there are some largely unexplored and underestimated opportunities for teachers to develop language through musical activities.

There are many researches which show the importance of songs relates with the pronunciation teaching. Neuroscientists have found that musical and language processing occur in the same part of the brain, musical and linguistic syntax is processed parallels (Maess et.al, 2001). It means that the use of songs in language teaching is important. Moreover,

Miyake (2009) in her research found that songs has the potential to address students' ongoing concerns about wanting to understand native speakers and wanting to sound more like native speakers.

C. METHODOLOGY

1. Research Method

The method that will be used in this study is experimental method. Experimental method is a research to determine the effect of treatment (Frankel and Wallen, 1990) and its deals with statistical techniques for analyzing the quantitative data. Quasi-experimental is the design used in this study. Sugiyono states that quasi-experimental design was developed from true experimental design because of the difficulties to determine control group. This design divided into two; time series design and nonequivalent control group design. The researcher uses nonequivalent control group design which is uses both experimental and control group as samples of the population, chosen purposively (Sugiyono, 2009).

2. Subject of Research

The population of the study is the seventh grade students of one of junior high school in Bandung. There are nine classes; two of them are bilingual classes. Each regular class consisting of 30 students which means that the students in regular classes consist of 210 persons. This study used available population, which means the population used in this study was accessibility selected (Gay et.al, (2009).

Purposive sampling was used to sample the population. Sugiyono (2009) states that purposive sampling is a sampling technique used with certain consideration. According to Surakhmad (1989), the research study may use at least minimum 15% of the population if the population is more than 100 persons. 15% of the population in this study means 30 students from both two classes purposively selected. The samples taken in this study were 60 students from which will be divided into two groups, experimental and control.

3. Research Instruments

The instruments were questionnaires, songs and tests battery. Pilot test, pretest, and posttest were the tests battery used in this study. Interpersonal text has been given as the text used in the tests battery. The text was presented using oral testing technique, reading aloud. In line with it, Selinger & Shohamy (1989) says that the result which presented by an oral reading stimulus is expected to be read aloud.

4. Data Collection Procedures

The study was based on the following procedures:
a. Choosing the class purposively
b. Collecting data
   In gaining the data, the researcher schedules an observation time.
   - 1st meeting: pre-test
   - 2nd, 3rd, 4th, 5th meeting: treatment
   - 6th meeting: post-test

c. Arranging the treatment

In implementing the process approach in teaching pronunciation, the process of teaching pronunciation used some steps, such as preparations, presentation, follow up, and evaluation.

d. Analyzing the data

At this step, student's pretest and posttest scores were analyzed by using t-test in Statistics Product Service Solution (SPSS 17.0) in order to find out whether or not the mean in control group and experimental group have significance different.

e. Interpreting the data

Interpreting the research findings to explains the results of the study; whether it is effective or not to use songs as the teaching medium in learning English pronunciation. At this step, data collection, analysis, and interpretation of the data from the questionnaires were organized in order to understand the survey results more clearly.

D. FINDINGS

Based on the hypothesis, the mean of experimental group is similar with the control group ($H_o : \mu_e = \mu_c$). The calculation of the data from the posttest t-test showed that the t_{obt} is 8.78. Based on the t distribution table, the t_{crit} is 2.00. Since the t_{obt} is bigger than t_{crit} (8.78 > 2.00), the null hypothesis is rejected. It means that there was a significant difference between the means in the pronunciation accuracy of the target speech sounds.

While from the questionnaires, the results were transforming into percentage as shown below:
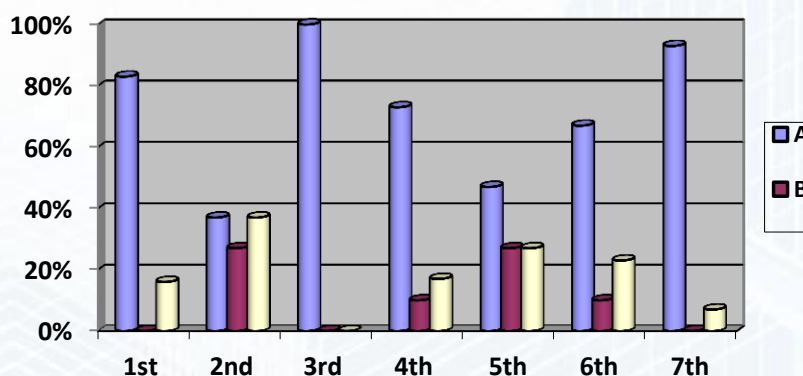
From the questionnaires, it can be seen that students positively responded to the implementation of songs. The further information can be seen in the appendix.

E. DISCUSSION

Based on the statistical analysis on the research findings, it can be concluded that songs were effective in improving students' proficiency in English pronunciation. The effectiveness of teaching pronunciation through songs to the seventh grade students was proved by a significant difference on the scores of pretest and posttest.

The significant increases of the test scores in experimental group were obtained because of the songs treatments. The activities held in the treatments were the important factor which influences the improvement of the students' pronunciation proficiency. They were: First, the teacher played a song and asked the students to listen to it carefully. It was held to make the students familiar with the sounds repeatedly pronounce in the song. Ebong & Sabbadini (2006) says that the listeners can get the repetition of the similar sounds from the rhymes in songs.

Second, the teacher replayed the song and asked the students to follow pronouncing the words as the singer said. The words which asked to pronounce were contained the consonant sounds /θ/ at the first treatment, /ð/ at the second, and the diphthongs /aɪ/ and /eɪ/ at the third and fourth treatments. The teacher used the singers (native speakers) as the model in pronouncing the words in order to make the students accustomed to pronouncing English like native. Moreover, it erases the pronunciation mistakes' possibility that might be done by the teacher.

Third, the phonemes were introduced. The teacher showed the students the process in getting the sounds. To pronounce the consonant sounds /θ/ and /ð/, the tongue is bitten, the air is blowing outside. In the consonant sound /ð/, voice was used, while /θ/ is voiceless. Thus, the diphthongs /aɪ/ and /eɪ/ is pronounced by gliding the two vowel sounds. The International Phonetic Alphabet (IPA) was not taught to lowering the students' stress in teaching pronunciation. Although the teacher tells how to produce the sounds; the song was still used as the primary model in pronouncing the words.

Fourth, the lyrics with some blanks were given to the students. Then, let them listen to the song first and the second time they fill in the blanks. Whoever gets the most blanks is the winner. This task trains the students to focus on the sounds of the word that their trying to search. Meanwhile, the winner is defined in order to increase the students' motivation to fill in the blanks and more focus in listening to the song lyrics.

The activities above were held the same in each meeting. While role play, lyrical puzzle, and picture puzzle were optional activities that conducted as additional activities in propping up the recent activities. Mixing the two methods in pronunciation teaching is a creative way in gaining students' interest. Still, using songs were the main method used in this study.

Furthermore, it is important to make sure that the song is appropriate and goes with the lesson plan. Morley (1991) says "the question is not whether pronunciation should be taught, but instead what should be taught in a pronunciation class and how it should be taught". In this study, the teacher described the materials, and related it with the lyrics of the song. The song entitled "Thank You" which used in the treatment was related with the theme of the lesson (Polite Expressions in English: Saying Thank) and also contains the target of the speech sounds. Other songs in this study also related with the theme of the lesson.

The questionnaire was also used to show the students' response to the classroom activities during the experimental treatment. As known that songs were functioned as the medium of teaching, it made the students aware or paid attention deeply to the process of producing speech sounds. The students show that they like the way the teacher tell how to

pronounce the words well. The teacher asked them to bite their tongue and push the air out when they pronounce the word "those" or any words which contain "th".

There are 100% of the students who felt that they got knowledge of how to pronounce the speech sounds through the songs. The students who like and enjoy learning English pronunciation through songs are 83%. Meanwhile 16% say that they don't really like it and don't hate it either. Number seven in the chart above shows that they like the atmosphere created by implementing the songs as the medium of teaching (93%).

The atmosphere of the classroom during the treatments was fun and joyful. It was proved by the students' answered in the questionnaires. The students asked questions to the teacher actively and answered the questions enthusiastically. The students' interaction with the teacher and between each of them was communicative, and lively.

F. CONCLUSION

From this study, it can be concluded that teaching pronunciation through songs is effective since the null hypothesis is rejected. The questionnaires as additional data of this research also support the research findings. It found that the students are enjoy the learning process, they also says that they felt the improvement in their English pronunciation. Questionnaires findings are in line with the experimental research findings.

In short, the effectiveness of teaching pronunciation through songs to the seventh grade students was not only proved by the statistical calculation, but also by the students' responses towards the teaching and learning process.

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THE COMPARISON OF TWO TEST ITEM FORMATS IN ASSESSING STUDENTS' READING COMPREHENSION ABILITY

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Abstract

This study discussed about the comparison of those two kinds of test in assessing students' reading comprehension skill. The sample of this research was 36 eighth grade students in one of the SMP in Riau. It employed quantitative research. The data collection technique used was reading comprehension test. Furthermore, the data which were obtained from both test item formats will be analyzed, compared and calculated in form of paired samples t-test analysis by using IBM SPSS statistics version 22. The research findings showed some points; there are 4.5833 point differences between two mean scores result (short answer and multiple choice test), the correlation between the result of the two test item formats is .626 which means that there is high correlation between them, and based on the comparison of t value and t table and the P value, it was found H0 is accepted which means that there is no effect of the use of those two test item formats in students' score in assessing students' reading comprehension ability.

Keywords: comparison, testing, multiple choice, short answer, reading comprehension

A. INTRODUCTION

Testing is one of parts in evaluation of students' learning. It is used to collect the information related to the students' achievement and learning outcomes. The main goal of classroom testing and assessment is to obtain valid, reliable, and useful information concerning student achievement (Miller et al., 2009:139). Further, testing is one of the sections in the teaching and learning process. Test may be constructed primarily as devices to reinforce learning and to motivate the student or primarily as a means of assessing the student's performance in the language (Heaton, 1988:5). A language test which seeks to find out what candidates can do with language provides a focus for purposeful, everyday communication activities. A well-constructed classroom test will provide the students with an opportunity to show their ability to perform certain tasks in the language.

In conducting test, the testers need to be able to choose the appropriate test item formats used. Miller et all. (2009:150) stated that there are two kinds of classroom test item formats; objective test items and performance assessment. He added that objective test items are highly structured and require the students to supply a word or two or to select the correct answer from alternatives. The examples of objective test are multiple choice test, short answer

test, completion, matching, True-False or Alternative Response. While performance assessment require the students to construct responses (e.g., write an essay) or perform a particular task (e.g., measure air pressure). However, the objective test items, particularly multiple choice test is the most widely used by the teachers. This is in line with the statement of Cheung and Bucat (2002:1) that the multiple-choice (MC) item is one of the most popular item formats used in educational assessment. Moreover, another test item format that is frequently used in classroom assessment is short answer test.

Furthermore, these two test item formats have their own strengths and weaknesses. Some research and theories have revealed about this case. Based on some research and theories, multiple choice test item format is one of the most popular ones to be used in educational assessment in which it issimple, valid, reliable, and efficient. On the other side, some researchers also revealed about the use of short answer test, particularly in assessing students' reading comprehension skill. They found that this kind of test item format is an easy test to be constructed and being a good one to make the students answer the questions with minimal possibility of guessing.

These two test item formats can be used in assessing reading comprehension. The multiple choice test offers a useful way of testing reading comprehension (Heaton, 1988:117). Reading comprehension is one of the skills which is needed to be mastered by the students. He added that the extent to which a test is successfully in measuring what it sets out to measure depends largely on the effectiveness of each of the items used. Moreover, Miller et.al (2009:172) stated that the short answer test item is suitable for measuring a wide variety of relatively simple learning outcomes. This is including in measuring students' reading comprehension.

In short, this study disscussed about the comparison of two kinds of test items formats; multiple choice and short answerin assessing students' reading comprehension in a class of eight grade students in a junior high school in Riau.

B. LITERATURE REVIEW
1. Language Testing

Testing consist of some components which need to be understood. Brown (2010:3) stated that there are some components of testing; (1) method – an instrument that consists of a set of techniques, procedures or items that requires performance on the part of the test-taker; (2) measure – a process of quantifying a test-taker's performance according to explicit procedures or rules (Bachman, 1990:18-19 in Brown 2010:3); (3) individual's ability, knowledge, or performance – testers need to understand who the test-takers are; (4) given domain – for example, in the case of proficiency test, eventough the actual performance on the test involves only a sampling of skills, the domain is overall proficiency in a language as the general competence in all skills of a language.

In short, it can be stated that in doing testing, it is needed to consider of the method used, the procedures, the test-takers, and the domains of the test itself in order to get the valid and reliable information through testing.

2. Multiple Choice and Short Answer

Multiple choice as one of the objective test is widely used in assessment. This is in line with the statement of Cheung and Bucat (2002:1) that the multiple-choice (MC) item is one of the most popular item formats used in educational assessment.

The multiple-choice test is a very flexible assessment format that can be used to measure knowledge, skills, abilities, values, thinking skills, etc. Such a test usually consists of a number of items that pose a question to which students must select an answer from among a number of choices. Items can also be statements to which students must find the best completion. Multiple-choice items, therefore, are fundamentally recognition tasks, where students must identify the correct response.

(http://www.flaguide.org/cat/mutiplechoicetest/multiple_choice_test1.php)

Multiple choice items can provide a useful means of teaching and testing in various learning situations (particularly at the lower levels) provided that it is always recognized that such items test *knowledge* of grammar, vocabulary, and etc (Heaton, 1988:27). He added that multiple choice items offer a useful introduction to the construction of objective tests. It means that multiple choice as a kind of objective test can be used in testing students' knowledge, particularly at the lower levels.

Moreover, the characteristics of multiple choice test (Miller et al., 2009:194). He said that a multiple choice test consists of a problem and a list of suggested solutions. The problem given can be in form of a direct question or an incomplete statement and is called the stem of the item. While the suggested solutions may include words, numbers, symbols, or phrases, and are called alternatives (also called choices or options).

In addition, the initial part of each multiple choice items is known as the *stem*: the choice from which the students select their answers are referred to as *opinions/responses/alternatives* (Heaton, 1988:28). He added that one option is the *answer, correct option* or *key,* while the other opinions are *distractors.* The task of a distractor is to distract the majority of poor students (i.e. those who do not know the answer) from the correct option.

The second types of objective test items format to be compared in this study is short answer test. According to Miller et all (2009:172), the short answer item is supply-type test items that can be answered by a word, phrase, number, or symbol. The short item uses a direct question. It is suitable for measuring a wide variety of relatively simple learning outcomes. He added some points about the advantages and limitations of short answer test in the same book on page 175-176. The short answer test is one of the easiest to construct, partly because of the relatively simple learning outcomes it usually measures. A more important advantage of the short answer test item format is that the students must supply the answer. This reduces the possibility that the students will obtain the correct answer by guessing. They must either recall the information requested or make the necessary computations to solve the problem presented to them. Partial knowledge, which might enable them to choose the correct answer on a selection item, is insufficient for answering a short item correctly.

Whereas there are two major limitation of short answer test described by Miller et al. The first is the unsuitability for measuring complex learning outcomes. This is in line with the principle of the form of short answer test item format in which it is only needed simple answer in assessing students' ability. So, it is just enable to measure the students' simple learning output. The second one is difficulty of scoring. Unless the question is carefully phrased, many answers of varying degrees of correctness must be considered for total or partial credit. In this case, the teacher needs to decide wisely how to give score of the students' answers.

3. Reading Skill

Reading is one of the four skills in language learning. According to Oxford Learner's Pocket Dictionary (2008: 366), reading is act of reading something that are intended to be read or way in which something is understood. In understanding or comprehending reading material, a good reader actively construct meaning as they read, and they also direct their own comprehension (Pressley, 2000; Snow, 2002; Paris, Lipson, & Wixson, 1983 in Blachowicz and Ogle, 2008:33) by using basic strategies and by monitoring their own understanding (Baker & Brown, 1984 in Blachowicz and Ogle, 2008:33). Strategies in reading activity is one of the elements to be focused on as stated by Gebhard (2006:194) that reading includes dicovering meaning in print, within a social context, through bottow-up and top-down processing, and use of strategies and skills. In short, reading comprehension refers to an act of reading materials which intends to construct meaning of the materials being read by using certain strategies.

People do reading comprehension activity must be on certain purposes. A reading course should cover these purposes – reading to search for information (including skimming and scanning), reading to learn, reading for fun, reading to integrate information, reading to critique texts, and reading to write (Nation, 2009:6). Each readers have different purposes depend on what they want to get from the reading materials, whether it is to get information, fun, and etc.

In comprehending reading materials, readers need to connect their background knowledge to what they read. This is in line with the statement of Klingner, Vaughn, and Boardman (2007:8) that reading comprehension is a multicomponent, highly complex process that involves many interactions between readers and what they bring to the text (previous knowledge, strategy use) as well as variables related to the text itself (interest in text, understanding of text types). When readers do the process of connecting their own background knowledge to the reading material, it will be easier for them to get involve more and comprehend more to the text or reading material.

Reading comprehension involves taking meaning to a text in order to get meaning from the text (Alexander, 1989 as cited by Kusnadi (2009:13). He added that an individual may be said to comprehend a text completely when he/she can: (1) recognize the meaning of words and sentences of the text; (2) associate meanings, both denotative and connotative, from personal experiences with the printed text; (3) recognize how all these meanings and/or his perceptions of them fit together contextually; (4) make value judgement about, and based

on, the reading experience. Those points show that in comprehending reading materials, a reader needs to be actualy get the meaning of the materials being read in depth through sequential steps.

C. METHODOLOGY

This study employed quantitative research. Maykut and Morehouse (1994:2-3) in Bergman (2008:11) stated that quantitative research is based on observations that are converted into discrete units that can be compared to other units by using statistical analysis. This is in line with this study in which it was aimed to compare the use of two test item formats (multiple choice and short answer tests) in assessing students' reading comprehension by using statistical analysis, t-test analysis. The calculation of t-test analysis was conducted by using IBM SPSS statistics version 22.

This study was conducted on the third week of November and the first week of December of 2013 in one of the junior high school in Riau. The samples of the research were 36 of eighth grade students in that school which consist of 21 female and 15 male students. The samples of the research were asked to take two kinds of test item formats; multiple choice and short answer test in two separate days, two weeks apart. The tests were written based on the materials that they have learned in the first semester in eighth grade.

In line with the research design employed and the topic of the study, the data collection technique used is in form of reading comprehension ability test. Emilia (2011:12) reported that test is usually administered at the beginning of the research before the implementation of a teaching program and at the end of the program to test the effectiveness of the program or a technique used.

There are two test item formats that were conducted in this research; multiple choice and short answer test. Each test item formats consists of 30 questions. These questions were written based on the materials taught in the first semester for eight grades of junior high school based on school-based curriculum. There are three materials which include; descriptive text (10 questions), recount text (10 questions), and invitation card (10 questions). The tests were conducted in two separate days, a week apart. This was aimed to ensure that there was no or at least decrease the possibility of any practice effect by taking the same answer in both tests.

The data in form of students' reading comprehension mean scores in both test item formats wereanalyzed and compared in order to find out which one of the two formats is more effective to be used in assessing students' reading comprehension, particularly in theresearch site. In finding this comparison, the researcher was dealing with statistical calculation. One of ways to do this calculation is by using t-test. The t-test is probably the most widely used statistical test for the comparison of two means because it can be used with very small sample sizes (Hatch & Farhady, 1982:108)

One ways of calculating t-test analysis is by using an application which is called SPSS. It originally named Statistical Package for the Social Sciences. It is a software package used for statistical analysis. Long produced by SPSS Inc., it was acquired by IBM in 2009, and current versions are officially named IBM SPSS Statistics.

(http://en.wikipedia.org/wiki/SPSS). In this study, the researcher used the IBM SPSS Statistics version 22. Through this application, it is found the t-test analysis which described the comparison of the mean scores of the two constituents to be mainly focused in this research; short answer and multiple choice test item formats.

This analysis would result the testing of the hypothesis about the comparison of the two test item formats. So, after doing the calculation, it would be found the comparison of the effect between the two test item formats; multiple choice and short answer test.

The following are the hypotheses of the research:

H_0 : There is no effect of the students' score in the use of short answer and multiple choice test item formats in assessing students' reading comprehension ability.

H_1 : There is effect of the students' score in the use of short answer and multiple choice test item formats in assessing students' reading comprehension ability.

D.   FINDINGS AND DISCUSSION

The following are the result of the t-test analysis by using IBM SPSS Statistics Version 22.

Table 1.Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	SA	75.1667	36	17.88642	2.98107
	MC	79.7500	36	13.67468	2.27911

Table 1 shows the paired sample statistics which compared in this research; Short Answer (SA) and Multiple Choice (MC). There are some points pointed out; mean, sample number (N), Standard Deviation, and Standard Error Mean. In this case, it is found that there are 4.5833 point differences between those two mean scores.

Table 2: Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	SA MC	36	.626	.000

Table 2 shows the paired samples correlation. There are two main points in this part; the correlation and the significant. The first point is about the correlation. The correlation refers to the relationship between the pair. It is found that the correlation between two test item formats is as .626. Based on Sugiyono (2012:231) there is a kind of guidance in determining the interpretation of the correlation coefficient; 0.00 – 0.199 (very low), 0.20 – 0.399 (low), 0.40 – 0.599 (average), 0.60 – 0.799 (high), and 0.80 – 1.000 (very high).

In table 2, it can be seen that the correlation between the result of the short answer and multiple choice test item formats is .626. It means that there is high correlation between those test item formats. Furthermore, the second point is significance of those two test item formats. In an article in a web which was written by Widhiarso, it is explained that there is rule about the significance of the statistical correlation:

1. if Sig. > 0.05, it means that there is no relationship between the variable 1 and variable 2
2. If Sig. < 0.05, it means that there is relationship between the variable 1 and variable 2.

As shown in table 2, the significance of it is .000. It means that there is relationship between the result of the use of short answer and the multiple choice test item formats. Moreover, in that web, it is also explained that the square of correlation coefficient (r) would show the contribution of test item formats used in the students' grade. It is found that the contribution is as $.626^2 = 0.39$ (39%). So, it means that 39% of students' grade in reading comprehension is caused by the test item format used, and the rest 61% are caused by other factors.

Table 3: Paired Samples Test

	Paired Differences							
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		T	df	Sig. (2-tailed)
				Lower	Upper			
Pair 1 SA - MC	-4.583 33	14.16 153	2.36 025	-9.374 90	.2082 4	-1.94 2	3 5	.060

Table 3 shows some important points; mean (-4.58333), standard deviation (14.16153), standard error mean (2.36025). Further, Confidence interval shows the area in which there is a kind of difference students' grade in 95% of confidence level. In this case, at the lower level, the confidence level is as -9.37490 and at the upper level, it is as .20824. Besides, the degree of freedom was 35 and the t values was 1.942.

In another column, it is found the t value of the t-test analysis. In an article (in a web) which was written by Widhiarso), it is explained that there is such kind of t-test rule:
a. Sig : $p \leq 0.05$, means there is a difference result of the two variable in 5% significance level.
b. Sig : $p \leq 0.01$, means there is a difference result of the two variable in 1% significance level
c. Sig : $p > 0.05$, means there is no difference result of the two variables.

In this case, t table distribution is calculated and $\alpha = 5\% : 2 = 2.5\%$ (2 tailed) with df (n-1) or 36-1 = 35. With 2 tailed test in α is .025, so it is found that t-table is 2.030108. When we compare t value and t table and the probability, it is found that:

-t value > -t table   and   P value
-1.942> -2.030108   0.060 > 0.05

Based on the rules in point 6, it is found that H0 is accepted which means that there is no effect of the students' score in the use of short answer and multiple choice test item formats in assessing students' reading comprehension ability.

E. CONCLUSIONS
Based on the research findings, it is concluded that:

1. There are 4.5833 point differences between two mean scores of the testing result (short answer and multiple choice test item format).
2. The correlation between the result of the short answer and multiple choice test item formats is .626. It means that there is high correlation between those test item formats.
3. t table distribution is calculated and α = 5% : 2 = 2.5% (2 tailed) with df (n-1) or 36-1 = 35. With 2 tailed test in α is .025, so it is found that t-table is 2.030108.
   When we compare t value and t table and the probability, it is found that:
    -t value > -t table   and   P value
   -1.942> -2.030108   0.060 > 0.05

      Based on the rules in point 6, it is found that H0 is accepted which means that there is no effect of the students' score in the use of short answer and multiple choice test item formats in assessing students' reading comprehension ability.

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PENANG MATRICULATION COLLEGE STUDENTS' OPINIONS ON THE USE OF ONLINE FORUMS

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Abstract

Research has shown that foreign language learners often encounter stress. It is a general consensus among second or foreign language instructors that language learning anxiety is a common barrier that impacts the students negatively and often leads to a passive learning environment. Educators are always in search of teaching techniques that might reduce student anxiety and promote more active participation in language learning activities. Studies show that online forums can affect student participation in a positive way and promote better reflection via peer interaction that empower students to uncover new perspectives. This study aimed to discover student opinions regarding the effects of Moodle forums on their participation and level of detail in their responses. A Likert survey and an open-ended questionnaire were used to gather data. Results suggested that Moodle forums helped lessen student language learning anxiety and increased their participation and level of detail in their responses.

Keywords: online forums, language learning anxiety

A. INTRODUCTION

With the advent of globalisation, proficiency in English has become more important than ever before. The countries in the East Asian region is addressing this issue and English language communication skills is high on the list of priorities in English language education. Malaysia, too, is not exempt from this concern. In Malaysia, English enjoys the status of a second language which reflects the country's commitment in fostering the use of the language amongst its citizens. Even after 46 years of gaining independence from British rule, in Malaysia, the English language is still associated with social, economic, and educational success. The government has implemented communicative language teaching in Malaysian schools from the primary level up to the secondary level. However, even though Malaysian students are aware of the importance of learning English, they are often viewed as 'reticent learners' who lack the confidence or the inclination to initiate communication in English when provided with the opportunity.

The problem does not often end at the secondary school. When these students go on to post-secondary learning institutions such as matriculation colleges, the problem is further exacerbated because the level of study is significantly higher and the language used is of a much higher standard with more sophisticated structures and vocabulary. The language tasks

also get significantly more demanding and strenuous. It is common enough for the students to be tasked with discussing weighty matters or describing complex scientific procedures. Students who are not accustomed to much communicating in the English language might find it terribly daunting and stressful. In most cases, these students shy away from attempting to communicate in the classroom with the most common reason given that they are simply not confident enough to use the language in the classroom.

Lack of past communication in English, or in even worse cases, lack of using the language altogether during their school years have brought about yet another problem. Many students have reported of being ill at ease when using the language. Almost all of these students are also not confident of using the right pronunciation and are afraid that mispronunciations would cause them a great deal of embarassment. As such, even though a student might be able to understand most of what is spoken to him and is able to write the average school essay, it is not surprising to find these very same students cowering in fear at the prospect of having to speak in English at post-secondary or pre-university level. This problem in student attitude towards the use of the language has made it difficult for the English language instructors to conduct activities in the classroom. Especially problematic are class or group discussions where the only contribution from the students would be from the few students who are already proficient in the language. These students would invariably end up as the 'spokesperson' for their groups or for the class.

Eventually, this leads to what, a prominent English Language researcher, Stanovich (2009) has termed of as the 'Matthew phenomenon' where the good students get better, while the weak students get weaker. My personal experience as a matriculation college lecturer have attested to this. It is unfortunately, an all too familiar scenario. In my quest to get the learners to feel confident enough to communicate using the English language during the tutorial sessions, I have decided to experiment with the use of Moodle forums as a means of getting the students to participate more in the class discussions, albeit in written form. It is my hope that the final outcome would be increased confidence among the students to use the language orally to communicate their thoughts and opinions during the group discussions as well as the class discussions. After a semester of carrying out the online forums, I am interested to know of the students' opinions with regards to the use of online forums in increasing their participation in class discussions. Hence, this survey is a step towards achieving that objective.

1. Literature Review

Generally, anxiety can be associated with "threats to self-efficacy and appraisals of situations as threatening" (Papamihiel, 2002, p.331) or an uneasy feeling due to something threatening (Koba et al, 2000). Meanwhile, language anxiety, according to MacIntyre and Gardner (1994) is the feeling of tension and apprehension experienced by learners in the foreign language classroom. It is well-known among language instructors that foreign or second language learning situations are liable to anxiety arousal. They contend that generally, the presence of anxiety can affect the fluency of the learners' speech and learning.

It has also been contended that language anxiety may likely cause problems for language learners (Kondo & Ling, 2004). Onwuegbuzie et al (1999) state that FL anxiety is a

complex matter within the context of English language teaching (ELT). Worde (1998) found out that a large percentage of foreign language learners feel anxious while in the process of learning the language. Gregersen (2005) stated that students might enjoy learning the foreign language less if they feel anxious while studying it. Research has also shown that foreign language anxiety can have a negative impact on learners' performance (Chen & Chang, 2004; Pappamihiel, 2002). Pappamihiel (2002) argues that learners who feel anxious in their learning tend not to engage in situations which can make them feel anxious. In a study he conducted on students undertaking ESL programmes in America, he discovered that avoidance - being wholly passive in class - is the most frequently used strategy the students employ to reduce their language anxiety.

Moodle, also known as a Learning Management System (LMS) or a Virtual Learning Environment (VLE), is an Open Source Course Management System (CMS) which has gained popularity among educators around the world as an instrument for creating online dynamic web sites for their learners (retrieved from https://moodle.org/about/). There are numerous ways to use Moodle. It has been used by some educational institutions as a platform to carry out complete online courses, while others have used it as a supplement to face-to-face courses (otherwise termed as blended learning).

Many educators subscribing to the social constructionist approach, which advocates reflection, critical thinking, and collaborative problem-solving, have found the activity modules such as forums and databases useful in forming joint learning communities around their subject matter (retrieved from https://moodle.org/about/). Ioannou (2008) identified several interactive activities that can be utilized by teachers to support active student participation, among them being forums, discussion boards and surveys.

Moodle forums makes it possible for all learners to view all posts in the forum. This enables them to ascertain which post they wish to respond to. This, in turn, gives the students stronger control of the discussion (Pan, 2007). Comments meant to foster self-assessment can be posted by the lecturer. Likewise, questions that aim to stimulate the generation of ideas from the students can also be posted earlier in the forum (Antonenko, 2004). As such, through the use of Moodle forums, instructors are provided with a way of creating an online learning setting that is dynamic and adaptable that will support active student participation (Chen, 2009).

Active participation by students fosters critical thinking skills as they share multiple perspectives and work collaboratively to achieve a deeper understanding of the topics presented (Zeng, 2009). Moodle forums provide this opportunity as students discover new viewpoints from peers then use this information to gain a deeper understanding of the issues presented (Chen, 2009). This active contribution may increase student willingness to seek help from peers (Kok, 2008). Furthermore, teachers can customize Moodle forums by moderating the discussions requiring students to respond and reflect (Pan, 2007). As a result, the teacher facilitates meaningful peer interaction while providing guided instruction that may positively influence student participation (Antonenko, 2004).

When students participate actively in the Moodle forums, they would be able to as read and consider various viewpoints from their peers and this would enable them to work

collaboratively to reach a more profound understanding of the topics discussed (Zeng, 2009). This will lead to the nurturing of their critical thinking skills. Chen (2009) shares the same opinion when she reiterates that Moodle forums present students with the chance to be better critical thinkers when they learn new perspectives from their classmates then use this information to gain a deeper understanding of the issues presented. Student willingness to seek help from peers may be bolstered by this active contribution (Kok, 2008). In addition, Moodle forums can be customized by the teacher by moderating the discussions whereby students are expected to respond and reflect (Pan, 2007). Consequently, this feature of the forum enables the teacher to assist with meaningful peer interaction at the same time guiding them with instruction that may positively stimulate student participation (Antonenko, 2004).

2. Background to the Study

Zeng (2009) researched the use of online forums in a general English course that employed a traditional lecture style and test-driven approach to language learning. All 16 students were familiar with online, text-based discussions. The study observed the effects that online forums had on student participation and knowledge construction through collaborative peer interaction. A language-related episode (LRE) was used as the unit of analysis. Zeng construed that online forums can function as ideal vehicles for interactive learning. Qualitative tools such as online discussion logs and surveys were subsequently employed to corroborate the results illustrated by the LREs. The final outcome signified active student engagement which was evidenced by a comprehensive analysis that demonstrated highly frequent LREs during text-based online discourse. Closer to home, Nibrasal, Chong, Y.N. & Maznah (2012) showed that the use of online forums contributed to an increase in Good Learning Behaviours (GLB) among the students in one of the Matriculation Colleges in Malaysia. They conducted a study using online forums in the English Language classroom and received optimistic responses from the students. The students welcomed the extra time the forums afforded them to interact as compared to the normal class hours. The majority of the students had similar views in that the online forums easily enabled them to share their ideas devoid of fear of making mistakes. Consequently, their active engagement in the classroom has brought about an increase in their confidence.

3. Statement of the Problem

Student anxiety when using the English language in speaking tasks and classroom exercises have contributed to a passive environment in the English as a second language (ESL) classroom. This is a serious cause of concern because a passive environment is not conducive to the teaching and learning process. The main reason for this passiveness seems to stem from the ESL learners' reluctance to speak English in the classroom. This is, unfortunately, a common enough problem in ESL/EFL contexts. This invariably results in fewer opportunities for students to learn from speaking as compared to the more oral students. Studies prove that these students eventually develop more negative attitudes to school and are likely to lack motivation to strive harder in school (McCroskey & Richmond, 1991). Consequently, when these students bring their reluctance in maintaining and extending

conversations to speaking tasks in the classroom, their reticence would result in lesser opportunities for language use for the other students as well.

Within the context of the Penang Matriculation College, this the researcher has noticed a tendency among the PDT students who are weak and not fluent in the language to be very reluctant to speak in class during class discussions. As such, the PDT students did not actively participate in class discussions making it hard to determine if the students have understood the issue that was being discussed or if they are learning the skills they are supposed to learn. When group discussions are held, there are some students who made liberal use of their first language. Further observation on this teacher researcher's part revealed that the students' lack of involvement has led to a passive learning environment. Moodle forums facilitate students' involvement in interactive and exploratory activities. These activities promote reflection, critical thinking, and collaborative problem solving (Baird, 2005). According to Antonenko (2004), students can develop a deeper understanding of the material because these processes enable students' comparison and contrast of course concepts. When students participate in class discussions, it creates an opportunity for the lecturers to assess their levels of understanding based on their comments or ideas (Janes, 2008). Thus, this teacher researcher implemented Moodle forums to facilitate student participation in order to create an active, student-centered learning environment. In order to know whether this programme has achieved its objective, the first step that the researcher would like to take is to find out whether the students found the activity helpful in improving their participation by increasing the frequency and level of detail of their online posts. Hence, the purpose of this study is to determine the students' opinions as to the effect of using Moodle forums on their participation and the level of detail in their responses.

4. Research Objective

To determine the students' opinions regarding the effect of using Moodle forums on their participation and the level of detail in their responses.

5. Research Question

What are the students' opinions regarding the effect of using Moodle forums on their participation and the level of detail in their responses?

6. Theoretical Framework

The constructivist theory postulates that learning is created through social interactions and this is what Moodle forums offer learners, albeit through a virtual environment. These forums allows students the opportunities to share perspectives, hence mirroring the theory of Constructivism (Payne, 2008). These forums incorporate such constructivist principles as development of knowledge through participation and discourse, student management of viewpoints, and enhancement of critical thinking skills (Payne, 2008). Social learning theorists, prominent among them, Vygotsky, have postulated that learners' greatest intellectual development is attained by active participation in the social exchange of information (Baird, 2005). According to Vygotsky, as cited in McLeod (2007), complex

mental processes begin as social activities, Vygotsky (1978) resolved that learners are equipped with several internal developmental processes that they activate only when they are socially interacting with their peers. As such, when students construct their individual knowledge through the use of information obtained via social interaction, be it in an actual physical environment or a virtual environment such as an online forum, this will allow for the development of critical thinking skills which will lead to improved learning (Payne, 2008).

Active student participation can be fostered through the use of Moodle forums which offer students an interactive, collaborative activity that simultaneously encourage students to broaden course concepts through shared dialogue (Kester, 2007). Moodle forums comprise these features: examination of posts, inclusion of attachments, dual reception of posts, and inclusion of a formatting text editor (Uzumboylu, 2006). The first feature mentioned allows students to examine their classmates' posts and this will hopefully prompt them to prepare and think critically so they can answer in a meaningful and reflective way (Pan, 2007). Engaging in this critical thinking creates an opening for the synthesis of information (Zeng, 2009). As Moreover, Moodle's threading feature arranges student discussion topics historically by threads (Kester, 2007). A thread is a collection of posts in a forum displayed chronologically from newest to oldest (www.moodle.org). Learners are able to trace the history of the discussion by viewing forum threads encourages students to reflect on each post while providing extra time to respond critically (Chen, 2009). As a result, students use prior knowledge combined with information learned from peer postings to construct new meaning and solve problems (Baird, 2005).

Inclusion of attachments with postings enables students to produce a more animated forum through the integration of other resources such as pictures and links to websites (Beatty, 2006). Also, Moodle forums inculcate knowledge exchange in a creative way and offer equal opportunities to participate by allowing students to create and receive posts (Zing, 2009). With the inclusion of a formatting text editor, students would be able to focus their attention on the content of their posts rather than word processing issues (Uzumboylu, 2006).

When students participate in the equal sharing of viewpoints through Moodle forums, they obtain a measure of accountability that can make them more motivated to ask for assistance from their fellow classmates (Zeng, 2009). This will lead to more interest in course content, further opportunities for reflection, improvement in learning quality, and development of meaningful observations on course content (Chen, 2009). Instructors can help guide the students by inserting posts that can induce the students to review previous postings or redirect students in need of guidance (Lin, 2009). According to Vygotsky, as cited in McLeod (2007) a learner acquires a lot of important knowledge through social interaction via instruction from a skillful tutor. The tutor may model behaviors or provide verbal instructions or do both simultaneously for the learner. Vygotsky refers to this as cooperative or collaborative dialogue. First, the learner attempts to comprehend the actions or instructions given by the tutor who is most probably the parent or teacher. When the information has been absorbed by the learner, he will then use it to guide or regulate his own performance. Hence, Moodle forums can be an effective tool in carrying out cooperative or collaborative teaching.

Two-way communication afforded by the Moodle forums helps transform superficial thoughts into more complex concepts when a student's knowledge grows and broadens in the course of the online dialogue (Pan, 2007; Payne, 2009). When students have more ideas on topic, it is hoped that their reticence would be lessened and they would be more interested to participate in the discussion.

7. Definition of Terms

Course management systems (CMS) – software systems that manage course content and activities

Moodle – an acronym for Modular Object Oriented Dynamic Learning Environment; it is an open-source course management system that allows users to create interactive online learning environments.

Open-source software – computer software or operating systems whose source code is public domain. Research method consists of research framework, source of data and technique of collecting data, and data analysis.

B. RESEARCH METHOD

1. Methodology

The methodology employed in this particular study is action research. Through action research, educators can identify a topic of interest, work out a research question, then develop an intervention for the purpose of improving classroom procedures (Hendricks, 2009). Student participation in the classroom is extremely important, leading teachers to constantly be on the lookout for tools to improve student engagement (Janes, 2008). Poor student engagement results in passive learning environments that may hamper students' learning development. In order to replace a passive learning environment with a dynamic, interactive learning environment, many educators have turned to CMS that provide social networking technologies that may improve student participation by creating the desired environment (Baird, 2005). Through action research teachers can evaluate the influence of CMS on student participation.

2. Research Setting

This study took part in Penang Matriculation College located in the northern part of Malaysia. Student population in the college was approximately 2700. The student population was divided into four main groups according to their study module, namely, the Biological Science, Physical Science, Computer Science and Accounts modules. The teaching staff for the English Unit consisted of 29 full-time teachers. There were 3 language labs in this college. However, the language labs have only one computer each which functions as the instructor's computer with Internet connectivity available in only one of the three language labs. The college also has seven computer labs which were fully equipped with computers and Internet connectivity. The researcher had been using Moodle forums to complement classroom activities for 2 years prior to this study. This study was conducted in one of the seven computer labs available.

3. Participants

The study involved a number of Matriculation students of lower and intermediate levels. Participants in this study were Matriculation students from Penang Matriculation College, one of the eleven Matriculation Colleges in Malaysia under the administration of the Matriculation Division of the Malaysian Ministry of Education. The students were enrolled in Module 3 of the Two-Year Programme. The students were selected from that particular module because they have studied the Computer Science subject which makes them more familiar with Moodle forums. They have also learned how to participate in online Moodle forums to discuss course content. The class consisted of 14 students, 10 girls and 4 boys. The response rate was 100%.

4. Data Collection and Analysis

A survey design was used to direct this study. According to Creswell (2005, p.52), survey design is one of the research procedures used to "describe trends in a population of individuals". In the context of this study, the trends described are those related to learners' opinions on the use of Moodle forums to help in discussions. The instrument used to collect the data is a questionnaire. Students completed a 4-point Likert survey. This survey concentrated on student attitudes about using Moodle forums. A Likert survey was chosen because of the close-ended nature of the questions, thereby allowing the researcher to tally the responses in a quantitative manner (Hendricks, 2009). The survey consisted of 10 questions, 5 questions phrased in the positive and 5 phrased in the negative. This format eliminated conflicting data results from participants who failed to read the survey questions (Hendricks). The data were quantitatively analyzed by calculating the means of participants' responses and the standard deviation. Another data collection method used in this study was an open-ended questionnaire to elaborate on their opinions on using Moodle forums to facilitate class discussions.

Prior to answering the questionnaire, the students participated in a forum to post their reactions to an article selected by the teacher on whether one parent should stay at home. This forum was implemented to promote dialogue among students. This teacher researcher provided students with a model of a similar Moodle forum and reviewed the model identifying features in the posts that acknowledged alternate viewpoints and encouraged additional discussion. Students were given the chance to respond to these features and to state their view as to whether they think the model forum was effective. This teacher researcher then asked the students to read article and post their reactions. Students used a one hour period of their next English class to post responses to the article selected by the teacher earlier. Over the next week, students are encouraged to post their views whenever they are inclined to.

C. FINDINGS AND DISCUSSION

A 4-point Likert survey was administered to determine student reactions toward using Moodle forums (see Table 1).

Table 1: Likert Survey – Moodle Forums

N=14	Mean	Standard Deviation
Allowed for more detail	3.38	0.5
Allowed more reflection time	3.00	0.58
Encouraged more than 1 peer post	3.57	0.51
Easier to include specifics	3.29	0.47
Enjoyed Moodle forums	3.36	0.49

A mean of 3.38 and a standard deviation of 0.5 indicated that most students feel that using Moodle forums allowed them to add more detail when responding. Similarly, a mean of 3.00 and a standard deviation of 0.58 revealed that the learners believe Moodle forums allowed for more reflection time. In addition, most students were encouraged to post more than one peer post as indicated by the high mean of 3.57 and a low standard deviation of 0.51. However, with a lower mean of 3.29 and a slightly lower standard deviation of 0.47, it still indicated that many students found it easy to include specific examples while using Moodle, and not too many students were still struggling. Overall, most students enjoyed using Moodle forums as suggested by the relatively high mean of 3.30 coupled with a fairly low standard deviation of 0.55.

From the open-ended questionnaire, it can be seen that many students enjoyed using Moodle forums. Most students liked the interactivity, sharing ideas with peers, and reading the peer and teacher posts. For example, one student responded, "It is so interesting to read all my friends' post. It shows that they have read a lot and they have such wonderful ideas. When the teacher and students interact and share the ideas, (there is) a lot of information we gain together. It's lots of fun!" Also, many students wrote that being able to view their classmates' posts as well as students form other classes gave them more ideas with which to respond. As another student wrote "I can hear others' opinions. Some of my peers do not have the chance to voice out their opinions during classes. I also can know whether my idea is acceptable when my teacher reply and viewing her posts based on my posts." Another student claimed that, "The variety of opinions will make me think from many perspectives."

Similarly, when students were asked if they responded more frequently using Moodle forums, most students agreed with many students saying that they felt more confident to give their points and views because they are not hampered by having to speak out loud. One such student responded, "Yes, because I cannot respond in English fluently. If I have to speak in class discussions my mind becomes blank and I do not have courage to speak in English in front of my friends. So I prefer online forums to speak my thoughts with writing." Quite a number of students felt that being able to observe peer and teacher posts induced them to post more frequently. Another notable reason given is the forum afforded them more opportunities to present their views. One respondent wrote "Yes. This is because I can voice out my opinions anytime that I want. If I had the idea, I can just post it anytime without needing others' opinions. If it is during class, I need to compete with my friends to voice out my idea in a limited time."

Students responded in a similar vein when queried about the effect that Moodle forums had on encouraging them to include more detail and specific examples. Approximately half of the students responded that Moodle forums encouraged them to include more detail and specific examples. Some students revealed that being online affords them the opportunity to get more information regarding the topic being discussed from the Internet and as such, they are more knowledgeable on the topic and become more interested in it. Consequently, they were able to generate more ideas and they would add detail and specific examples when responding. Almost as equal number of students stated that they added detail and specific examples because they are stimulated by their friends' posts. For instance, one student explained, "I can easily generate ideas based on the peer posts. I can express all the ideas with the details and specific examples with no limit. I can post as many examples as I want." Another student wrote, "Yes, when I am writing my posts, I will think deeply first and I will reflect back on the information that I had read before this or the other way is I can search for the information that is related to our forum on Google so I can give more examples and facts that no one knows before." A very comprehensive response comes from a girl who wrote "Yes, when responding to peer posts, I can include more details and specific examples that can be obtained from a lot of sources. I realize that everything I have written will be viewed by peers and the teacher. It is important to explain everything in detail so that all of them would understand my explanation." On the whole, students mentioned the benefits of viewing peer and teacher posts in relation to adding detail and specific examples when responding.

The open-ended questionnaire also asked students if they spent more time reflecting on their responses. Many students signified that they tend to reflect more when they are able to view teacher and peer posts and the interactive nature of Moodle forums facilitated editing of posts after reflecting. One student commented, "Yes, I take a lot of time to review the older posts from teacher and friends so that I can give a good feedback on certain issues." Yet another student responded, "Yes, sometimes I only send one post because I keep thinking if my ideas are corny or my language is bad. That's why I use such a long time to finish one post. But, I make sure that if I send one post, I will give my best to my post by giving a fact and honest response." Generally, students agreed that the interactive nature of Moodle forums combined with the ability to view teacher and peer posts provided more time to reflect on their posts.

Next, when asked whether they think online forums support class discussions, most students agreed and indicated that knowing their peers' views by reading their posts made them more familiar and at ease with the topic, hence, which made them eager to take part in class discussions. Quite a significant number of students revealed that, "… some of the students are shy and they do not talk a lot during class discussions. By doing online forums, they can express their opinions without facing their friends and teacher." Another student echoed this sentiment by stating, "Moodle forums help support class discussions because in class we can talk about what everyone has written and more." Another student replied with, "Yes, with online forums, we can generate our ideas with others. So, in class discussions, maybe the burden to speak English will be lifted, because in our minds, there are many

information that we gain during online forums, so we can voice out that information during class discussions." However, two of the students did not think so. One of them said "Not really because students do not feel confident to respond during the real class discussion as they respond in the forum." The other student said "Not really but online forums trained me to think in a short time to give the response."

Findings from the open-ended questionnaire yielded more consistent premises concerning the advantages of using Moodle forums. Most students reported that being able to view student and teacher posts promoted further postings and insertion of more detail. According to the students too, this facet of the Moodle forum provided them with time for deeper reflection and made it enjoyable. Students also appear to favour giving responses by typing on the computer rather than the usual pen and paper method. When asked about what they liked most about using the Moodle forums, these are some of the responses: "The online forums are very interesting and I am not going to be sleepy in the class." "When everybody comments on teacher's post and I can see many different views from the others." "I can share my ideas without limit. Also, I can view the others' opinions and respond to them immediately. I don't to wait for them to finish speaking.". "The interaction between classmates, sharing ideas, fighting for their stand, their points. It's fun!"

Finally, all of the students felt that the online forums have helped them improve at least two of their English Language skills, with the most frequently mentioned being reading and writing. The majority of them also felt that their critical thinking skills have also been improved. In addition, there was one student who felt that her speaking skills, apart from her writing skills have also improved. According to her, this was because the forums have taught her many ways to write and express her ideas.

Implications

Two major implications have resulted from this study. Most importantly, the study has proven to the researcher that FL anxiety is a real and common problem within the setting of second language learning. It is therefore clear to this researcher that teaching methods that can help lessen the students' language learning anxiety are expressly needed so that the students will not be discouraged from participating in all the classroom activities. As Worde (1998) has observed, the teacher's teaching approach is a deciding factor as to whether the learners will become anxious or not when they are learning the second or foreign language.

This study has also shown that Moodle forums have had a positive impact on reducing the students' anxiety in using the English language in class discussions thereby increasing student participation and the level of detail in their contribution to the discussion. Although not all students attained a high level of growth, all participants had improved in the number of posts and quality of responses. In the future, when this teacher researcher employs Moodle forums in the classroom, she will construct forum questions that encourages elaboration and discussion. More time will also be allocated to reviewing exemplary student posts that can be used to help low-performing students. On the whole, participants conveyed their liking and enjoyment of using the Moodle forums and exhibited improvement in participation and level of detail when responding. Zeng (2009) determined that two of the benefits of using online

forums are increased student participation and improved quality of student responses. It would appear then that Moodle forums definitely has a place in the English as a second language classroom. As such, this teacher researcher will continue using Moodle forums in her classes. It is also recommended that other language learning instructors incorporate Moodle forums into their classrooms because of the numerous advantages that they have to offer as illustrated in the findings.

D. CONCLUSION

This study was undertaken in the researcher's quest to discover whether the integration of Moodle forums could lessen the passivity of the students during class discussions. As such, after implementing the use of Moodle forums during some of the lessons, the first step towards gaining that knowledge is to discover the students' attitude towards the use of Moodle forums. Thus, the purpose of this study was to determine the students' opinions on the use of Moodle forums specifically with regards to the effect of using Moodle forums on their participation and the level of detail in their responses. The data obtained indicated that the students have very good opinions regarding the use of Moodle forums. They agreed for the most part that the forums have increased their participation in the class discussions and improved the level of detail when responding to their peers or the teacher in the discussions. Furthermore, the students reported that the interactive feature of the forum was especially effective in the sharing of ideas which helped spark and sustain their interest in the topic discussed, thereby allowing them to generate more ideas for the discussion. It also provided them with more time and opportunities to participate without having to wait for their turn. Another important feature of the Moodle forum that the students feel has significantly contributed to the increase in their participation is the online feature. Being online allowed the students access to a multitude of resources on the Internet which enabled them to be more knowledgeable of the topic being discussed, thus increasing their confidence to participate in the discussion. Overall, the results indicated that all the students enjoyed using the Moodle forums for class discussions. Therefore it appears that using Moodle forums in an English Language classroom is a beneficial tool for lessening students' second language learning anxiety which consequently leads to improvement in student participation and increase in the level of detail when responding in a discussion. To sum up, the students had very favourable opinions regarding the use of Moodle forums with regards to their participation and the level of detail in their responses in the English Language class discussions. It is hereby hoped that the objective of this study has been successfully fulfilled.

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SECTION 3 :
LANGUAGE

USE OF GRAPHICS FRY FORMULA FOR MEASURING READABILITY DISCOURSE 2013 CURRICULUM PACKAGE STUDENT BOOK GRADE 1 ELEMENTARY SCHOOL

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Abstract

Indonesian national education curriculum change significantly in the year 2013 brought many changes in the impact of planning, implementation and evaluation. Change is one of them evident in the provision of teaching materials in the form of student textbooks that had been prepared by the government. In the 2013 curriculum textbooks grade 1 primary school there is a discourse that is the subject of reading in the students' learning. Before discourse given to students in the first study in the analysis of whether it is appropriate or not to be given to the student with the level of its development. This study is a descriptive analysis method, namely: based on readability formulas introduced by Edward Fry, known as "Fry Graph". The use of graphs fry in this study is one way to measure the readability level of discourse in textbooks in 2013, the Grade 1 curriculum, so that the results can be the basis of whether the discourse is feasible or not given in the study. The focus of this study is to determine the readability level of discourse in the 2013 curriculum textbooks grade 1 primary school theme "Objects, Animals and Plants around me" and "Natural Events". Based on the results of discourse readability level curriculum textbooks 2013 grade 1 primary school students conducted by using a graph fry, the discourse of the samples taken from the textbook curriculum 2013 grade 1 primary school students with the theme "Objects, Animals and Plants around me" have concluded that the total number of syllables 521,91 with an average of 130,47 in accordance with the rules of the graph then fry rounded to 130 and the total number of sentences 73,85 with an average 18,46 but for the number of sentences in accordance with the rules of graphic fry is not rounded. From these results it means the book is suitable for class 2. While the discourse of the samples taken from the textbook curriculum 2013 grade 1 primary school students with the theme "Natural Events" has the total number of syllables 547,93 with an average of 136,98 then in accordance with rule graph fry rounded to 137 and the total number of sentences 60,07 with an average 15,01 but for the number of sentences in accordance with the rules of graphic fry is not rounded. From these results it means the book is suitable for grade 3 .

Keywords : chart fry, legibility discourse, textbooks curriculum 2013

A. INTRODUCTION

      Indonesian national education curriculum change significantly in the year 2013 brought many changes impact both in terms of planning, implementation and evaluation. In the midst of the curriculum changes that occur, arise various responses of the entire Indonesian nation, others regard it is good and there is also the opposite either of the education experts and the public. When we talk about the curriculum as a guide is certainly needed in every level of education. curriculum needed to be willing to carry around educational guide brought .

      The implementation of curriculum 2013 gives different colors, especially in the provision of facilities in practice, precisely in July 2013 to implement the curriculum in 2013 and every school be piloting the implementation curriculum 2013 every teacher and students are given a handbook that has been created by a team of experts from the central government. So every school textbooks get help for teachers and students. It is intended that the parents because the parents do not need to buy the book

      Curriculum implementation in early 2013 only apply in the hump I and class IV, therefore the provision of curriculum textbooks in 2013 also only in first grade and fourth grade. In the 2013 book The curriculum is structured around a theme, the theme for the elementary school class I have eight themes, for half the four themes that theme 1) Diriku, 2) Kegemaranku, 3) Kegiatanku, 4) Keluargaku, and for the second semester of the four themes, namely theme1) Pengalamanku, 2) Lingkungan Bersih Sehat dan Asri, 3) Benda, Hewan and Tanaman di Sekitarku, 4) Peristiwa Alam.

      In the book there are several first-class package discourse into teaching materials to be read by students, the discourse ideally able to read and tertangap meaning well by the students. Due to the legibility of a discourse is very important that it agrees with Harjasujana and Yeti (1997, p. 111) which says that the higher the level of readability of a discourse, the discourse of the easier, the lower the reading level of a discourse, a discourse that increasingly difficult .

      To view the legibility of a book is to see or measure the readability of discourse that is in the book, as for how that can be used is the one using the formula chart fry. The graph is a graph to see the fry readability discourse introduced by Edward Fry, radiography is a readability formula to determine the reading level of a discourse by way of calculating the short word length and word difficulty level is characterized by a number of more or less syllables that make up each word in a discourse the (Muchlisoh, 1996, p.170).

      The steps or procedures measurement chart fry formula set forth in Hidayati Subyantoro (2005, p. 24) is as follows.

1. Counting the number of sentences in 100 words with a score of one digit after the decimal point.
2. Counting the number of syllables of 100 words.
3. Multiply the result by the number of syllables calculation 0.6.
4. For short text (the amount he is less than a hundred words must be Multiplied the number of sentences and syllables with numbers on the conversion list.

5. Formulas Matching the number of sentences and syllables per hundred in a graphic.
6. Establish levels of text legibility.

The focus of the research conducted is to determine the readability level of discourse in the 2013 curriculum textbooks elementary school first grade second semester with the theme "Benda, Hewan and Tanaman di Sekitarku" and "Peristiwa Alam" using charts fry. because the focus of this study is to see or determine the readability level of discourse in textbooks of class I school curriculum in 2013 then this study entitled "*Use of Graphics Fry Formula for Measuring Readability Discourse 2013 Curriculum Package Student Book Grade 1 Elementary School*".

B. THEORY
1. Graph Fryy

The graph is a graph fry used in determining legibility of a discourse, graphs fry is often used because of practical and easy. The name is taken from the name of the graph fry inventor is Edward Fry, this graph was made in 1968. Graph fry began to be published in the Journal of Reading in 1977. Readability formula in this chart is based on two factors, namely short word length and word difficulty level marked by the number of (many-at least) that make up the syllables of each word in the discourse (Muchlisoh, 1996, p. 170).

The following is presented fry graphic images used in calculating the level of readability of a discourse, as for use following procedures tailored to the Indonesian discourse as mentioned by Harjasujana & Yeti (1997, p. 116-120)

Fry Graph for estimating Reading Ages (grade level)
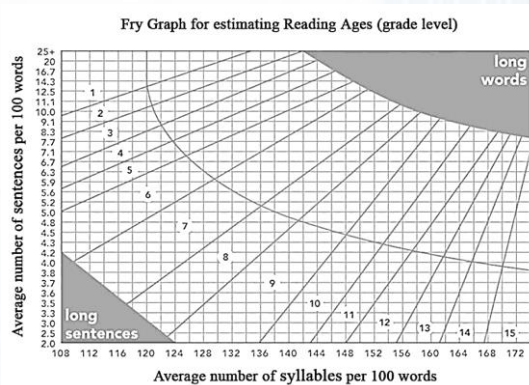
As for how its use are as follows: (a) select a representative fragment and discourse readability level to be measured by taking the fruit l00 words. What is meant by the word is a group of symbols on the left and right cordoned thus, Budi, IKIP, 2000 respectively are considered words. What is meant by a representative in the selection of election discourse is discourse sample truly reflects the reading text. Discourse tables interspersed with images, vacancy pages, tables, and or formulas that contain a lot of figures representataif deemed not to be a discourse sample, (b) count the number of sentences and words hundred pieces to the nearest tenth. That is if the word is to 100 (discourse samples) do not fall in the threshold calculations sentence sentences are not always intact but there will be residual. The rest of the course in the form of a number, the word that is part and a row of words that form sentences

because Sampling discourse must be based on the number l00, then the rest of the word that includes the count was reckoned hundredth in decimal form (tenths). For example, if the discourse sample consisted of 13 sentences, and the last sentence is a sentence-13 consists of 18 words and 100 words to fall on the 8th word, sentence dihitungan as 8/16 or 0.5. So that the total number of sentences of the discourse sample was 12 +0.5 or 12.5 sentences, (c) count the number of syllables of discourse samples up to 100 words. For example, a discourse sample consists of 228 hundred-word syllables, (d) for Indonesian discourse, the use of graphics should still fry plus one step, ie, multiplying the result by 0.6 syllables calculation. Therefore, the number 228x0,6 = 136.8 rounded to 137 syllables. (E) Plot the figures in the chart fry. perpendicular column shows the number of syllables per hundred words and a horizontal line indicates the number of sentences per hundred words.

Furthermore Harjasujana & Yeti (1997, p. 121) explains that the reading level is approximate. Deviations may occur, either upward or downward. Therefore, readability rating one level of discourse should be added and subtracted one level. If there is a discourse that is less than 100 words the work procedures to take steps fry chart is as follows.

1. Calculate the number of words in a discourse that would readability level was a Measured and rounded to the nearest number of tens were.
2. Calculate the number of syllables and sentences in the discourse.
3. Subsequently, multiply the number of sentences and syllables (the result of the calculation 2) multiplied by the numbers in the list below conventions.

Number of Words	Number of Conversions
30	3,3
40	2,5
50	2,0
60	1,67
70	1,43
80	1,25
90	1,1

Example: A discourse have said 33 words total, then rounded up 30 pieces. Total sentence there are 2 sentences. The number of syllables there are 40 syllables. Conversion rate for multiplication of the number of sentences and syllables for the number 30 is 3.3, then :
- Number of sentences :   2 X 3,3 = 6,6
- Number of syllables   : 40 X 3,3 = 132
Once plotted fall on the region level 9

2. Keterbacaan

Understanding legibility proposed by Sakri, A. (1994, p. 165) that the degree of ease of readability is an article meant to be understood. Readability, among others, depend on the vocabulary and sentence wake chosen by the author for writing. Posts that contain many words that are not generally more difficult to understand than the use of everyday vocabulary, which is already known to readers in general.

According to Klare (1984, p. 726) that reading has good readability level will affect readers in improving learning and memory, increase the speed and efficiency of reading, and nurture reading habits.

Furthermore Rusyana (1984, p. 213) explains that legibility associated with events that made a person's reading, so it will bertemali with aspects of (1) the reader; (2) readings; and (3) background.

From the definition legibility above it can be concluded that keterbcaan is a benchmark used to determine whether a reading is easy to understand and read, and cause interest to the reader or not.

3. Wacana

The term is derived from the Sanskrit discourse wac/ wak/ subdiscipline, which means to say, say. The word is then changed into a form of discourse (Douglas in Mulyana, 2005, p. 3).

Discourse in Indonesian word used as the equivalent (translated) words in the English language discourse. Etymologically the word discourse is derived from the Latin discursus 'run to and fro'. The word is derived from the word discourse discurrere. Discurrere shape it is a combination of dis and currere 'run, walk fast' (Wabster in Baryadi, 2002, p. 1). Discourse or the discourse was then appointed as linguistic terms. In linguistics, discourse understood as a lingual unit (linguistic units) which is above the level of the sentence (Baryadi, 2002, p. 2).

Discourse by Tarin (2009, p. 19) is a complete language of the largest and highest or above sentences or clauses with high coherence and cohesion that have continuous real start and end delivered orally and in writing.

Urthermore Kridalaksana in Yoce (2009, p. 69) ays that discourse is a complete unit of speech in hirearki highest grammatical and a grammatical unit that is the highest or greatest. The discourse is realized in the form of a complete essay, such as novels, short stories, or prose and poetry, encyclopedias series and others as well as paragraphs, sentences, phrases, and words that carry complete mandate .

From the above it can be concluded that the unity of language is discourse is complete with high coherence and cohesion sustainable and has the start and end either orally or in writing.

C. METHODOLOGY

This study used a descriptive analytic method is by way of describing the results of the analysis of discourse in textbooks legibility curriculum 2013 elementary school students in grade 1 theme "Benda, Hewan and Tanaman di Sekitarku" and "Peristiwa Alam" as stated Sudjana, (1991, p. 52) that the descriptive method is used when the aim to describe or explain the events and occurrences that exist in the present. Included in this research method, case studies, surveys, development studies, and the results of the correlation. Therefore, researchers choose to use this research method is descriptive analytic method.

1. **Population and Sample**

The sample used in this study is the 2013 curriculum textbooks grade 1 primary school theme "Benda, Hewan and Tanaman di Sekitarku" and "Peristiwa Alam" which has been prepared by the government which is prepared by a team, first printing copyright Kemendikbud.

2. **Techniques Data Collection**

The technique used in this research is the data collection techniques of data analysis techniques. Data collected later in the analysis to determine readability discourse in textbooks and then analyzed using a discourse readability formulas fry readability graph.

3. **Instrument Research**

The instruments used in this research is the formula graph fry. The instruments are as follows.

Calculation of the graph fry is by counting the number of sentences and number of syllables in a discourse. Furthermore, after the discourses in the book known number of sentences and number of syllables then analyzed by entering the number of the calculations in the chart fry. The results obtained by researchers classified based on class rank at the intersection of a cross between the number of sentences and number of syllables in the chart fry.

4. **Steps Research**

The steps in this research study are as follows:
a. Collecting 2013 textbook curriculum grade 1 elementary school theme "Benda, Hewan and Tanaman di Sekitarku" and "Peristiwa Alam".
b. Researchers determine discourse samples to be analyzed.
c. Discourse that has been specified in the textbooks analyzed using the formula chart fry.
d. Enter into the calculation results in a graph fry.
e. Classify the discourse in textbooks in class rank according to the chart fry.

5. **Time and Place Research**

The time this research was conducted in April 2014. To place an unspecified study, because this study is a study book.

D. RESULTS AND DISCUSSION

1. Readability Analysis Book Theme Pack "Benda, Hewan and Tanaman di Sekitarku".

The results of the analysis of curriculum textbooks legibility 2013 elementary school students in grade 1 theme "Benda, Hewan and Tanaman di Sekitarku" by using the formula fry is following chart.

No	Discourse Sample Pages (100 words)	Number of Syllables	Number of Sentences
1	11	118,5	20
2	18	150	20
3	76	116,16	17,6
4	116	137,25	16,25
Total		**521,91**	**73,85**
Average		**130,47**	**18,46**

Based on the analysis above legibility were obtained an average of 130,47 syllable then fry in accordance with the rules of the chart is rounded up to 130, for the number of sentences obtained an average of 18,46 but for a number of sentences in accordance with the rules of graphic fry unrounded, after the The entries in the chart fry turns the intersection or crossing of the data is in the region 2. means that the readability level of textbooks curriculum 2013 grade 1 elementary school theme the theme "Benda, Hewan and Tanaman di Sekitarku" based on readability formulas included in the class of graphs fry 2. deviation to avoid the readability level plus one level and a reduced one level, so the legibility enroll in classes 1, 2, and 3. Yet according to the analysis by calculating the average number of syllables and sentences of the book are given in class 2 fitting not to class 1. following description of the results included in the analysis after the chart fry:

Fry Graph for estimating Reading Ages (grade level)
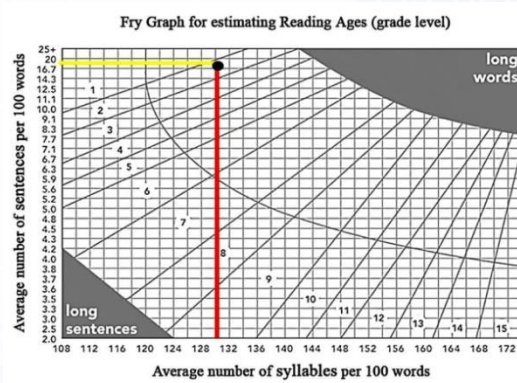
2. Readability Analysis Book Theme Pack "Peristiwa Alam".

The results of the analysis of curriculum textbooks legibility 2013 elementary school students in grade 1 theme "Peristiwa Alam". by using the formula chart fry is as follows.

No	Discourse Sample Pages (100 words)	Number of Syllables	Number of Sentences
1	29	139,2	12
2	61	153,31	18,37
3	75	126,72	16,5
4	109	128,7	13,2
Total		**547,93**	**60,07**
Average		**136,98**	**15,01**

Based on the analysis above legibility were obtained an average of 136,98 syllable in accordance with the rules of the graph then fry rounded to 137, for the number of sentences obtained an average of 15,01 but for a number of sentences in accordance with the rules of graphic fry unrounded, after the The entries in the chart fry, turns the intersection or crossing of the data is located in the region 3. means that the readability level of textbooks curriculum 2013 elementary school students in grade 1 theme "Peristiwa Alam" based on a formula included in the readability of the chart fry grade 3. To avoid deviation then readability level plus one level and a reduced one level, so keterbacaanya enroll in classes 2, 3, and 4. Yet according to the analysis by calculating the average number of syllables and sentences of the book are given in grades 3 suitably not for class 1. following picture after analysis of the results included in the graph fry:

Fry Graph for estimating Reading Ages (grade level)
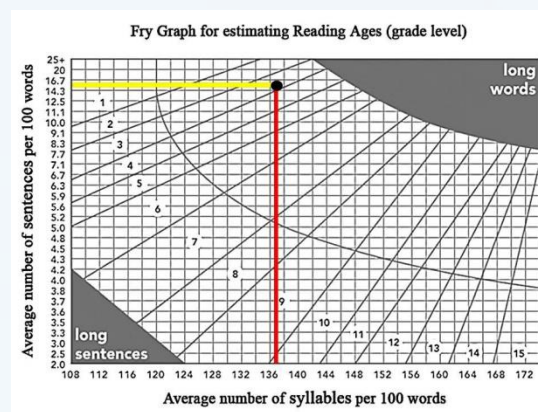
E. CLOSING

1. Conclusions

From the research conducted, the researcher gave the following conclusions,

a. The study conducted by researchers that the 2013 curriculum textbooks grade 1 primary school theme "Benda, Hewan and Tanaman di Sekitarku" as calculated using the graph fry was dropped right in the area 2 means the book is more suitable given in class 2.

b. While the 2013 curriculum textbooks grade 1 primary school theme "Peristiwa Alam" calculated after using graphs fry was dropped right in the area of 3 means the book is more suitable given in class 3.

c. In providing instructional materials to students, especially literature analysis should be performed prior legibility, because an arrest would affect the legibility discourse students' understanding of the teaching materials and the suitability of legibility discourse given to the development of the student will be memudahkana teachers in learning.

d. Gauge chart fry readability formulas as one measure of legibility is crucial controlled by an educator and anyone who cares about education.

2. Suggestion

Researchers gave some suggestions related to the study the researchers did, as for the suggestion that researchers give is as follows.

a. Should teachers or educators more selective in choosing teaching materials that will be given to students.

b. While teaching materials supplied from the government should still be corrected beforehand not to accept uncorrected.

c. Teachers should master beeberapa readability formula because the formula fry readability graph is not the only measure of legibility.

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THE EFFECTIVENESS OF COLLABORATIVE LEARNING TECHNIQUES ROUND TABLE TYPE TO IMPROVE ELEMENTARY STUDENTS' WRITING SKILL IN NARRATIVE ESSAY

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Abstract

Writing skills are part of the language skills. Writing is an ability that is used to communicate in writing, communicate indirectly or without face to face with another person. Writing activities are productive and expressive activities that will support the development of language abilities of students. By writing, students are trained to develop their creativity through the formulation of ideas, formulation of the storyline, the use of language and delivery of messages, as well as train students to be able to communicate in writing. The narrative is an essay that tells the events arranged in chronological order (systematics time) with the goal of expanding one's experience. There have been many efforts made to improve students' writing skills, but still showed unsatisfactory results. Collaborative learning techniques round table type is a way used to develop students' writing skills. Step-by-step implementation of collaborative learning techniques which round table type, 1) the teacher gives guidance and procedural techniques round table introduction directed learning competencies, 2) students are grouped into several groups with equal number of members (6-7 people), 3) student and the teacher determines the topic and purpose (genre) a paper together, 4) students take turns writing sentences in the paper each group, 5) students must shift the paper to a friend next to him, to return again to the first student, 6) each group proofread and revise writing that has been made, 7) further each student was asked to write a narrative according to the theme. The results showed that the application of the collaborative learning techniques round table type effective to the improvement narrative writing skills in elementary school students.

Keywords: Collaborative learning technique round table type, narrative essay writing skills.

A. INTRODUCTION

Writing is an activity that communications be in writing. In the course of writing we can convey ideas, ideas and feelings to the reader. A writer can also provide important information to the public. According to (Tarigan, 1994: 3) writing is a proficiency that is used to communicate indirectly, not face to face with another person.

Writing skills students' in schools specifically incorporated into the Indonesian subjects. In the Indonesian subjects according to KTSP (BSNP, 2006: 17) states that learning Indonesian it self has four components of language skills, including listening skills, speaking skills, reading skills, and writing skills. All aspects of the language skills are related to each other so as to teach the need to involve other skills. Still according to the KTSP (BSNP, 2006: 7) states that the Indonesian language learning aims to improve students' ability to communicate in Indonesian both written and verbal as well as lead to an appreciation of the results of human creativity Indonesia. Therefore, it becomes essential writing skills to be taught from the beginning, especially for elementary school students.

But in reality the writing skills of elementary school students have not been in line with expectations. Based on observations and interviews with teachers in the field, in general students have difficulties when given an assignment to write a story. The difficulty that arises normally when led to the idea, start writing, developing stories and using diction and spelling. Difficulties led to the idea is usually caused by lack of response to the students in creating a learning method that makes the students active and creative. Difficulties in developing the story because not unfamiliar students in writing the story. While the difficulty in using diction and spelling is usually caused by lack of exercise and teacher assessment conducted on the results of student essays. As if the results of the essay assessed, then the mistakes are not made known to the students.

According to the author, these conditions should not be allowed, given the ability to write is a part of language proficiency. Writing has many benefits in everyday life. With writing, especially in the teaching-learning process, students will be able to document the knowledge they gained. According to D'Angelo in Tarigan (1982: 22) writes primary function is as an indirect means of communication. Furthermore, according to his writing is very important for education because it allows the students to think. It can also help us think critically. It also can help us feel writing and enjoying relationships, deepen our responsiveness or apperception, to solve the problems we face, sort the order for the experience. Writing can help us clarify our thoughts. Not infrequently we see what we really think and feel about the people, ideas, issues and events only in the actual writing process. D'Angelo in Tarigan (1982: 22).

Based on the above statement, then according to the author, we need to find solutions to overcome them. Collaborative learning techniques round table type is one of the means used in the teaching of writing. With this technique, students will work together in preparing an essay in the group, then they correct mistakes together in their groups. The next step students write narrative essays in dependently. Because of this, the formulation of the problem is needed in order to issues discussed in this article is not wide and clear. Formulation of the problem issues in this study is whether the collaborative learning techniques round table type is effective to improve narrative essay writing skills of elementary school students. The hypothesis of the study is that there is a difference between the learning outcomes before and after a given learning with collaborative learning techniques round table type.

B. LITERATURE REVIEW

1. Concepts Writing

Writing is the process of describing a language that the message can be understood reader writer (Tarigan, 1994: 21). Furthermore, he states that writing is lowered or symbols depicting a graph illustrating a language understood by someone, so that others can read the symbols on the graph if they understand the language and the epitome of the graph.

Writing activities have an important role in human life. With writing, one can pour your thoughts and ideas to achieve his aim. According to Byrne in Slamet (2007: 141) revealed that essentially writing skills is not just the ability to write graphic symbols that form words, and words can be arranged into sentences according to certain rules, but writing skills is the ability to pour ideas into writing through sentences strung together as a whole, complete, and clearly so that ideas can be communicated to the reader to succeed.

Based on the above definition, it can be concluded that the writing is the process of delivering an idea or ideas, feelings, or information set forth in the form of writing both fiction and non-fiction to be enjoyed by the readers.

2. Concepts of Narrative Writing Skill

Narrative is one form of composition that is applied in the learning process that is in Indonesian language teaching. According Djuharie-Suherli (Ristiani, 2009: 69) states that narrative is an essay that tells the events arranged in chronological order (systematics time) with the goal of expanding one's experience. Furthermore, he explained that the so-called narrative discourse narrative essay also because it tells the story of an event or a person. The story is told in a fictional narrative may be too factual.

Wesley (Saleh, 2013: 33) reveals that there are three steps in developing narrative writing. The first step, write, meaning give students the opportunity jot down ideas you have in mind, stopped, and then write more things that have been experienced, for example, take the topic of experience. Second, improve the structure and grammar writing, with attention to the core phrase and verb usage, by using the words first, then, next, finally, after that, while (first, then, next, finally, afterward, meanwhile). Third, the structure of the sentence, must be considered when combining sentences (complex sentences) are used commonly with the conjunctions and, but, later. While the process of writing a narrative according to him consists of four steps, namely free writing, composing storyline, write drafts, and improve the draft (prewrite to get ideas, organize the ideas, write the rough, edit the rough draft).

According Keraf (2004: 145) mentions the components contained in the narrative is a narrative structure. The components that make up the structure of the narrative in question is: action, character, setting, and viewing angle. Events had the form of the story can be analyzed in terms of the plot. Furthermore, according to Saleh (2013: 115) says there are some lattice in narrative writing assessment include (1) the content of the idea of the narrative; deeds, character, background and point of view, (2) the organization; beginning of the story, climax, completion; (narration), (3) linguistic; diction, (the structure of words/sentences), (4) grammar; use of spelling.

Based on some understanding of the above it can be concluded that writing is a process mengungkapkasn narrative, idea, ideas, feelings and experiences are manifested in a fictional story and nonfiktif, arranged in the form of inter-related events, to meet the elements of a theme, plot, background, character, point of view, using correct spelling, clear language to produce writing that is interesting and can be enjoyed by readers.

3. Collaborative Learning Techniques Round Table Type

Collaborative learning techniques round table type is basically a written version of the technique colllaborative learning technique, namely Round Robin 2 (Berkeley *et al*, 2005: 357). According to this method when used in writing can help focus attention, provide some quiet time to think of student responses, and provide a cumulative record. Round table method to ensure more equal participation among group members and exposes students to a variety of view points and ideas.

According to Berkeley *et al* (2005: 361) round table can also be used in creative writing. Variations round table is used to help encourage students to tell stories, imaginatively. Teachers expressed an introductory sentence or a paragraph or a simple opening phrase. Furthermore, still according to Berkeley *et al* (2005: 361) states each student to give their contribution to the story, encouraging the next step by adding a few sentences or even whole paragraphs. If done this way, students can remain at their desks, doing other tasks, until the arrival of paper in their hands, or they can be arranged so that there are several stories running simultaneously so that students stay busy writing.

The stages in the implementation of the round table by Berkeley (2005: 357-358) as follows:

a. Preparation

Create a guide which can be responded to students with a few words or sentences. Write the instructions at the top of a sheet of paper, let the rest remain empty to place students' writing. Make several copies of sheet distributed to each group of four people.

b. Procedure

1) Form groups of four people and convey his briefing on the group or distributed in leaflet form.
2) Determine (or have students determine) that group members will start first and convey to students that they should circulate the paper clockwise.
3) Ask students to write the first word, phrase, or sentence response as quickly as possible and then read aloud so that other students had a chance to think about and prepare a response.
4) Ask the students submitted a paper to the next student, who follows the same steps.
5) Tell the students when the time limit, or mentioned in the instructions that the process will be completed when all the members have participated and all ideas have been written on paper.

C. METHODOLOGY

This type of research is quantitative research. The research design use the *one group pretest-posttest* design as proposed by (Gall and Borg, 2002: 389). Data was collected through library research activities and experimental test. Studies conducted with searching data sources relevant to the problem, in the form of books, articles and so on. The experimental tests were conducted in one school in Bandung.

Outline the data processing is done with the help of statistical hierarchical approach. The primary data of student test results before and after treatment, were analyzed by comparing the initial test scores and final test. The increase that occurred before and after the learning gain factor is calculated by the formula (g) developed by Hake (1998: 65) with the formula:j65

$$N\text{-}Gain \text{ (each student)} = \frac{Pretest \text{ score-}Posttest \text{ score}}{Maximum \text{ score-}Pretest \text{ score}}$$

After N-Gain value each student counted, then calculated the average value of N-Gain, with the formula:

The average score of N-Gain = score total N: number of students.

N-Gain value is interpreted based on the criteria of an increase in N-Gain in the table below as proposed by Hake (1998: 65).

Level	Score N-Gain
High	$\geq 0{,}7$
Medium	$0{,}7 > N\text{-}Gain \geq 0{,}3$
Low	$< 0{,}3$

Data processing average normalized gain scores were statistically analyzed using Microsoft Office Excel 2007 software.

Discussion of activities carried out by the theoretical approach and interpretation of the results of the analysis of research data. The process of analysis and synthesis of data carried in the writing of this article covers the data editor and presentation of data. Data reduction is done by selecting, simplifying and abstracting the data obtained. Presentation of data is done by compiling information on the results of the data reduction phase and then present it in full, both the data obtained through library and documentation.

At this stage of withdrawal conclusions and suggestions, the author uses induction techniques based on the description and discussion. Based on the discussion the authors also formulate some suggestions for developing the company's research and provide recommendations that enable the next period.

D. FINDING

1. Description of Data

Based on the results of research in the field, it is generally obtained the following data:

No	Item	Pretest	Posttest	N Gain
1	Number of student	43	43	43
2	Score average	21	29	0,61
3	Standar deviasi	3,78	4,56	0,28

2. Discussion

Based on the results of the data analysis it appears that there is an increase in the students' ability to write a narrative essay using collaborative learning techniques round table type. The maximum value of all indicators of performance appraisal narrative essay writing students is 35. Students first given a pretest to see early ability in writing narrative essay with the theme of the experience. Having calculated the average value turns pretest showed the number 21. Upon the researchers conducted the treatment of students by using collaborative learning techniques round table type. Finally, the authors conducted a posttest to see how far the students' ability to write a narrative essay after being given treatment. Posttest results obtained that the average value of narrative essay writing learning outcomes of students increased to 29.

Based on the results of the average of the values, then having known the gain of each student pretest and posttest values, then the gain is sought normality (N-gain). The results of the calculation of N-gain indicates the number 0,61. This figure when put into categories according to the N-gain (Hake, 1998: 65) in the category of being. So the narrative essay writing skills of students in this study is said to increase the medium category. The hypothesis that the comparison between pretest and posttest values, it can be concluded that there is a difference between the results of students learning to write narrative essays by applying the collaborative learning techniques round table type.

As for seeing the improvement is more specific, it can be seen from the average grades of students in each indicator. Indicator 1 of the act can be seen that the average student scores on pretest gain of 3,40 while the value for the average posttest score was 4,30. Indicator 2 on the characterizations, the average value is 3,09 while the student pretest mean posttest score was 4,23. Indicator 3 of the background, the value of the average student at the time of the pretest students is 3.19 while the average posttest score was 4,19. Indicator 4 on point of view, the value of the average student at the time of the pretest was 2.86 while the average posttest score was 4,09. Indicator 5 of the groove, the value of the average student at the time of the pretest was 3,02 while the average value of 4,21 posttest. 6 of linguistic indicators, the average student score on the pretest was 3,02 while the average posttest score was 4,28. Indicator 7 on spelling, the average value of the student at the time of the pretest was 2,79, whereas the average posttest score was 4,05. Based on this, it is apparent there is an increase in the average value of students from each of the indicators.

The factors are the cause of such an increase with this learning technique provides the opportunity for students to speak his mind in composing an essay. Students are also working together in preparing an essay in a group so that it becomes a complete story. Students are also given the opportunity to correct the results of the work of each group. In addition, teachers also gave an example of a narrative essay that the students will know the example of narrative essay writing.

E. CLOSING

1. Conclusion

Based on the results of findings in the field, it can be concluded that the narrative essay writing skills of students increased with a maximum score of all indicators assessment is 35. Amount the average pretest scored 21, while the average value of the posttest gain value of 29. Meanwhile his normality gain scores of 0,61 and fall into the medium category. Seen from the acquisition value of the average pretest and posttest student from each indicator has increased. This proves that the implementation of collaborative learning techniques round table type effective to improve students' ability to write a narrative essay.

2. Suggestion

Based on the findings in the field, then there are some things that need to be recommended by the authors that the teacher should give a long time in applying the techniques of collaborative learning round table type. Teachers also need to be conditioned so that each student can remain focused on the activity in the group. These findings can also be used as recommendations for further research on a variety of levels, for example, junior high, high school, and college with a variety of types of writing, such as writing essays essay exposition and description. So writing skills can be developed in accordance with the desired expectations.

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CHARACTER BUILDING IN CLASSROOM INSTRUCTION: AN ANALYSIS ON LESSON PLANS
(A CASE STUDY OF AN ENGLISH TEACHER AT A 2013 CURRICULUM PILOTING HIGH SCHOOL IN SUMEDANG)

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Abstract

All wrongdoing things at present times, such as plagiarism and corruptions, happened throughout the world. This is because of less moral value hold by either people or students. It is a result of less or no implementation of moral value in classroom instruction. In Indonesia education, moral value or social value is asserted in Core Competence (KI) 2 in which teaching it should be incorporated into all taught lessons, as well as in lesson plan (Fitri, 2012). Hence, this study is intended to investigate to what extent the integration of character building into English lesson plans as stated in 2013 Curriculum, as well as to find out problems faced when making the lesson plans. The study employed a qualitative case study conducted in one of piloting high schools in Sumedang. The respondent was an English teacher of grade X. The data was collected through document analysis and interview. The lesson plans arranged for particular social competence were analyzed guided by a checklist to examine the integration of character building in lesson plans. Interview was employed to find out teacher's problem while developing the lesson plans. The results show that in general, the teacher had integrated character building into the lesson plan with its emphasis on whilst-activity. In addition, she found no significant problems because delivering moral value is not brand new though the integration of character building in lesson plan is relatively new. Thus, integrating moral values into lesson plan needs some expertise obtained through training.

Keywords: character building, character education, moral values, 2013 curriculum, lesson plan.

A. INTRODUCTION

Several years ago, Indonesian education world was surprised by plagiarism issue carried out by three doctorate lecturers in one of prestigious universities in Indonesia (Budiana, 2012). This was very embarrasing because it happened to academicians who should be a model for their learners. Hamzah (2013) in his blog expresses that this happened because education is not seen as a media for developing positive character anymore, but tends to be profit oriented.

Moral values become major issue in students' behavior because, accroding to Venkataraman (2014), good moral value eventually will result on nation's progress. Cicero (as cited in Saptono, 2011) had mention it earlier that the prosperity of a nation is begun with the citizen's strong good character.

According to Venkataraman, some outcomes of good moral value are no cheating and corruption. Meanwhile, corruption is particularly a major problem happened throughout the world. Thus, to solve problems in modern times, he suggests that moral value should be applied in education world. Thus, moral values have to be incorporated in classroom instruction.

Regarding the case above, students have to possess moral values, especially 'honesty' trait. As a result, this present study is intended to examine to what extent the integration of moral values in classroom instruction.

1. Theoretical Perspectives

Character education derives from the word character and education. Character is a set of values that serve as a foundation of someone's belief, behavior, and attitude and consistently carried out by an individual as a way to show him/herself in front of other people (Philips, 2008 cited in Mu'in, 2011: 160; Saptono, 2011; Mu'in, 2011; Fitri, 2012;).

Moral value is a part of character education which consists of a group of righteousness and wrong values accepted by a particular culture. It is commonly formed by habitual formation of life experience and is reflected on all behavior done in his/her life (Baron et al 1980 cited in Budiningsih 2004: 25; Winecoff, 1988 in Fitri, 2012; Fitri, 2012). In relation with the case explained in the previous section, Venkataraman (2014) proposes kinds of moral value that students have to possess, some of which are rightness (*kebenaran*), honesty (*kejujuran*), goodness (*kebaikan*), and spirit of sacrifice (*semangat pengorbanan*) (see also Saptono, 2011: 20-22).

On the other hand, the term education is defined as "the process of teaching or learning in a school or college, or the knowledge that you get from this [school]." (Fitri, 2012). Thus, character education is defined as a conscious effort to develop good traits as expected by society (Saptono, 2011 p.23).

The purpose of character education is to make a wisely-decision-making individual, resist from globalization negative effect, and apply these values in his/her daily life (Djiwandono, 2000 and Mulyana, 2004 as cited in Fitri, 20012; Megawangi, 2004 as cited in Kesuma et al., 2012). Kemendiknas (as cited in Fitri, 2012: 22-25) also determines the purpose of character education which is to create, instill, and develop positive traits in order to make a leading and dignified human being based on Standard of Graduate Competence (*Standar Kompetensi Lulusan* – SKL).

In 2013 Curriculum, moral values were also called social values and were stated in KI 2. According to Permendikbud Nomor 81A Tahun 2013, KI 2 is related with personal characteristic and social attitude. The rule states that teaching moral values, or character education, cannot be taught directly as a separated lesson but is incorporated into all lessons

taught as well as within syllabus and lesson plans (Fitri, 2012: 30; mentioned in Venkataraman, 2014).

Kemendiknas (2010 as cited in Fitri, 2012) mentions that there are four principles in developing character education in curriculum. First, character education is a continuous process, hence making them hold good moral value can be done by giving them positive experience continuously, or habitual formation (p.26). Second, character education is integrated into all lessons in the curriculum. Therefore, the material of character education must contain many possibilities directing students to obtain the targeted moral values indirectly through continuous experience (p.27).

The third principle is that values are not directly taught as a separated lesson. Therefore, moral value can be developed through classroom activities, such as through classroom instruction or homework. (p.34). The last principle is that the educational process for character education should be enjoyable. Therefore, the methods for delivering moral value must be interesting, enjoyable, motivating and creating students' initiative without sounds patronizing (p.34).

On the other hand, lesson plan is a planning for teaching learning process for one session or more written in detail referred to a syllabus to lead learners achieve The Basic Competence (Syahmadi, n.d.; Permendikbud Nomor 65 and 81A Tahun 2013). Making a lesson plan, teachers have to adjust the aims, contents, strategy, and evaluation with the principle of character education (Fitri, 2012: 19). They also have to ensure that moral values are incorporated into lesson plan reflecting the process of habitual formation. According to Permendikbud Nomor 65 Tahun 2013, the process of habitual formation for achieving character building starts from accepting, implementing, respecting, comprehending, and applying it in daily life.

However, not only the stages of learning but also the evaluation part should include assessment for character building. The method used to measure this social competence is in the form on non-test instrument. It can be observation, direct questioning, personal report, questionnaire, self-assessment, peer-assessment, and teacher's teaching journal. These instruments are used to obtain students' description of progress they have made related to the targeted social competence (Permendikbud Nomor 81A Tahun 2013)

In conclusion, character education in 2013 Curriculum means teaching moral values to students referring to KI 2 which cannot be taught separatedly, but should be integrated into the whole learning process as a habitual formation. Therefore, the assessment for character education must be in the form of non-test instrument, such as observation or self-assessment, which can provide teacher the description of students' progress in the targeted competence.

2. Previous Related Research

One of the studies that have similar topic with this present study is Schemrich's (2003) research. Her research was aimed to develop classroom disciplinary and instructional methods, school wide disciplinary procedures, district-wide programs, and community-based service project incorporating Kohlberg's principle of moral development. The main concept of Kohlberg's theory of moral development is that children construct their own values and

morals through situations of moral conflict, the natural process toward more mature reasoning. The study conducted on Family and Consumer Science Classes used scenarios and class discussions to solve relational-real-life practical problems. The result showed that the students seemed to learn during the process of how to respect others as well as how to be well mannered. Thus, this method proved to be positively accepted since both teacher and students developed and agreed upon the desired classroom atmosphere.

3. Research Question

The research questions for this study are:

1. To what extent is the integration of character building in making lesson plans?
2. Are there any problems in integrating character building in the lesson plans?

4. Scope of the Study

Permendikbud Nomor 69 Tahun 2013 states that KI 2 for senior high school level is:
"*Menghayati dan mengamalkan perilaku jujur, disiplin, tanggungjawab, peduli (gotong royong, kerjasama, toleran, damai), santun, responsif dan pro-aktif dan menunjukkan sikap sebagai bagian dari solusi atas berbagai permasalahan dalam berinteraksi secara efektif dengan lingkungan sosial dan alam serta dalam menempatkan diri sebagai cerminan bangsa dalam pergaulan dunia.*"
(p.7)

Pusat Pengkajian Pedagogik Universitas Pendidikan Indonesia (as cited in Kesuma et al, 2012) has formulated several important values to support Indonesia's development growth; those are honesty, hard work, and sincerity. Since there are a lot moral competences in KI 2 as stated above, this present study is restricted to examine 'honesty' trait stated in second basic competence:
"*Menunjukkan perilaku jujur, disiplin, percaya diri, dan bertanggung jawab dalam melaksanakan komunikasi transaksional dengan guru dan teman.*" (p.80)

The previous paragraphs have explained that the elements of curriculum should be adjusted based on the principles of developing character education. Hence, this study is limited to the analysis of curriculum element on the last three principles, they are (a) character building is integrated into all lessons taught, (b) the character education is not taught as a separated lesson, (c) teaching character education should be enjoyable.

In sum, this present study elaborates to what extent the teachers integrates moral values in the English lesson plan, especially 'honesty' trait. Besides, this study is intended to investigate problems found by the teacher when making the lesson plans.

5. Justification of the Study

This study is significant from three perspectives, namely theoretical, practical, and authoritative perspectives. From theoretical perspective, this study will enrich the present literatures regarding implementation of character building in English curriculum, based on

The Core Competence on 2013 Curriculum. From practical perspectives, this will give information to teachers in improving their teaching quality to create a leading and dignified individual. Finally, from the authoritative perspective, it is useful as a consideration for stakeholders to see the effectiveness of 2013 Curriculum from teacher's perception.

6. Definition of Terms

In order to obtain a deeper understanding about several terms in this study, here are the definitions of used terms:

1. Character: it is someone's attributes, which may be innate for particular person, that make he/she different from other and can be reflected on his/her behaviour.
2. Character education: it defines as a process of conveying positive traits which are accepted by society in order to create a leading and dignified individual.
3. Moral (social) values: these are a set of values hold by somebody which is accepted by particular society, and are very much related with right and wrong behavior done.
4. Social competence: it is called as Kompetensi Inti (KI) 2 which is corresponded with attitude and social value.
5. Lesson plan: it is a standardized set of procedures containing materials taught for one session or more referred to a syllabus. Basically, it consists of objectives, materials, procedures, and evaluation.

In conclusion, this paper is intended to investigate to what extent the process of integrating character buiding at lesson plan level. Besides, this study aims to reveal what problems the teacher faced during incorporating character building into lesson plan. By clarifying the state of character building integration into lesson plan as well as teacher's perception and problem dealing with the process, teacher will know how effective the lesson plans she/he had made whether it is consistent with the provided standard or not.

B. RESEARCH METHODOLOGY

This section discusses the methodologies or procedures of the present research, involving research site and participants, research instruments, stages in collecting data, research procedures, as well as data analysis.

1. Research Design

This study was a qualitatively case study, meaning that it is conducted in one particular subject (Fraenkel et al, 2012). The study occupied intrinsic case study, in which Stake (as cited in Fraenkel et al., 2012: 435) defines it as concerning on the understanding of specific individual or circumstances to obtain what is going on.

2. Research Site and Subjects

This study was conducted on one English teacher of grade X in one of piloting high schools in Sumedang which was purposivey chosen for several reasons. Firstly, using a single subject is aimed to focus intensely on the integration of moral values in lesson plans which is definitely different from other teachers'. Secondly, the site is the most preferred school in

Sumedang. For that reason, it is assumed that the teachers had the required competences in making lesson plan referred to 2013 Curriculum.

3. Instrument

The data was collected through document analysis and interview. Document analysis, called as content analysis, is "… a technique that enables researchers to study human behavior in indirect way, through analysis of … [t]extbooks, essays, newspaper, novels, magazine, articles …". (Fraenkel et al, 2012: 478). It was guided with a checklist consists of eleven items checking the occurrence of character building integration in the lesson plan. The checklist also provided an additional note in the case of occurrence of other important information.

In conducting interview, a structured or semistructured interview was employed in which it is useful to draw out specific answers from respondent that can be compared later on (Fraenkel et al., 2012: 451). As further he (p.451) mentions, "… structured and semistructured interviews are often best conducted toward the end of a study, …" (p. 451), the researcher also managed it at the same time. Five questions related with integrating character building into lesson plan and problems the teacher found were questioned.

4. Procedures

The data being analyzed were two lesson plans for the basic competence of KI 2 targeted 'honesty' trait. These plans were then analyzed guiding by a checklist to examine the process of integrating moral values in lesson plan. To avoid research bias, another assessor was employed. As for information, the second assessor is an English teacher in one of junior high schools in Sumedang with his educational background is English Education. Although he is teaching at different school level, the assumption is that the process of integrating moral values in both level are not so much different. On the other hand, the interview was conducted on May, 12th 2014. Data from interview was used as a supporting data to strengthen the analysis data.

5. Data Analysis

Firstly, having analyzed the lesson plans, the data was compared to find aspects of integrating character building two different perspectives. Each item in checklist is explained elaborately to obtain the detailed process of integrating character building in the lesson plan. Secondly, interview transcript was analyzed. The supporting data was used to give a clearer understanding about the whole process of integrating character building in the lesson plan.

C. FINDINGS

The findings regarding the integration of character building in the lesson plan are explained in the following paragraphs.

From the beginning of the lesson plan, the teacher had concentrated the learning process obtaining the whole KD, particularly KD for social competence, through re-stating the whole targeted competences related with the topic. Besides, she had made indicators of

achievement, especially for KI 2. The whole elements of lesson plan from the objectives to the evaluation process had been led to the achievement of these social competences.

Examining the whole learning activity, pre-activity, whilst activity, and post-activity, the researcher found that delivering moral values was carried out through integration of them into all activities. Every step in learning procedures had been made as a means for achieving the targeted competences through the process of habitual formation. However, moral values were strongly integrated in whilst activity. Meanwhile, in pre- and post-activity, the teacher did not strongly emphasize the importance of these traits.

In evaluation part, the teacher had made an evaluation instrument for assessing students' progress on the targeted competences. She made observation sheet as the only instrument for assessing them. However, she did not attach it in the lesson plan so that the procedure for evaluating students' social competences could not be analyzed.

One important thing in analyzing the lesson plan was that delivering moral values in the classroom teaching still used conventional methods and strategies in which they were not too motivating and attractive.

However, from the interview there are several data support the data from the analysis. First, the teacher recognized that 2013 Curriculum has the term 'character building' which has its own basic competences. Although she did not get any training on 2013 Curriculum before, she seemed to know very well about character education.

Regarding the integration of character building in learning activities, the teacher asserted that character building was integrated from pre-activity to post-activity. Although she explained the integration of character building for different traits, it still proved the integration of moral values into the lesson plan.

Asked about her problem dealing with integrating character building into lesson plans, she clarified that the process of integration was not difficult. The only burden for her was that she felt unsure in making the lesson plans because of no training before. Teaching moral value, integrated into the lesson plan or not, was not a problem for her. The most important was that being patient was the method for teaching it since the result of achieving moral value cannot be seen immediately.

Overall, from document analysis along with interview, though it still used conventional method, it is found that generally the teacher had incorporated character building in lesson plan with the emphasis on whilst-activity. Evaluation was also made through observation sheet to measure students' progress on the targeted competences. In addition, she found no significant problem in integrating moral value due to her experiences.

D. DISCUSSION

To answer the first research question, which is "To what extent is the integration of character building in making lesson plans?", it can be obtained through the following paragraphs.

Thoroughly, the teacher has integrated character building into the lesson plan. Every learning activity is turned out to be a means for achieving the targeted social comptence by passing each stages of habitual formation. This is relevant with theories proposed by Fitri

(2012) which mention that moral values cannot be taught separatedly. The lesson plans made corresponded with the theories proposed above.

However, there are some concerns to be considered. First, comparing the lesson plans with the principles of developing character education - to make an enjoyable and motivating educational process even teaching character education – they did not reflect this principle. Instead, it still used conventional strategy so that it might not be attractive and motivating. As the result, the teaching and learning process seemed to be boring. Second, the instrument for assessing students' progress is insufficient, only relying on observation sheet. Referring to Permendikbud Nomor 81A for evaluating character education in which the lesson plans should include specific activities to measure students' progress on the targeted competence, this was not manifested in the lesson plan. As a result, the teacher only measured the competences through a single instrument in which it might give insufficient data to draw students' progress description of the targeted competence. The implication was that obtaining students' objective description seemed hard to acquire.

Answering second research question "Are there any problems in integrating character building in the lesson plans?" can be concluded from the interview data. The teacher found no significant problem in developing character building in lesson plan though she did not get any training on 2013 Curriculum before, because in practical she had done it during classroom instruction.

The important thing that should be considered here is that teaching moral value is not brand new, however, integrating moral value in the lesson plan explicitly is relatively new for teachers so that it needs some expertise and experience. Not dealing with some difficulties in developing character building in lesson plan is probably because of her competence as a teacher of the most preferred school. In the case of teachers from other schools, it is possible that they may not create lesson plans which are as standardized as hers. Thus, training in 2013 Curriculum becomes necessity for every teacher, especially for English teachers, in order to eliminate all difficulties that might be found by them.

E. CONCLUSIONS

In sum, integrating character building is not a difficult process for teachers because they had done it since the previous curriculum. Although some of them may not state the moral values explicitly in the lesson plan, in practice, they strongly emphasize the importance of achieving all targeted competences, especially social competence on the 'honesty' trait, how it will influence their whole life if they do not acquire it. The lesson plans made are indeed not as perfect as provided by the government. This might be due to no training in 2013 Curriculum. Thus, if teachers get some training on how to develop character building especially on the lesson plan, they will design a better lesson plan that incorporates moral values into it.

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THE CORRELATION BETWEEN READING ATTITUDES AND READING COMPREHENSION OF NON-ENGLISH EDUCATION POSTGRADUATE STUDENTS IN A UNIVERSITY IN BANDUNG, WEST JAVA

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Abstract

This study aims to find out the correlation between reading attitude and reading comprehension of non-English education postgraduate students of a university in Bandung, West Java. The null hypothesis of this study is there is no correlation between the two variables. This study is a quantitative research named correlation study which consists of 30 respondents. They are chosen randomly. The instruments of this study are questionnaires named the Attitude Survey of Reading Attitude (ASRA) which consists of 15 items divided into 3 aspects; reading activity and enjoyment, anxiety and difficulties, and the modalities of reading. The second instrument is reading comprehension test which consists of a short English text and 10 multiple-choice questions. The data is analyzed by using SPPS 16 software. Based on the result, it indicates that null hypothesis is accepted. There is no correlation between the two variables of the study since r value is lower that r critical value with d.f 28 and significant level .05 two-tailed, .085 < .38. Furthermore, the researcher recommended that students should increase their reading attitude for their academic success. For other researcher, they can add some other instruments to develop this research.

Keywords: reading attitudes, reading comprehension, correlation study

A. INTRODUCTION

1. Background of the Study

Reading plays an important role in our daily life. Everybody reads for many reasons, such as reading in different ways for different purposes, reading for meaning, reading foreign language text, and reading for getting message from a text (Nuttall, 1996: 2-4). Especially, based on the phenomenon non-English postgraduate students of education have to read English journal in order to fulfill their assignment and even they have to analyze it. It is supported by several researches which investigated non-English students' needs. It was found that they would like to improve reading skill because they have to read as much as journal written in English as reference of their assignment (Marjito: 2007). It is supported by Pandian (1997) and Mokatsi (2005) in Annamalai and Muniandy (2013: 33) who stated that in

academic learning, reading comprehension is essensial to professional succes and to lifelong learning.

The definition of reading has been defined by many experts. Eskey (2002: 5) in Lukhele (2009: 31-32) proposed that some people may assume that reading is just skill to visualized sentences and read the text loudly or the ability to change written language to spoken language. Yet, reading is more than that. Fisher (2004) in Annamalai & Muniandy (2013: 33) added that reading includes the process to understand the meaning of the text. It is emphasized how the reader interpret the meaning from what they read. It is called reading for comprehension. Nuttall (1996: 4) defined reading as the process how the writer transferred the meaning from what she/he has written (encoding) to the reader's received (decoding). She added that a reader has a passive role. The reader has only to open their mind to pour in the meaning which is conveyed by the writer.

However, to get more understanding of reading, it cannot be separated from someone's reading attitude. Positive reading attitudes inspire positive reading experiences. "Someone who has positive attitude of reading tends to be willing to read, enjoy reading, become proficient, and become longlife readers. On the other hand, children with poor attitudes toward reading may only read when they have to read, tend to avoid reading, and may even refuse to read altogether" (Joseph: 2004: 61). Many researchers have found that the correlation between reading attitude and reading comprehension around the world (Tercanlioglu, 2004; Annamalai & Muniandy, 2013; Yamashita, 2013; Lukhele, 2013).

To sum up, by standing on the theory above, this study was conducted in order to find out the relationship or correlation between reading attitude and reading comprehension of non-English education postgraduate students in Bandung, West Java.

2. Research Question

The following question is considered in order to get the data needed in this study: is there any correlation between reading attitude and English reading comprehension of non-English education postgraduate students?

3. The Hypothesis

Hypothesis is formed after the problem has been identified. Best (1981) stated that the research or scientific hypothesis is a formal affirmative statement predicting a single research outcome, a tentative explanation of the relationship between two or more variables. Based on the research question above the null hypothesis of this study is there is no correlation between reading attitude and English reading comprehension of non-English postgraduate students.

4. Significance of the Study

This study is expected to provide both theoretically and practically contributions. Theoretically, this study is intended to provide useful theories about reading attitude and reading comprehension.

Practically, the results of this study are expected to give beneficial contribution for students to be aware of their attitude in reading and their reading comprehension particularly

in reading English text. For other researchers, hopefully this research can help them in conducting the similar research or even develop it by adding other instruments or variables.

5. Clarification of Key Terms

There are several terms that need to be clarified in this study to avoid misunderstanding. They are:

a. **Reading attitude** is defined as an individual's feeling about reading (Annamalai & Muniandy, 2013: 33). It includes avoidance, anxiety, or even enjoyment in reading. In this study, reading attitude is one of variables that will be investigated in order to find out students' real attitude of reading especially in reading English text.

b. **Reading comprehension** is the understanding of what someone has read. It emphasized on the meaning of the text that someone can obtain from the text. As similar as reading attitude, reading comprehension is one of variables that will be measured in this study by giving the non-English postgraduate students a text and multiple choice questions.

B. LITERATURE REVIEW

1. Reading Attitude

Many researchers define reading attitude in various ways. Guthrie and Greaney (1991: 87) in Lukhele (2009: 35) state "people's attitudes to reading are resultant from "perceptions" acquired from past reading experiences regarding how pleasurable and valuable reading is". In addition, Alexander & Filler (1976: 1) in Yamashita (2013: 249) define attitude of reading as feelings toward reading which causes the reader to enjoy reading situation or even elude it. Still in Yamashita (2013: 249), he believed that reading attitude is built from reader's individual experiences.

A good reading attitude brings the reader to like reading so much. In other hand, a poor reading attitude makes the reader avoid reading activity, whereas, someone's academic progress may be influenced by his or her attitude toward reading, (Joseph, 2004: 61). It is also stated in Annamalai & Muniandy (2013: 34) "positive reading attitudes inspire positive reading experiences. This creates the possibilities to encourage higher academic performances". Based on two quotations above, it can be conclude that there are two types of reading attitude, positive and negative attitude.

Furthermore, there are three aspects that can be assessed in reading attitude. Based on Smith (1991) in Tercanlioglu (2004: 565) who constructed the Adult Survey of Reading Attitude (ASRA):

"…..the three dimensions of reading attitude are: the anxiety and difficulty scale measured the extent to which the person experienced problems or confusion when reading. The social reinforcement scale assessed the extent to which the person's reading activities were recognized and reinforced by others, for example family and friends. The modalities scale measured the extent to which the individual preferred to use sources other than reading when faced with a learning task".

Besides that, Mathewson (1994) and McKenna (1994) in Yamashita (2013: 250) differentiated reading attitude into three dimensions; affect (feeling), cognition (thought and belief), and conation (intention for action). However, these all aspect can also be influenced by other factors such as gender, home environment, and literacy education (van Schooten, de Glopper, & Stoel, 2004 in Yamashita, 2013: 250).

2. Reading Comprehension

It is believed that the purpose of reading is to get understanding from what is read. Reading is not only about decoding written language, but also about the meaning of what is written. It is called reading comprehension. Comprehension itself is the process of deriving meaning from connected text. A good comprehension enables readers to obtain information and communicate it well.

In line with the definition above, Dorn & Soffos (2005: 14) say "comprehension is a complex process regulated by cognitive, emotional, perceptual, and social experiences. Comprehending involves interpreting and synthesized ideas in ways that influence the reader's mind". It can be concluded that in reading a text, the comprehension is necessary in order to achieve understanding of it.

3. Reading Attitude of Indonesian's Students

This section will discuss the researches in Indonesia which investigated Indonesian attitude toward reading. One them is the research which was conducted by Venita, Hayati, and Silvhiany (2010) aimed to find out whether there is a significant correlation among reading attitude, reading habit of public vocational school students in Palembang and their reading achievement. The result of the study demonstrated that students reading attitude and reading habit to English reading achievement was small. But however, both of reading attitude and reading habit influence students reading achievement. For advance, it is emphasized in this study that the students' reading habit was low.

C. METHODOLOGY
1. Research Design

This study was a quantitative research which also called as traditional method (Sugiyono, 2013: 13). Besides, this kind of research used numbers and statistical methods (Thomas, 2003: 2; Creswell, 2012: 13; Sugiyono, 2013:13) or figures and graphs (Rasinger, 2008: 10) in analyzing the data.

To be specified, this study called corellation studies which focus on the degree of relationship between pairs of two or more variables (Hatch & Farhady, 1982: 192). In this study, the two variables were reading attitude and reading comprehension.

2. Participants

This study was conducted in a university in Bandung, West Java. The sample of this study was second semester non-English education postgraduate students who came from

different department; science education, sport education, and civil education. The number of respondent was 30 students and they were chosen randomly.

3. Instrumentations

a. *The Adult Survey of Reading Attitude (ASRA)*

It was a Likert-scale questionnaire which was developed by Smith (1991) and the writer was inspired to adapt this questionnaire from Annamalai & Muniandy (2013: 38) who had conducted a research by using this ASRA questionnaire. There were 40 items stated in ASRA which scale range from 1-5 (where 5 = strongly agree, 4 = agree, 3 = uncertain, 2 = disagree, and 1 = strongly disagree), but only 15 items which were chosen by researcher. These 15 items was devided into three dimensions of reading attitude; reading activity and enjoyment (8 items), the anxiety and difficuties (5 items), and the modalities (2 items).

b. *Test of English Reading Comprehension*

Test of English reading comprehension consisted of one short text which was adapted from TOEFL book and consisted of 10 multiple-choice questions. Each question was scored 10. So the total score of all questions was 100. The kind of text was report text which was suitable to be given to non-English education postgraduate students.

c. *Procedures of Collecting Data*

This study is carried out from 18th, April 2014 to 23rd, April 2014 to spread the questionnaires and reading comprehension test. In conducting this study, the researcher followed several procedures. First, she asked whether the students of particular major wanted to be investigated or not. After having agreement and schedule with the students, she delivered ASRA questionnaire. It spent about 10 minutes to answer the 15 items of questionnaire.

After collecting all questionnaires, the students are asked to do English reading comprehension test. As mentioned in previous section, this English reading comprehension test consisted of 10 multiple choice questions from only one short text. It spent almost 20 -30 minutes for the students to finish their work on test.

After collecting all he data required, then the researcher analyze it by using SPSS 16 software. Further explanation about how the data was analyzed, will be discussed in the next section.

D. DATA ANALYSIS AND FINDING

In analyzing the data required, the researcher used SPSS 16 and the formula used was Pearson product moment correlation. For further information of data obtained, see appendix. The following is the result of analysis of the data:

Correlations		VAR00001	VAR00002
VAR00001	Pearson Correlation	1	.085
	Sig. (2-tailed)		.655
	N	30	30
VAR00002	Pearson Correlation	.085	1
	Sig. (2-tailed)	.655	
	N	30	30

The table above demonstrated that the result of correlation was .085 with significant level .05 two-tailed. Degree of freedom (d.f) is N - 2 = 30 – 2 = 28. By considering critical values of the Pearson product-moment correlation coefficient (rxy) in Hatch and Farhady (1982: 277) with degree of freedom 28 was .38. It indicated that r value was lower that r critical value: r < r value, .085 < .38. It can be concluded that null hypothesis was accepted. There is no correlation between reading attitude and reading comprehension of non-English education postgraduate students in the research site.

E. CONCLUSIONS

Here are some conclusions that the researchers can conclude from the study. Reading attitude is the feeling of someone toward reading activity. It includes enjoyment of reading or even avoidance of reading situation. However, it is believe that positive reading attitude can build positive reading comprehension. The reading itself aims the reader can understand the meaning of the text. So, it is important to read for deep comprehension.

Many researchers have been conducting research related to the relationship of reading attitude and reading comprehension. Inspiring from those researches, this study is held in order to know the correlation between reading attitude and reading comprehension of non-English education postgraduate students in a university in Bandung, West java. Based on the finding it can be concluded that the null hypothesis of the study was accepted. Since r value was lower that r critical value with degree of freedom 28 and significant level .05 two-tailed, .085 < .38. There was no correlation between the two variables.

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A TEACHER'S WRITTEN FEEDBACK AS FORMATIVE ASSESSMENT ON STUDENTS' WRITING

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Abstract

Writing plays a significant role for college-level students' success since almost all subjects require them to produce academic writing. However, some students still have a lack of academic writing ability since errors are unavoidable in a variety of writing issues. Therefore, feedback is crucial to take place as an attempt to evaluate and give suggestions for students' writing improvement which leads them to be problem solvers and independent writers. Thus, using document analysis and a questionnaire, this study aims to explore both a teacher's written feedback practices and nine English students' perceptions towards the feedback at one postgraduate school in Bandung. It was a qualitative case study with a touch of quantitative data. The findings reveal that the teacher gave selective and indirect error correction which mostly aimed at asking for information dealing with the content of students' compositions. The results also show that the students placed a high value on the teacher's written feedback especially on the content and indicated preferences for both comprehensive error feedback and direct error correction which are contradictory to the teacher's practices. Thus, the study suggests both the teacher and the students to make an agreement regarding what factors contribute to the development of writing.

Keywords: a teacher's written feedback, student's perceptions, content, organization, grammar, mechanics and vocabulary.

A. INTRODUCTION

As a part of academic surrounding, writing plays a significant role for college-level students' success since almost all subjects require them to produce academic writing. However, some students still have a lack of academic writing ability which has become a national issue in Indonesia (Meilani, 2013, p. 379). This might happen because students are required to struggle with a variety of writing issues including delivering the content, using the language, using the mechanics, organizing the report, choosing the appropriate vocabulary, and giving the style on the writing (Ferris, 2003). In fact, this is not an easy task because errors are unavoidable (Hamouda, 2011; Katayama, 2007; Kavaliauskiene & Anusiene, 2012).

In this regard, students should be assisted and guided to produce valuable pieces of writing. One of the possible ways is to provide supportive feedback from the teacher since valuable writing cannot be accomplished in one draft (Friedlander, 1990, p. 110; Hyland, 2009, p. 21). Feedback is beneficial to assess students' writing process including its strengths,

weaknesses and to give suggestions for the future writing development (Coffin *et al*., 2003, p. 104; Carless, 2006, p. 220 & Mahfoodh, 2011, p.7). It will further be crucial to ensure the successful writing process (Aridah, 2003, p. 106; Coffin, *et al.,* 2003, p. 102; Hyland, 2003, p. 177; Hyland & Hyland, 2006, p. 83, 2006, p. 1; Carless, 2006, p. 219; Emilia, 2012, p. 63).

Since feedback is central to the writing process, a study about feedback is crucial to take place. Many researchers have advocated the effectiveness of feedback in writing process (Hamouda, 2011; Mahfoodh, 2011; Kavaliauskiene & Anusiene, 2012; Purnawarman, 2011). However, studies about teachers' feedback in Indonesian context have been being concerned by a few researchers (Purnawarman, 2011; Irawati & Maharani, 2012; and Ratnah, 2013) especially to graduate students (Hyland & Hyland, 2006, p. 87). This study, hence, discusses a teacher's written feedback practices and students' preference related to the written feedback at one postgraduate school in Bandung.

B. LITERATURE REVIEW

1. Teacher Feedback

Feedback is defined as a method of giving information to improve performance (Kavaliauskiene & Anusiene, 2012, p. 88; Ratnah, 2013, p. 54; Hattie & Timperley, 2007, p. 81) which is provided by "teacher, book, parent, self, experience" as the agent (Hattie & Timperley, 2007, p. 81).

2. Types of Feedback

Regarding how errors should be corrected, feedback can be classified into several types. However, there are four types of feedback which are relevant to this study. The first type of feedback is known as teacher corrections in which the teacher corrects students' writing mistakes directly (Saito, 1994, p. 46).

The second type is commentary (Saito, 1994, p. 47; Hyland, 2003, p. 180; Harmer, 2004, p.110; and Williams, 2005, p. 102) in which the teacher gives comments in the process of students' writing related to what they have done and what they should do to improve it (Harmer, 2004, p. 110). The third type is error identification which refers to circling and underlining students' errors and it is widely used technique in correcting ESL students' writing errors (Saito, 1994, p. 47). The fourth type is coding in which the teacher gives codes and symbols either in the body or in the margin of the writing (Harmer, 2004, p. 111).

3. Purposes of Feedback

There are at least three purposes of giving feedback (Hyland, 2003, p. 177 & Coffin, *et al*., 2003, p.104). The first is to indicate the progress in writing as an attempt to strengthen learning (Hyland, 2003, p. 77 & Coffin *et al.,* 2003, p. 104). This indicates that the feedback is the initial attempt to give insights for the students to improve and develop their writing.

The second is to evaluate what has been written by the students including its strengths and weaknesses and to suggest on what should be done in their future writing (Coffin *et al.,* 2003, p. 104). As the students know their strengths, they will maintain and apply it for the next writing. Meanwhile, when they have weaknesses, they will be a consideration for them

to develop the weaknesses to be better and to avoid the same mistake in writing other texts. The last is to build students' confidence in writing (Hyland & Hyland, 2006, p. 83). Students who receive encouraging feedback from the teacher will be motivated to revise their writing in order to produce worthier texts.

C. METHODOLOGY

This study employed a qualitative case study design involving nine English students academic year 2012-2013 at one postgraduate school in Bandung. Through purposive sampling, these students were chosen as the participants as written feedback was only given to this class. They have taken Systemic Functional Grammar course in the third semester. Each of them was required to make an essay using Systemic Functional Grammar (especially Theme ad Transitivity system). These respondents were anonymous.

To obtain the data, document analysis and a questionnaire were employed in two stages. The documents were collected as they provided unchangeable data which could be re-analyzed and provided information that could not be obtained in another way (Saedi, 2002, p. 59). A questionnaire was devised as it allows for collecting identical results that can be compared from one another (Saedi, 2002, p. 41). The data were collected in two stages. First, compositions along with the teacher's feedback were collected in order to identify the teacher's written feedback practices including the feedback focus, the error correction strategies, and the communicative aims of the written comments. Second, a questionnaire consisting of 13 items was distributed in order to elicit information dealing with their preference on the teacher's feedback focus, the teacher's error correction strategies, and students' strategies for handling the feedback. The items were developed from Saito (1994), Ngai (2009) and Hamouda (2011).

Both quantitative and qualitative data analyses were employed. A quantitative method was used to analyze the data from the close questionnaire and students' compositions. A qualitative method was used to analyze the data from open ended questionnaire. A qualitative data analysis was conducted by rewriting respondents' answers into the data sheet, categorizing and interpreting them. To ensure the validity of the conclusion, two types of triangulation were also used including methodological (document analysis and a questionnaire) and data triangulation (information obtained from the teacher and the students' answers).

D. FINDINGS AND DISCUSSION
1. Teacher's Written Feedback Practices
a. Error Feedback Focus

Regarding the analysis of the teacher's written feedback on nine students' compositions, Table 1 summarizes the teacher's error feedback focus. Among 91 points of feedback given by the teacher, the highest points (67 points) were addressed to the content issue while the lowest ones (3 points) were addressed to the vocabulary issue.

Table 1
The Teacher's Error Feedback Focus

Error Type	Total
Content	
Meaning of ideas	**34**
Missing of necessary information	**33**
Language	
Articles/ determiners	**1**
Noun endings (singular/plural)	**3**
Preposition	**4**
Sentence structure	**6**
Subject-verb agreement	**2**
Verb form	**2**
Word form	**3**
Mechanics	**-**
Organization	**-**
Vocabulary	**-**
Word choice	**3**
Total	**91**

The results reveal that the teacher placed great emphasis on the content, especially meaning of ideas and missing of necessary information, instead of the others. These are also in agreement with the students' report in the questionnaire arguing that content was the first focus of the teacher's written feedback. Student 7 said:

"The teacher corrected the content of my essay. The ideas were not coming from me but I did not give any credit for the authors who have the ideas."

These results confirm those of Cohen's & Cavalcanti's (1990, p. 165) study which have shown that the teacher mostly stressed the importance of content in giving feedback to students. On the other hand, the results are inconsistent with Ngai's (2009, p. 25) study which has indicated that the teachers paid much attention to the language instead of the other aspects of written feedback.

This suggests that it is important for the teacher to focus both on the content and the language when giving feedback to students in which the focus on language is given after the students are able to develop their ideas (Fathman & Whalley, 1990, p. 180-181 & Hyland, 2003, p. 185) depending on students' critical needs (Ferris, 2003, p. 23). Focusing on content might contribute to the writing fluency while focusing on the grammar might contribute to the writing accuracy (Aridah, 2003, p. 108 & 110).

b. Error Correction Strategies

Table 2 presents error correction strategies employed by the teacher when giving feedback on students' essays. The table shows that all types of correction strategies were employed by the teacher. Among 79 corrections strategies used, 55 of them indicate indirect feedback while 24 of them indicate direct feedback.

Table 2
The Teacher's Error Correction Strategies

Error correction strategy	Explanation	Total
Direct feedback	Deleting words	3
	Inserting words	4
	Locating and correcting errors	14
	Rewriting	3
Indirect coded feedback	Locating errors and indicating error types	17
Indirect uncoded feedback	Simply locating errors	38
Total		**79**

The results show that indirect feedback was the most prevalent strategy adopted by the teacher. This preference might imply that that the teacher wanted to promote students' problem-solving and responsibility for writing development (Ferris, 2010, p. 190). The results do not concur the results of Ngai's (2009, p. 26) study which have argued for direct error feedback as the most prevalent strategy adopted by the teacher in error correction.

Conversely, as revealed in the open ended questionnaire, the students expressed their preference for the direct feedback by providing a reason as follow:

"So that I know which parts that I make errors and I know how to correct them (student 3)

I'd rather to have the correction of my essay…so that I get a clear direction of what should I do next on my essay (student 7)

These students perceived the direct feedback as the guideline which was beneficial to correct errors on the current essays and on the compositions afterwards. This probably happens because they believed that it was the teacher's responsibility to correct the errors directly (Lee, 2004, p. 295). The teacher's practice is not only contradictory to the students' preference but also to the results of Ngai's (2009, p. 46) study which have indicated that direct correction was the most comprehensive way for the students as they could identify their mistakes clearly.

Thus, it seems to be a mismatch between the teacher's and students' preference towards the written feedback strategies which might lead to unsatisfactory learning outcomes (Katayama, 2007, p. 285 & Hamouda, 2011, p. 128). Therefore, it is important for both the teacher and the students to make an agreement regarding what contributes to the writing development (Leki, 1991, p. 203). It is also necessary for the teacher to give a suggestion for students that they have to change their expectation if they want to achieve the maximum result of writing (Leki, 1991, p. 203).

c. The Aims of Written Comments

There are four types of the teacher's communicative aims of giving written comments on students' composition which are displayed in Table 3.

Table 3
The Communicative Aims of the Teacher's Written Comments

Communicative aims	Total
To ask for information	23
To make a suggestion/ request	7
To give information	2
To give positive or encouraging feedback	1
Total	**33**

The table describes that 23 out of 33 comments aimed at asking for information that can be seen in the following examples:

berarti apa yang harus dilakukan? (so, what should be done?)

apakah bisa menggiring pembaca? (can it guide the readers?)

What do you think about the practice of these themes?

Meanwhile, 7 comments aimed at making suggestion/ request, such as "Beri comment tentang linguistic features" (Give comments on the linguistic features). Furthermore, 2 comments aimed at giving information, such as "This is an argumentative test". Finally, 1 comment aimed at giving positive or encouraging feedback, such as "Good!"

The results imply that asking for information was the most common aim of the teacher's comments. The large proportion of asking for information might indicate that the teacher intended to encourage students to provide further thought of the ideas that have been delivered (Ferris, Rezone, Tode & Tinti, 1997, p. 164).

Different from the results above, Ngai's (2009, p. 30) findings have indicated that the teacher mainly intended to give positive or encouraging feedback in order to build students' confidence in writing.

Because of the important role of positive feedback, it is necessary for the teacher to give more encouraging feedback based on their needs and task types (Harmer, 2004, p. 262).

d. Students' Preference Related to the Feedback

Students' Preference for Feedback Focus

Table 4 illustrated the rank of the feedback focus as rated by the students. Content was rated by 4 students as the first focus that should be addressed by the teacher, organization was rated by 4 students as the second focus, grammar was rated by 5 students as the third focus, and vocabulary as well as mechanics were rated as the least focus as rated by 7 students.

Table 4
Students' Preference for Feedback Focus

Rank	Focuses	Rated by
1.	Content	6
2.	Organization	6
3.	Grammar	5
4.	Vocabulary & Mechanics	7

The students' preference for the content as the main feedback focus is in line with the teacher's feedback practice. The students said:

In my opinion, lecturer doesn't need to be confused by the mistakes in those areas. Students of S2 should have no more problems or errors in those areas. So lecturer needs to focus on the content and the organization (student 8)

I really need the input of content and organization because those show the teacher style in evaluating and scoring the paper. Grammar, mechanics and vocabulary choice basically can be done by myself (student 7)

Based on the students' explanations above, two possible reasons for the preference on content can be drawn. First, as stated by student 8, it was believed that for postgraduate level student, there would be no more problems related to the other aspects except for content as they were perceived as more proficient learners. Therefore, the focus should be on content. Second, as stated by student 7, this preference may due to the students' desire to fulfill the teacher's expectation. In other words, they rated content as the first focus because the teacher mainly focused on it in assessing and scoring the students' compositions.

These results are different from the results of Hamouda's study (2011, p. 132) which have reported that the students preferred grammar as the highest attention that should be given by the teacher. However, this idea is supported by the minority of the students. Student 1 said "I need my work to be as accurate as possible. I care the most about accuracy" while student 6 said "Grammar is important so my writing should have error as little as possible"

The statements indicate that they needed grammar as the main focus of the teacher's feedback practice because they thought that it helped them to produce accurate writing. Thus, it appears that postgraduate students also need attention on grammar besides of content. Therefore, it is more beneficial for the teacher to increase the frequency of giving feedback on grammar in addition to the feedback on content to facilitate them to produce both fluent and accurate writing (Aridah, 2003, p. 108 & 110).

Students' Preference for Error Correction Strategies

Table 5 describes the preference for the teacher's error correction strategies as rated by the students. Each student was asked to rank the strategies from 1 to 3. It was found that 4 students rated correcting errors as the first preferred strategies to be employed by the teacher, 4 students rated writing comment only as the second preference, and 6 students rated indicating errors by underlining, circling or marking as the last preference.

Table 5
Students' Preference for Error Correction Strategies

Rank	Students' Preference for Error Correction Strategies	Rated by
1	Correcting errors	4
2	Writing comments only	4
3	Indicating errors by underlining circling/ marking symbol	6

The students also provided the reasons of choosing correcting error as the first preference. They said:

So that I know which parts that I make errors and I know how to correct them (student 3)

By indicating my errors I would know what I should revise in terms of grammatical rules, while by giving comments I would know the revision in term of cohesion & coherent (student 6)

These students argued that correcting errors, which is the direct from of feedback, was crucial in order to know their errors or weaknesses that could be used as the guideline for their writing afterwards. These findings indicate that there is a mismatch between the students' preference and the teacher's practice. The students placed a high value on the direct correction strategy while the teacher employed indirect strategy.

The mismatch probably happens because they did not want to be busy to make revisions and expected the teacher to do it for them. This is in line with a study conducted by Lee (2004, p. 295) which have reported that students perceived error correction as the teacher's responsibility.

Hence, it can be inferred that indirect feedback is crucial to encourage students to be independent writers and achieve long-term writing ability that enables them to avoid the same mistake for the other compositions. This can be achieved through locating, indicating the error types, or both of them.

Accordingly, it is necessary for the teacher to maintain the indirect feedback practice since it would guide the students and give them a space for problem solving which further leads them to be independent writers and editors (Nunan, 2003, p. 93; Kim & Kim, 2005, p. 4; Hyland & Hyland, 2006, p. 96 & Ngai, 2009, p. 55). Furthermore, it is important for the teacher to suggest the students to modify their preference from the direct feedback into the indirect.

Students' Preference for the Strategies for Handling Feedback

Table 6 displays students' preference for the strategies to handle the feedback. In this regard, 7 out of 9 students indicated that they rewrote the papers by revising and expanding and asked classmates for help while 6 out of 9 students preferred to use internet to find more references and rewrote only by incorporating the teacher's comments.

Table 6
Students' Preference for the Strategies for Handling Feedback

Strategies for handling feedback	(√)
rewriting by revising and expanding	7
Peer correction	7
identifying points to be explained	6
using the Internet to find more references	6
rewriting by only incorporating teacher's comments	5
asking for teacher's help	3

referring back to previous compositions	2
consulting a grammar book	2
going to the library	2
making a mental note	1
writing down points by type	1
ignoring them	-
Other(s):	-

Whereas, five students rewrote the essay by only incorporating the teacher's comments, two students referred back to previous composition, consulted a grammar book, and went to the library to consult reference materials. Meanwhile, there was only one student who made a mental note and wrote down points by type.

Rewriting by revising and expanding and peer correction are the most preferred strategies employed by the students in handling feedback. Rewriting by revising and expanding shows the students' willingness and motivation to improve the quality of their essays. It might be true because as postgraduate students, they are more proficient with a higher level of education; therefore, they will maximize their ability to write seriously. This is in contrast with the results of Cohen's & Calvacanti's (1990, p. 161) study which reported that rewriting is useful if it is dealing with grammar and spelling while in this study, rewriting is also useful when dealing with content. This suggests that rewriting is not only useful for the errors on grammar and spelling but also for the improvement on the content.

The preference of peer correction is probably because "it is less threatening, less authoritarian, and more supportive" (Kavaliauskiene & Anusiene, 2012, p. 98) as well as "comfortable and not fearful" (Hamouda, 2011, p. 134). These can be achieved in "a friendly and cooperative atmosphere" (Kavaliauskiene & Anusiene, 2012, p. 98). Therefore, it is important for the teacher to promote peer correction among the students because of its important role in developing students writing quality.

E. CONCLUSION

Based on the findings, two major conclusions can be drawn related to the teacher's written feedback practices and the students' attitudes towards the feedback. In relation to the former, the results indicate that the teacher mainly focused on the content when marking students' errors by employing selective and indirect error correction which mainly aimed at asking for further information.

With regard to the latter, the results show that the students put high emphasis on the teacher's written feedback and support the teacher's focus of giving feedback. However, they preferred for selective and direct error feedback to be given by the teacher.

This study suggests that the teacher and the students should have a discussion regarding the effective feedback practices that constitute the improvement of their writing. It is important for the teacher to communicate the criteria, expectation, and purpose of her feedback practices as an attempt to promote problem-solving and independent writers who are able to evaluate their own writing.

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ACTION RESEARCH IN IMPROVING STUDENTS' READING COMPREHENSION USING COOPERATIVE LEARNING INSTRUCTION IN TEACHING READING OF ANALYTICAL EXPOSITION TEXT IN A PUBLIC HIGH SCHOOL IN WEST BANDUNG

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Abstract

Genre based curriculum necessitates students to have a good reading comprehension. Especially for students of xi grade, their score will be as the determiner to pass the national examination. Besides, the standard competence for graduation in English subject stated that the students should comprehend kinds of text. One of them is analytical exposition. This research tries to find out whether the using of cooperative learning instruction applied in classroom activities can improve students' reading comprehension of analytical exposition text in grade xi or not. Then, to find out the students' response of the method applied. This reserach is action research, so the steps included in cycle. This research included two cycles. In each cycle consists of plan, action, observation and reflection. Pre test and post test are conducted. Then, two cycles were conducted. After that, students anserwed questonnaire to get information about their response of cooperative learning. Based on the analysis, some important points found. Cooperative learning instruction applied in classroom activities can improve students reading comprehension. Besides making some improvement, students also have a positive response to this method.

Keywords: action research, analytical exposition text, cooperative learning and reading comprehension

A. INTRODUCTION

1. Research Background

In Indonesia, the curriculum that is applied now at school is School based Curriculum. In English subject, Genre-based curriculum is the basic curriculum that can be developed by school. In this curriculum for high school, it necessitates the students to comprehend kinds of text. In XI grade, one of the text that they should comprehend is Analytical Expositon. It is very important to emphasize students' reading comprehension of this text in XI grade because their English score will be considered as a determiner for their graduation. Reading skill of Exposition text also is stated in the SKL (Standard Competence of Graduation) in National Examination.

So, teaching reading is important but it is not an easy thing to do, especially when we face the classroom situation in public school. Commonly the condition of the classroom of

public school is a big class approxiamately, it consists of 30-40 students. Based on this condition, the class consists of students who have various abilities and proficiencies in English from the low until high achievement.

Based on the explanation above, there are some previous studies which related to those issues. Dotson (2001) stated that cooperative learning increase students achivement. Another study also by Jing Meng (2010) said that cooperative learning is more effective in teaching English in reading and speaking. Another study conducted by Henny, Kelly and Stone (2009) said that students had a good preception and preference to cooperative learning. Those theories indicate that cooperative learning has positive things especially related to students achivement and comprehension of the materials.

Therefore, the writer has an interest in the cooperative learning instruction in teaching reading of analytical exposition text to improve students reading comprehension of this text. Besides, the writer also wants to find out about students' response of cooperative learning instruction that applied in the classroom activities.

2. **Research Questions**

    This research has the following questions to be answered

    a. Does the cooperative learning instruction applied in classroom activities improve students reading comprehension of analytical exposition text in grade xi?
    b. How does students' response to the use of cooperative learning instruction in classroom activities?

3. **Aims of The Research**

    This research has the following aims

    a. To find out the improvement of students' reading comprehension of analytical exposition text in grade xi using the cooperative learning instruction applied in classroom activities
    b. To find out the students' response of the use of cooperative learning in classroom activities

4. **Research Significant**
    a. For students

       This research is expected to enrich the research in teaching and learning English. Besides, the method that is used in this research can improve students' reading comprehension especially EFL students in teaching reading of analytical exposition text.
    b. For teachers

       The reserach also is expected to be useful in giving more knowledge to the teachers and also improving their competencies as English teacher.

B. LITERATURE REVIEW

1. Cooperative Learning

Cooperative learning is the teaching and learning instruction of small groups so that students can work together to acheive the learning goal for their own and others. (Johnson, Johnson, & Holubec 1998 p.1:5). They also said that cooperative learning produces three positive things: greater efforts to achieve, positive relationship between students and greater psychological health for students.

The Johnson and Johnson Model (1999) explained that there are five criterias to make a true cooperative learning Positive interdependence, individual accountability, Promotive interaction, Group processing, Development of small- group interpersonal skills. They also has introduced three types of cooperative learning groups. They are formal, informal, and base groups

In their theory stated that cooperative learning method includes many techniques. Some of these are:

- Learning together
- Teams-games-tournaments
- Group investigation
- Constructive controversy
- Jigsaw producers

So, based on the explanations of theories mentioned above, this reserach will apply cooperative learning instruction with formal cooperative learning group and the method of learning together.

In formal cooperative learning group, the group is only for a period of time for a certain material. The group is taken by using heteregenous grouping of students' level of achievement so in each group the students are varied from high, medium to low achievement. In this case, the skill was reading and the material was analytical exposition text.

The learning together method is a technique developed by D.W. Johnson and R.T. Johnson (1991). The most important properties of this technique are the existence of the group goal and sharing the opinion and materials, division of labour and the group reward.

2. Analytical Exposition Text

Based on the explanation of Gerot and Wignell (1995), analytical exposition is the text which has the social function in persuading the reader or listener that something is the case. It also has the generic structure : *Thesis, Arguments* and *Reiteration*. Besides, the text has some significant lexicogrammatocal features. They are focusing on generic human and non-human participant, using simple present tense, relational processes, internal conjunction and causal conjunction.

3. Reading Comprehension

Based on wikipedia, reading comprehension can be defined as the level of understanding of a text. In this area, the writer can say that reading comprehension is

students' understanding of the text that is given to them. Their comprehension can be seen by the correctness of the questions that are answered by the students related to the text.

C. METHODOLOGY

1. Research Design

This research is a classroom action research (CAR). According to Burn (2010), CAR has something to do with the ideas of 'reflective practice' and 'the teacher as researcher'.

So, CAR is really useful especially for the teacher in improving their teaching and learning process. In this case, the writer is both the teacher and the researcher. Besides, the research also involved other teachers as the observer and the writer's partner in giving interventions to the research.

Kemmis and McTaggart (1988) stated that CAR involves four broad phase in a cycle of research. They are *planning, action, observation* and *reflection*. The first cycle become a continuing, or *iterative*, spiral of cycles which recur until the action researcher has achieved a satisfactory outcome and feels it is time to stop.
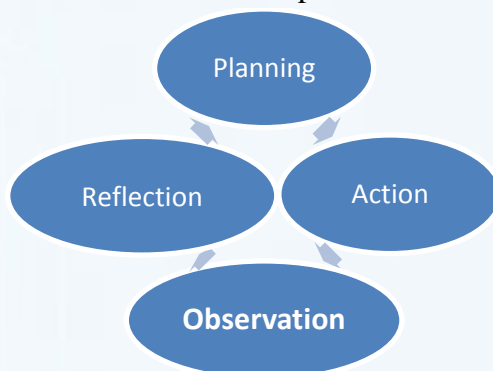
Picture 1. Cycle of Action Research

2. Place of the Research

The place of the research is Senior High School named SMAN 1 Cipeundeuy West Bandung.

3. Research Subject

The research subject of the study was class of xi social 2 in SMAN 1 Cipeundeuy. This class was chosen as the research subject because it has 30 students which is a big class and has various students characteristics and English proficiency from low to high. Besides, students' English score in XI grade is one of the determiners whether they can pass or not in National Examination. So, the sample or the subject is a purposive sample.

Those students were divided into 6 groups using heterogenous grouping based on students level of achievement. Each group consisted of students who have high, medium and low level of achievement.

4. Research Instrument

The instruments of the research were pre and post test, observation, questionnaire.

a. Pre and post test

This instrument is conducted to see the improvement of students' comprehension in reading analytical exposition text. There are 10 questions in the test. It is taken from National Examination reading comprehension in 2012. After that, the improvement can be seen by calculating the mean of the pre test and post test. Then, the means are compared. The formula of the mean can be seen as follow

$$\overline{X} = \frac{\Sigma X}{n}$$

$$
\begin{aligned}
x \quad &= \text{mean} \\
\Sigma x \quad &= \text{sum of the scores} \\
n \quad &= \text{sum of the students}
\end{aligned}
$$

b. Observation

The observation was conducted to see the implementation of cooperative learning in classroom activities. This observation was based on the observation sheet that is adopted form the Teacher's observation sheet for supervision applied in the school.

c. Questionnaire

Questionnaire was conducted to find out about students' response to cooperative learning instruction in classroom activities. It was adopted also from the previous study about cooperative learning from Henny, Kelly and Stone (2009). The questionnaire responses were divided into three categories according to the type of question. There were five questions that ask about their preference for working in groups (questions 1, 4, 7, 10, 13), five questions that asked how their groups functioned (questions 2, 5, 8, 11, 14), and five questions that addressed how well they learned in cooperative groups (questions 3, 6, 9, 12, 15).

5. Validity

a. Pre and post test

The test is considered as valid because it is taken from the questions of National Examination in 2012.

b. Observation

The writer assumed that the observation is a valid one because the quideline of observation sheet is adopted form the Teacher's observation sheet for supervision that is applied in the school.

c. Questionnaire

The writer also had an assumption that Questionnaire is valid because it had been used in the previous study about cooperative learning from Henny, Kelly and Stone (2009).

6. Time of collecting the data

Data were collected within a week since 12 - 18 November 2012.

7. **Technique of analyzing the data**

The result of the data can be reached after gathering the data from the result of pre and post test, observation, and questionnaire. Besides, since this is an Action reserach so it has to follow the cycle which has been discussed above. The research was consisted in two cycles.

Below are the steps of the research based on action research in two cycles.

The first cycle

a. **Plan**

In this stage, the writer prepared the intervention by conducting a lesson plan which was applied in the classroom. This lesson plan was based on the syllabus of the school and also adapted from the cooperative learning method for classroom activities.

b. **Action**

In this stage, the writer applied the lesson plan that had been arranged in the plan stage in the classroom.

c. **Observation**

In this stage, another teacher was involved to be an observer during the teaching and learning in the classroom.

d. **Reflection**

In this stage, teacher and the observer had a discussion related to the action and intervention that had been done based on the observation. Besides, the writer decided for the next meeting activities and intervention for the classroom for the next cycle.

The Second Cycle

This cycle is almost the same with the first cycle. The different exists in the planning and reflection stage. Planning stage is based on the intervention of the reflection in the first cycle. In reflection stage, the writer and the observer have a discussion and make the conclusion of the intervention. After that, the students are asked some questions to find out about their response in cooperative learning instruction in classroom activities.

D. **RESULT AND DISCUSSION**

The result of the study will be discussed into three categories. The first will be the result and discussion of pre test and post test. Next, it is from observation. The last is taken from the questionnaire from the students.

1. **Pre test and post test**

The result of the the post and pre test of the students' reading comprehension can be seen in the following table.

Table 1

Pre test	Post test
3,47	6,9

From the table above, it can be said that there is some improvement of the students' reading comprehension in Analytical exposition text using cooperative learning instruction in classroom activities. This result has the same result of the previous research by Dotson (2001)

about the increasing of students achivement using cooperative learning. Although the improvement was not significant but the improvement still exist.

2. Observation
a. First cycle

Based on the observation conducted by the observer using the observation sheet, the components of teaching and learning such as the planning of teaching and learning material/administration, teaching and learning process and closing have been covered by using cooperative learning instruction in classroom activities.

But, there are few things as notes.

1. Teacher should state the goal clearer to the studentsh
2. Teacher should pay attention much to each group members because there are some students who just chat out of the context of the study in group especially in group 2, 3, 4 and 6 . Besides, they are also students who are very passive in group work in group 1, 2 and 3.

So, in the reflection stage, the writer and observer prepared some intervention based on the result of the observation. The intervention are

1. The teacher should give the group clear explanation about the text task, goal of the study and also instructions to make the students can cooperate well with their group.
2. The teachers should monitor the students by checking the group's work and asking the students who didn't do anything or just chat in the group.

b. Second cycle

Based on the intervention that has been done by the writer and the observer in the first cycle. There are some improvements shown in the second cycle. The teacher gave the students clearer informantion about the goal, text task and instruction of group work. Then, some students who used to chat out of the context of the study, start to chat about the task and more active. But, there's also still 4 students from different group who give few contribution. There's a student who just be quite (group 4) and three students who chat out of the context with his friend from other group (group 1, 3 and 6).

c. Questionnaire

The questionnaire that has been conducted to the students was divided into three categories.

1. Students' preferences in working in group

They indicated that group work was a favorite activity (M = 3.1), that they would like to spend more time in groups (M = 2.65), that they did not prefer to work alone (M = 3.1) or in pairs, (M = 2.68), and they strongly agreed that they worked in groups too much (M = 3.19).

2. The students' response in group functioning.

They agreed that everyone in their group had a chance to participate (M = 3.4), that they understood the role they performed in their group (M = 3.2), and they disagreed with the statement that they did not participate much in their group (M = 3.3). They were split on

whether the work was divided equally among group members (M =3.4) and whether they finished their work more quickly (M =3.5).

3. The students' feeling that cooperative learning groups was beneficial for them.

They felt they learned more when working in cooperative groups than when working alone (M= 3.3), that working in small groups helped them understand better (M = 3.4), that their group members helped them learn (M = 3.2), and they had more ideas working in groups (M = 3.6). They disagreed with the statement that working in small groups did not help their understanding of the Subject (M = 3.4).

So, from the result of the questionnaire, it can be inferred that the students prefer working in group. Then, they also felt that their group functioned well. Besides, they agreed that cooperative learning help them in understanding the task.

E.   CONCLUSION AND RECOMMENDATION

Based on the findings that were discussed in above explanation, it can be concluded that using cooperative learning instruction in classroom activities with formal group of learning together method can improve students' reading comprehension. Then, the students also have positive response to this kind of method.

Moreover, the findings showed the improvement of students' reading comprehension was not so significant. So, the writer recommend that this method should be mixed with another method or reading strategies. Also, the research only lasted in two cycles. So, more cycles are better to have more intervention. So, students' reading comprehension can improve well.

Although the improvement was shown not so significant, the students had positive response to this method. So, this kind of method can be used in classroom activities as the variation in teaching and learning especially to make the students enthusiastic and enjoy the materials.

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PROBLEM FACED BY POSTGRADUATE STUDENTS' IN COMPREHENDING TOEFL READING'S TESTS
(A Case Study of Non-English Major in One of Universities in Bandung)

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Abstract

This study investigates the problems faced by postgraduates' students in one of university in Bandung in TOEFL reading comprehension test. Reading comprehension is a crucial skill that should be mastered for the students especially postgraduates' students to get better understanding and be more knowledgeable. This study aims to find out some difficulties and some problems that affect the difficulties of postgraduates' students in facing TOEFL reading comprehension test. This study employed descriptive qualitative method in describing students' difficulties and problems that affect them. The participants of this study were the first year of non-English department postgraduate' students in one of university in Bandung. The data were obtained through TOEFL reading comprehension test and interviews. In this study, the research only focused on some sub skills in reading comprehension skills. The research revealed that finding main ideas, detailed information, implied information and words meaning were the difficulties faced by postgraduates' students in TOEFL reading comprehension test. It was also revealed that there were three factors that affect the difficulties; the test itself, the test takers themselves and the situational condition. It is suggested for the test takers to prepare some strategies before taking TOEFL test. For the next researcher, it is hoped to carry out further research in investigating reading difficulties in TOEFL reading comprehension.

Keyword: reading comprehension, TOEFL, reading difficulties

A. INTRODUCTION

English as an international language is needed in academic environment, work environment and social environment both national and international. English proficiency is needed to keep maintaining in the globalization era. TOEFL (Test of English as a Foreign Language) is one of the measurements for English proficiency. TOEFL is a kind of English test that use standard which is created and developed by ETS (Educational Testing Service) in New Jersey internationally (www.toefl.org). Nowadays, TOEFL is used in many occasions such as, for students who want to continue their study in the university and get scholarships and for workers who want to get a job both national and international job should have a TOEFL certification as one of the requirements for knowing their English proficiency. It is the accumulation of students' achievement in learning English quality (Ali, 2012).

Since there are many obstacles that caused lower score in reading comprehension section in TOEFL test, this study is aimed to find out the difficulties faced by students especially postgraduates' students who are not majoring in English in one of universities in Bandung when facing TOEFL tests in reading comprehension section. This study also wants to investigate some factors that affect students' difficulties in doing TOEFL test in reading section. It is hoped this study will reveal what are the difficulties faced by postgraduates' students and some factors that affect them. It is also expected that this study will gain students and TOEFL test takers awareness of difficulties and factors affect them in facing TOEFL test so that they can improve and prepare themselves well in the test.

This study is conducted to answer the following questions:

1. What are the difficulties faces by postgraduates non English department students in comprehending TOEFL reading's tests?
2. What factors affect the difficulties?

B. LITERATURE REVIEW

Since TOEFL test is one of the proficiency tests where according to Hughes (1989 in Gunawan, 2008) who stated that proficiency tests are the tests which designed to measure people's ability in a language regardless of any training that learners may have had in that language, TOEFL tests are often used in as a testing tool. The reliance on TOEFL (Test of English as a Foreign Language) for various testing purposes of English proficiency have reached such a point that most universities and colleges both overseas and domestic adopt this standardized test as a part of graduation requirements. In some universities, the postgraduate students must have at least 500 TOEFL score for non-English Department students and 550 TOEFL score for English Department students. It is a compulsory for all of postgraduate students to pass the TOEFL score. It is not possible for the university policy makers to increase the minimum TOEFL score standard either for postgraduate students because the quality targets will always change periodically.

There are three sections in TOEFL test; listening comprehension section, structure and written expression and reading comprehension test. Each section has their own standard measurement in measuring the test takers' proficiency (Philips, 2000). Listening comprehension section measures the ability to understand English as it is spoken in America. This section consists of three parts: Part A (short conversations), Part B (long conversations) and Part C (talks). Structure and written expression section measures measured is the ability to recognize language that is appropriate for standard written English. This section is divided into two sections: structure (completion) and written expression (error identification). The last section is reading comprehension section. This section measures the ability to understand short passages similar in topic and style to academic texts used in America colleges and universities. There are variety of short passages on academic subjects and answer several questions about each passage in this section. The total amount of item questions in TOEFL test is 140 questions with, 50 questions for listening comprehension section, 40 questions for structure and written expression section and 50 questions for reading comprehension section. The test takers are given 110 minutes to answer all of the questions.

Based on the interviews with some postgraduates' students who have taken TOEFL test, it is found that reading comprehension section is the most difficult section in TOEFL test. They got the lowest score in reading comprehension section. Reading is a complex process of human functions which need a long process to master it (Shaywitz in Khariyani, 2012). He also adds that the complexity of the process makes reading, especially reading in foreign language, as a difficult activity. It means readers need to understand a complex alphabetic system which asks them to struggle hard in order to gain what the text brings to them.

Furthermore, reading is one of the four skills that have to be mastered since it is one of the key points to be success not only in academic life but also in occupation because most information and references are written in English. Basically, the purpose of reading is to comprehend what is being read. Reading provides students with lots of information and knowledge which gives contribution for their success in study and in their life in general (Perfetti in Ali, 2012). Since reading for comprehension is the primary purpose of reading, questions comprehension is required to measure the students' understanding towards a text (Grabe, in Khariyani, 2012). TOEFL reading test is relevant as the questions of comprehension for measuring students' comprehension. According to Philips (2000) who stated that reading comprehension in TOEFL questions consists of five types of questions required 13 skills of reading that measured students' reading comprehension ability.

C. METHODOLOGY
1. Method
This study was designed by using descriptive qualitative research. According to Punch (2009) states that qualitative research is empirical research where the data are not in the form of numbers. This research is committed as a descriptive qualitative since it is conducted to investigate the difficulties faced by non-English department postgraduates students and find out some factors that affecting them.

2. Instruments
The instruments of this study were TOEFL reading comprehension test and interviews. The test was taken from Longman paper-based TOEFL preparation. The test was in the form of multiple choices where the participants should choose one the best correct answer. There were four passages consisted of twenty five questions because this research just focused on the four sub-skills of reading comprehension which also became the indicators of the reading comprehension test. They were finding the main ideas, implied information, detailed information, and words meanings in the text. The students were given only twenty five minutes to answer all of the questions. It is clear shown in the following table:

Table 1: Indicators of difficulties in TOEFL reading comprehension section

Indicators	Item Numbers	Total
Main ideas	1, 6, 11, 18	4
Detailed Information	2, 4, 8, 10, 13, 15, 22	7
Implied Information	5,7,17, 20, 25	5
Words Meaning	3, 9, 12, 14, 16, 19, 21, 23, 24	9

This test was adopted test from Longman paper-based TOEFL preparation where the validity and the reliability of the test were tested before. The level of difficulties for each indicator was measured through the TOEFL difficulties level taken from book entitled TOEFL: Test Preparation Kit Workbook, ETS (1998 in Gunawan, 2008). It is shown in this following table:

Table 2. Level of Difficulties

Range of Percentage	Level of Difficulties
80 – 100	Easy
60 – 79	Medium
0 – 59	Difficult

Furthermore, interview was done emphasized the previous data. According to Mckenzie (2007) who states that interview can be used to collect facts and seek to elicit information about attitudes and opinions, perspectives and meanings, the very stuff of much of both psychology and sociology. Semi structured interview was given with fifteen questions. Dornyei (2007 in Cohen, 2009) states that semi structured interview helps the researcher to have the clear pictures of the topics that need to be covered but is prepared to allow the interview to develop in unexpected directions. Because of the limitation of time, the students that were chosen to be the interviewee were chosen based on their score in the test, so the interviewee would be only two students, the highest score and the lowest score.

3. Method of Data Analysis

There were some steps in analyzing the postgraduate students' reading difficulties in TOEFL reading comprehension test. First, the researcher was computing the frequency of the students' answer by giving scores. Then, the difficult items were scored to find the difficulties in the reading TOEFL passages based on the reading sub skills indicators. Next, the frequency of the correct answer of each indicator was calculated and percentage of students' reading comprehension was achieved.

The data was analyzed by using the formula (Sudjiono, 2009):

$$P = F/N \times 100\%$$

P = the percentage of the students' comprehension based on the indicator
F = frequency of questions item in each indicator
N = total respondents

The researcher determined the indicators of the students' achievement in reading comprehension based on *Buku Pedoman Akademik UPI* (2012):

Table 3. Criteria of Students reading Comprehension

Percentage of Score	Mark	Grading Criterion
88% – 100 %	A	Excellent
75% - 87%	B	Good
62% - 74%	C	Average
50% - 61%	D	Poor
0% - 49%	E	Very Poor

Then, data from the interviews were analyzed by describing and interpreting the answer of each from the recording and note that had been taken during interviews. Then, answers of the interviewees were analyzed to find students' problems and factors affect these problems in comprehending reading TOEFL passages. Finally, the postgraduates' students' difficulties and factors that affect the difficulties in TOEFL reading comprehension section were described based on the data collections.

D. FINDINGS

The results of the particular study which aims to investigate postgraduates' students' difficulties and the problem affect them in comprehending TOEFL reading passage in one university in Bandung. The difficulties were focused on the four main skills in reading comprehension; they are finding main ideas, detailed information, implied information and words meanings. In presenting the result of the study, the percentages of difficulties of each sub-skill in reading comprehension test was calculated to describe and summarize the responses of the participants. The results of items that relate to each sub-skills of reading comprehension criteria and difficulties were presented in tables and explanations were provided accordingly. Some aspects that affect the difficulties also described and interpreted from the interviews of some participants.

Based on the TOEFL reading test, it can be seen the reading comprehension of postgraduates students in reading TOEFL passages. It is also answered the first research question: 'what are the difficulties faced by postgraduates non English department students in comprehending TOEFL reading test". It is presented in the following table:

Table 4. Description of reading comprehension of postgraduates students

Indicators	Average Score	Quality
Finding Main Ideas	0.58	Poor
Detailed Information	0.46	Poor
Implied Information	0.44	Poor
Words Meaning	0.52	Poor

Based on the table 3, it can be seen that the all indicators of reading comprehensions in TOEFL reading passages were judged in average score between 0.40 – 0.60. This means postgraduates students' reading comprehension ability is still poor and they faced the difficulties in reading TOEFL passages. The lowest average score is implied information which got 0.44 that categorized as poor. Based on the table 2 of level of difficulties, the items in the implied information indicator were difficult. It means postgraduates' students have some difficulties in comprehend reading TOEFL passages in finding the implied information from the text. While the highest average score in the reading TOEFL test is finding the main ideas with the average score 0.58 which is still categorized as poor. Finding main ideas consisted of four questions in reading TOEFL passages which the items were difficult based on the level of difficulties. Therefore, the two other reading sub skills indicators, detailed information and words meaning, are also classified into poor comprehension since the average score for both of the items are 0.46 for detailed information and 0.52 for words

meaning. The detailed information consisted of seven questions and the words meaning indicators consisted of nine questions of twenty questions in reading TOEFL passages which all of the items in these passages were categorized difficult. It can be concluded that postgraduates' non English department students' difficulties in comprehending reading TOEFL text were in finding the main ideas, implied information, stated information and words meaning.

E. DISCUSSION

Based on the findings above, it can be seen that postgraduates students still had difficulties in comprehending English text especially the text in TOEFL tests which most of the texts are logical exposition. All of the indicators which is suspected as the problems for non-English students major was tried and true based on the test's results. Non-English postgraduates students have difficulties in some reading skills included finding main ideas, finding detailed informtion, finding implied information and using context clues to guess the meaning of the words. There are some factors that affect these difficulties which can be internal and external factors. The interview was done to reveal the factors that affects students' result in TOEFL reading comprehension section.

Based on the interviews with the two participants of postgraduates' students who had given the reading TOEFL test and questionnaires before, it is found that there were some factors that affect the difficulties faced by them. It answered the second research question: 'what are some factors affect the difficulty'. The factors that affect the difficulties in reading comprehension section were the test takers themselves, the test itself, and the situational condition. The problem came from the test takers themselves such as lack of vocabularies, lack of concentration, lack of strategies in reading comprehension and lack of the background knowledge about the passages. These factors affect their comprehension in reading TOEFL passages. The most crucial factor was the lack of reading comprehension strategies which many of the test takers did not know them. Cohen & Upton (2006) stated that reading strategies provide how the readers interact with the text and how their choice of strategies influences their comprehension of the text. They also emphasized that strategy use and efficacy are clearly influenced by the level proficiency of the reader.

Then, others factors that affect difficulties in reading comprehension section is the test itself. As a non-native reader, a test taker's ability in reading English passages is different with the native ones. The tasks, the length of the text and the nature of the questions asked were some factors that affect the test taker as the nonnative readers in comprehending the passages. It is supported by Skehan (1998 in Cohen & Upton, 2006) who stated that the task itself poses true hurdles for the nonnative reader and the length of a text and the nature of the questions asked about the test. The last problem that affects students' ability in reading comprehension section is the situational condition. The situational conditions of the test taker such as, tired, bored and under pressure were much affected the problems of reading comprehension. Since reading comprehension section is the last section of TOEFL tests, the test taker felt tired, bored and under pressured made the test taker lack of concentration and felt anxiety in reading the passages.

F. CONCLUSION

Based on the result of the research, there are two points that can be concluded. First, postgraduates' non English department students have some difficulties in reading comprehension section of TOEFL test such as, finding main ideas, detailed information, implied information and words meaning. Second, there are some factors such as, the test takers themselves, the test itself and the situational, that affect the postgraduates' non English department students in reading TOEFL comprehension section. It is suggested to the postgraduates' student to have many practices in TOEFL test especially reading comprehension section. They should prepare for some strategies which can be helped and applied during doing the test. Moreover, the postgraduates' students should improve their reading comprehension ability especially for reading English texts.

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SPEAKING PROBLEMS FACED BY THE ENGLISH DEPARTMENT STUDENTS

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Abstract

English Department students are demanded to have good speaking ability. Nevertheless, the students perceive that they have difficulties in improving their speaking ability. This study is conducted to find out the problems that students face in learning speaking and the causes of problems, and the efforts they make in order to overcome those problems. This study is done in one of university in Aceh Province. The subject of this study is the students who are in the third semester in this year. This study employed a qualitative research design. The data were collected through questionnaire and interview. The results of this study show students problems were caused by psychological and linguistic factor. The causes of student's problems in speaking skill are that they forget what to say and they are afraid to speak. Practice with the classmates or other friends and listening English song are the efforts that the majority respondents do in improving speaking skill. This finding suggests that the lecturer motivate the students to express their ideas and have self-confidence to communicate in English and the students should practice English regularly inside or outside the class.

Keywords: speaking problems, english department students

A. INTRODUCTION

In learning of English, there are four basic skills that the students should master, namely listening, speaking, reading and writing. Those skills can be divided into two categories; those are productive skills and receptive skills. Productive skills consist of speaking and writing skills, while receptive skills are listening and reading (Harmer:2007).

At the university level, especially at the English department, the teaching and learning of English is specified into each skill. Soler (2008:11) concluded that the main purpose of teaching English at the university is to provide the operative and authentic means of communication for the students. So, it is expected that the students will be more familiar with English so that they can improve their English ability. Generally, in English language teaching, speaking has always been considered as one major focus to study.

> *The mastery of speaking skills in English is a priority for many second-language or foreign-language learners. Consequently, learners often evaluate their success in language learning as well as the effectiveness of their English course on the basis of how much they feel they have improved in their spoken language proficiency (Richard, 2007:1)*

It means that speaking is the most used skill rather than three other skills. Syam (2012:8) stated that because speaking is a basic tool for communicating among us in our daily life, the teaching of English should also focus on teaching speaking skill beside listening, reading, and writing skills in order that students can use it for oral communication. It should not be ignored or get a little portion in teaching or learning English. Because it will be much better when students not only understand English but also they are able to use it for interaction with people orally.

English department students are expected to create a competent and skillful candidate for English teacher. So, English departments should have a good ability in every skill, especially speaking. By learning this skill, students can increase speaking ability and they are able to communicate fluently. However, the fact is still contrary to its goals. Most of students still face some difficulties in increasing their speaking ability even though they have learned it for two semesters.

The researcher herself also find that the lack of vocabulary, low self-confidence, and afraid to make errors are some obstacles in speaking. Pia (2012) says that there are some difficulties mostly faced by students; (1) they were not confident to speak in English, (2) they were afraid to make mistakes, (3) they did not know how to share their ideas in English, (3) they hesitated if their words were wrong, and (4) they could not pronounce particular words. In addition, it is also supported by Solihin (2009), the students problems in speaking are choosing appropriate vocabularies, making the correct sentence, making the correct pronouncing, and no self confidence.

> *The students had anxiety to speak English in the classroom, fear of making mistakes and derision, low proficiency in English, teacher's intolerance of silence, uneven allocation of turns and incomprehensible input are the problems that students get in speaking. (Syam:2009)*

Moreover, Smith (2011) as cited Juhana (2011) states that linguistic factors such as lack of vocabulary, lack of understanding of grammatical pattern, and incorrect pronunciation also become the source of students' difficulties and reluctance to speak in English class. Therefore, there are several suggestions from chinese students who have already been in the United States to improve English. First, taking formal ESL classes, using mass media, practising, taking conversation club, and taking toastmasters international (Improving English:5).

Based on the explanation above, this study wants to know whether the sample in this research faces the same difficulties or not. In other words, this study is conducted to find out students problems and the causes of the problems in speaking. Additionally, the writer is interested to know what efforts they make to overcome those problems.

B. LITERATURE REVIEW

Speaking as one of four language skills in studying English is very important to be learned. Speaking is much more prevalent in our day-to-day lives than most of us realize. Improving our ability to speak effectively in public is crucial to achieving important goals for ourselves, our families, and our communities. (Verderber et al :2008:3). Nunan (1999)

explains that as a productive skill, speaking deals with the meaning negotiation and the active use of language to express meaning so that other people can make sense of them.

Syam (2009:8) stated that because of speaking is a basic for communicating among us in our daily life, the teaching of English should also focus on teaching speaking skill beside listening, reading, and writing skills in order that students can use it for oral communication. It should not be ignored or get a little portion in teaching or learning English. Because it will be much better when students not only understand English but also they are able to use it for interaction with people orally.

1. **Factors that Affect Speaking Ability**

Many language learners regard speaking ability as the measure of knowing a language. These learners define fluency as the ability to converse with others, much more than the ability to read, write, or comprehend oral language. They regard speaking as the most important skill they can acquire, and they assess their progress in terms of their accomplishments in spoken communication.

Latha & Ramesh (2012) says that speaking activities can fail miserably due to some very real problems in classroom. Therefore, we can say that students speaking performance is affected by many factors. The factors are learner inhibition, lack of motivation, lack of subject matter, lack of proper vocabulary, lack of confidence, improper listening skill, poor non verbal communication, anxiety, strong and quick learners domination in the class, family background, rural background, excessive use of mother tongue, lack of proper orientation, phonology, and mother tongue pattern and its influence.

Shumin (2002) explains, *"speaking is one of the central elements of communication. In EFL teaching, it is an aspect that needs special attention and instruction. In order to provide effectivebinstruction, it is necessary for teachers of EFL to carefully examine the factors, conditions,and components that underlie speaking effectiveness."* He also claims that age or maturational constraints, aural medium, sociocultural factors, and affective factors become the factors that affect students' ability in practicing speaking.

2. **Students' Difficulties in Practicing Speaking**

What is expected from the speaking class is that the students involve actively and express their ideas confidently during the class. However, most students found that it is hard for them to speak up their mind.

Pia (2012) says that there are some difficulties mostly faced by students; (1) they were not confident to speak in English, (2) they were afraid to make mistakes, (3) they did not know how to share their ideas in English, (3) they hesitated if their words were wrong, and (4) they could not pronounce particular words.

Juhana (2011) conducted a research about the difficulties encountered by students in practicing speaking in English class. The research is a case study at a Senior High School in South Tangerang, Banten. He states that students difficulties in speaking English were caused by both pychological and linguistic factors. The psychological factors include fear of mistake, shyness, anxiety, lack of confidence, and lack of motivation. With regard to the linguistic

factors, aspects like lack of vocabulary, lack of understanding of grammatical pattern and incorrect pronunciation have also been sources of students' difficulties in speaking English.

In addition, Syam (2009) investigated the same field namely exploring students' problems and expectations in speaking class. The reasearch is a case study at a MAN in Riau. He claims that the students had anxiety to speak English in the classroom, fear of making mistakes and derision, low profiency in English, teachers' intolerance of silence, uneven allocation of turns and incomprehensible input. Their solutions to overcome these problems were being sure their teacher would help, creating close relationship with classmates, joining English course to build self confidence, forcing themselves to be confident to speak and being encouraged by their teacher's friendly attitude.

C. METHOD

This research carries a qualitative research. In addition, this study is descriptive in nature as it is thoroughly desribing a specific matter (Fraenkel, Wallen, & Hyun:2012). However, this study also employs the elements of quantitative in the form of how the data are recorded in percentages. This research was conducted at the English Department of Faculty Teacher Training and Education in one of University in Aceh Province. The writer took 30 respondents in 2013 academic years as the subject of the study who are in the third semester in this year. The reason for choosing this respondent are the respodents has already passed Speaking I and Speaking II. It means that the respondents are at Speaking III class at the moment. The writer used questionnaire and interview as the instruments in gathering the data. In analyzing the data, the writer used several steps as follow. In questionnaires, the first step is identifying the data from the respondents. The second step is cetegorizing the data based on the theories on literature review. Next, the categorized data were quantified and presented in the form of percentage. In interview, the data were transcribed, categorized, and interpret to answer the research questions proposed.

D. FINDING

1. What are the problems faced by English department students in learning speaking skill?

There were seven problems that often faced by the students in learning speaking. The problems that often faced by the students in learning speaking in psychological factor are lack of confidence (30%), nervous to speak (10%), not used to speak in English (6,6%), difficult to express idea in English (13,3%), and afraid to make errors (3,3%). It is alo supported by Juhana (2011). He said that fear of mistake, shyness, anxiety, lack of confidence, and lack of motivation are the students difficulties in speaking in term of psychological aspects.

Table 1. The Distribution of Difficulties in Speaking Related to Psychological Aspects

No	Kinds of Problems	Perceived by the Respondents	Total	%
1	Lack of Confidence	R1,R8, R10, R16, R21, R22, R23, R26, R30	9	30
2	Nervous to Speak	R4, R7, R28	3	10

No	Kinds of Problems	Perceived by the Respondents	Total	%
3	Not Used to Speak in English	R17, R25	2	6,6
4	Difficult to Express Idea in English	R5, R9, R14, R19	4	13,3
5	Afraid to Make Errors	R27	1	3,3

In linguistic factors, there are grammatical problem (3,3%) and lack vocabulary (33,3%) that become the problems of students difficulties in speaking skill. It is also supported Smith (2011) as cited Juhana (2011) states that linguistic factors such as lack of vocabulary, lack of understanding of grammatical pattern, and incorrect pronunciation also become the source of students' difficulties and reluctance to speak in English class.

Table 2. The Distribution of Difficulties in Speaking Related to Linguistic Aspects

No	Kinds of Problems	Perceived by the Respondents	Total	%
1	Grammatical Problems	R11	1	3,3
2	Lack of Vocabulary	R2, R3, R6, R12, R13, R15, R18, R19, R24, R29	10	33,3

As can be seen above, the respondents state that the students difficulties were caused by two factor: grammatical problem and lack of vocabulary. It is also supported by Juhana (2011). He claims that regarding lingustic factor, there are some problems that are faced students: lack of vocabulary, lack of understanding of grammar pattern and incorrect pronunciation. Thus, incorrect pronunciation does not become the students' difficulties in speaking skill.

2. **What are the causes of problems faced by English department students in learning speaking skill?**

The researcher found that there were eight the causes of problems that that often faced by the students in learning speaking. Of these eight the causes of problems forget what to say range first (30%), while afraid to speak is the second (23,3%) followed by no partner to practice English (10%), seldom memorizing (10%), nervous to speak (10%), confuse to use appropriate word (10%), not interesting topic (3,3%) and the last mother tongue influences (3,3%).

Table 3. The Distribution of the Causes of Difficulties in Speaking

No	The Causes of the Problems	Perceived by the Respondents	Total	%
1	Forget What to Say	R5, R9, R10, R11, R13, R26, R27, R28, R30	9	30
2	Afraid to Speak	R4, R12, R16, R17, R21, R22, R23	7	23,3
3	No Partner to Practice English	R1, R6, R15	3	10
4	Seldom Memorizing	R2, R18, R24	3	10

No	The Causes of the Problems	Perceived by the Respondents	Total	%
	Vocabulary			
5	Nervous to Speak	R7, R8, R19	3	10
6	Confuse to Use Appropriate Words	R3, R20, R29	3	10
7	Mother Tongue Influences	R25	1	3,3
8	Not Interesting Topic	R14	1	3,3

All these go with those factors of students difficulties in speaking as mentioned by Latha & Ramesh (2012). They claims that the factors are learner inhibition, lack of motivation, lack of subject matter, lack of proper vocabulary, lack of confidence, improper listening skill, poor non verbal communication, anxiety, strong and quick learners domination in the class, family background, rural background, excessive use of mother tongue, lack of proper orientation, phonology, and mother tongue pattern and its influence.

3. What are the efforts done by English department students in improving their speaking ability?

The re were five kinds of the efforts that the students often did in improving speaking skill. There are practice with classmates or other friends (53,3%), listening to English song (30%), memorize some new English vocabulary (6,6%), reading English grammar book (6,6%), and join English club (3,3%).

Table 4. The Distribution of the Efforts of the Students in Improving Speaking Skill

No	The Efforts	Perceived by the Respondents	Total	%
1	Practice with Classmates or Other Friends	R1, R2, R6, R8, R10, R12, R15, R18, R19, R21, R22, R23, R24, R26, R27, R30	16	53,3
2	Listening to the English Song	R5, R7, R9, R11, R14, R16, R17, R20, R28	9	30
3	Memorize some new English vocabulary every day	R4, R13	2	6,6
4	Reading English Grammar book	R3, R29	2	6,6
5	Join English Club	R25	1	3,3

E. DISCUSSION

There were some findings that were encountered by the researcher during and after the data collection. The first finding was that 30 respondents in this study faced several difficulties in learning speaking those were linguistic problems as grammatical problems, incorrect pronunciation and lack of vocabulary or psychological problems as: lack of confidence, nervous to speak, not used to speak in English, difficult to express idea in English, afraid to make errors, and afraid of being given impromptu task. Therefore, there are 9 difficulties that by the students in learning speaking.

The second finding is 10 causes of those speaking problems that is faced by students in learning speaking. There are forget what to say, not interesting topic, no partner to practice English, seldom memorizing vocabulary, afraid to speak, other students perform better performances in speaking class making me down, nervous to speak, lack of motivation, mother tongue influences, and confuse to use appropriate words.

Another finding was that there were 7 efforts done by students in working out their speaking skill. There are : (1) practice with classmates or other friends, (2) memorize some new English vocabulary, (3) reading English book, (4) reading English grammar book, (5) listening to English song, (6) watching English movie, and (7) join English club.

To sum up, the discussion of each data indicates that students have difficulties in learning speaking. It also shows that students do several efforts to increase or improve speaking ability.

F.   CONCLUSION

Based on the research findings and discussion, it can be concluded that the students of English Department at Teacher Training and Education Faculty at one of University in Aceh Province face several difficulties in speaking and have several efforts in overcoming those problems.

10 problems in learning speaking were found in this study. The problem mostly faced by the students are lack of confidence, nervous to speak, not used to speak in English, difficult to express idea in English, an d afraid to make errors, grammatical problems, and lack of vocabulary. All of the problems are grouped into linguistic and psychological aspects.

In order to overcome these speaking problems, the respondents have some efforts. Most of the respondent said that: practice with classmates or other friends, listening to English song, memorize some new English vocabulary, reading English grammar book, and join English club.

Based on the conclusion above, the researcher gave some suggestions. First, the lecturers of speaking should not only focus on the linguistics matters but also should pay attention to the psychological aspects which are mostly faced by the students in learning speaking. In addition, it is also necessary for the lecturers to motivate the students to express their ideas and have self-confidence to communicate in English. The second, students are the central focus in achieving the successful speaking learning. It is important for them to bring in their mind that to be good English speakers, they should practice English regularly inside or outside the class. They should overcome their fear, increase their self- confidence and motivation and learn more about the language pattern and grammar.

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TEACHER'S STRATEGIES IN TEACHING SPEAKING TO STUDENTS AT SECONDARY LEVEL

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Abstract

This study is aimed at portraying teacher's strategies in teaching speaking to students at secondary level and recognizing students' response towards the strategies by involving an English teacher and a class of 22 students. In collecting the data, classroom observation and interview were conducted to identify the strategies of teaching speaking, and questionnaire was administered to the students to gain the data about their response towards the strategies under the umbrella of descriptive research. The result revealed that the strategies used by the teacher were cooperative activities, role-play, creative tasks, and drilling. In the meantime, students' response towards the strategies resulted in positive attitude as they responded that the strategies helped them to speak, as well as concerned oral production of students whose participation was emphasized.

Keywords: *teaching strategies, the teaching of speaking, secondary level.*

A. INTRODUCTION

The teaching of speaking is having high concern in many language programs and teaching strategies cannot be denied as a factor influencing the teaching outcome. Strategies employed to achieve the ability to write and speak would be different because the goals of each skill are not the same. The former is concerned with the ability to produce written language, whereas the latter mainly focuses on producing oral language. Moreover, the strategies for teaching the English skills should be made appropriate for each skill in order to attain the expected outcomes. Regarding strategies for teaching speaking, it is ironic that, based on experience of the researcher during studying in high school, most of students of secondary school were not able to speak English. Furthermore, those who graduated from secondary school do not have sufficient ability for English speaking as the teaching of English in Indonesia is considered unsuccessful (Nur, 2004; Renandya, 2004; as cited in Cahyono and Widiati, 2011).

As Reiser and Dick (1996) argue that teachers can use different strategies of teaching to achieve teaching-learning goals and objectives. It is correspondingly asserted by Cole (2008) that it is the teacher's role to provide effective plans/strategies in accomplishing students' educational needs, whose general purpose is to communicate using the language being learnt. These imply that it is teachers' responsibility to make students speak English by employing suitable teaching strategies of speaking.

Given that teacher's strategies are important to attain the lesson objectives, which affect the teaching learning circumstances, and speaking skill is typically a sign of successful language learning (Brown and Yule, 1999), these become the focus of the study. Considering those explanations, this research is conducted to find out strategies employed in teaching speaking to students of a senior high school in Sumedang and students' responses towards the strategies.

B. LITERATURE REVIEW
1. Strategies of Teaching Speaking

A various number of speaking teaching strategies are utilized and used in the classrooms for many circumstances. Among others, the strategies of teaching speaking are cooperative activities, role-play, creative tasks, and drilling. Cooperative activities can encourage negotiation of language item (Newton and Nation, 2009). Role plays are activities where students are asked to pretend to be in various social contexts and various social roles (Harmer, 2007a; Thornbury, 2005; Solcova, 2011). Creative tasks resemble real-life tasks as Solcova (2011) asserts that students develop their fluency best, if engaged in tasks where all their concentration focuses on producing something, rather than on the language itself. Drilling, as Thornbury (2005) argues, is a strategy to improve pronunciation by imitating and repeating words, phrases, and even whole utterances. It functions to make students pay attention to the new materials and emphasize words, phrases, or utterances on students' mind, move new items from working memory to long term memory, provide means of gaining articulatory control over language (Thornbury, 2005).

In addition, designing activities for teaching speaking requires some principles to consider. Firstly, speaking activities need to maximize the production of language to provide the best conditions for autonomous language use (Brown, 2001; Thornbury, 2005). Secondly, the activities should be performed in situations where students can show interest, understanding, and ask questions or make comments, called *interactivity*, and include competitive element where students work together to achieve certain purpose (Thornbury, 2005).

Thirdly, teachers bear in mind what student needs, from language-based focus on accuracy to message-based focus on interaction, meaning, and fluency to encourage the use of authentic language in meaningful contexts (Brown, 2001). Besides, meaningful contexts for each activity is important to relate new material with what has been learned and experienced by students so that it can be stored in the long-term memory of students (Brown, 2001; Richards and Rodgers, 2002). Meanwhile, the functions of speaking including talk as transaction aims to exchange information or goods, and talk as interaction aims to maintain social relationship (Brown and Yule, 1999; Brown, 2001; Bailey, 2005; Thornbury, 2005; Richards, 2008).

2. Students at Secondary Level

Regarding the teaching of speaking to students at secondary level, teachers should bear in mind that treating students fairly, impartially, and with respect is a must for teachers

since the students need an adult in charge of the classroom (Rowley and Hart, 1998; Brown, 2001). Moreover, people's perception on them could influence their performance (Brown, 2001). As a result, any small mistake can make students embarrassed so that working in group can ease their burden on a task (Brown, 2001; Flemming and Stevens, 2004; Hammack and Grayson, 2009). Thus, feedbacks should be delivered in a way that does not obstruct students' utterances, for instance after students' performance and without pointing out to individual error (Brown, 2001; Harmer, 2007a; Bailey, 2005; Linse, 2005; Thornbury, 2005; Nation and Newton, 2009). While constant interruption to student speaking in front of class can cause the loss of speaking fluency (Harmer, 2007a; Thornbury, 2005; Nation and Newton, 2009).

C. METHODOLOGY

Having chosen qualitative study by employing descriptive research, the researcher conducted in one of state senior high schools in Sumedang, which involved an English teacher and a class of 22 tenth graders from that school. Meanwhile, the instruments were classroom observation and interview, administered to the teacher in attempt to portray speaking teaching strategies used by the teacher, as well as questionnaire administered to the students to recognize their responses towards the strategies.

D. DATA PRESENTATION AND DISCUSSIONS

Of the four observations, the following table shows the result of the observations:

Teaching Strategies of Speaking	Obs 1	Obs 2	Obs 3	Obs 4
Cooperative Activities	√	√	√	-
Role plays and Simulations	√	√	-	-
Creative Tasks	-	-	√	√
Drilling	√	√	√	√

Cooperative activities provid-ed the students with contextual and meaningful topics important to relate new material with what has been learned and experienced by students (Brown, 2001; Richard and Rodgers, 2002). It also provides students with the aid of others, meaning that students can discuss problems with their partner, as mentioned above that the use of cooperative activities can encourage negotiation of language item (Newton and Nation, 2009). Hence, the more students are exposed to language item and contextually meaningful activities emphasizing on oral production, the more they are helped to speak English.

In addition, the teacher prompted the students to participate in the activities, and students' speaking is emphasized. Moreover, an activity involving competitive element where students work together can increase language productivity (Thornbury, 2005). However, people's perception on them could influence their performance (Brown, 2001). Fortunately, the teacher could anticipate this situation by having students work in group to ease their burden on a task (Brown, 2001; Flemming and Stevens, 2004; Hammack and

Grayson, 2009), as it had the students classify the expressions, make dialogues, and rearrange steps of how to make something as teams.

It also had the students deliver their work in front of the class, discuss with other groups and at the end, get feedbacks not only from the teacher but also from other groups. As stated, appropriate feedbacks are delivered after students' performance and without pointing out to individual error (Brown, 2001; Harmer, 2007a; Bailey, 2005; Linse, 2005; Thornbury, 2005; Nation and Newton, 2009). Besides, constant interruption to student speaking in front of class can cause the loss of speaking fluency (Harmer, 2007a; Thornbury, 2005; Nation and Newton, 2009).

Meanwhile, in role play strategy, the teacher did not focus on certain students. As stated by Brown (2001) and Rowley and Hart (1998) that treating students fairly, impartially, and with respect is a must for teachers in secondary level. Furthermore, in terms of function of speaking proposed by Brown and Yule (1999), Brown (2001), Bailey (2005), Thornbury (2005), and Richards (2008), the activity used talk as interaction because it served to maintain social relationship and had purposes to be friendly and nice to interact with others.

Creative tasks as Solcova (2011) asserts that students develop their fluency best, if engaged in tasks where all their concentration focuses on producing something. Instead of thinking of language, the students focused on making the procedure of making food or drinks, so that the activity was to develop fluency. It is based on a principle that teachers bear in mind what student needs, from language-based focus on accuracy to message-based focus on interaction, meaning, and fluency (Brown, 2001).

Employing the strategy, the teacher added some expressions to make the activity look real. There were the one delivering the procedure and others listening, so that interaction between the speaker and the listeners can be built up. Moreover, according to Brown and Yule (1999), Bailey (2005), and Richards (2008), the function of speaking in this activity was talk as transaction. As argued by Thornbury (2005), speaking activity should be performed in situations where students can show interest, understanding, and ask questions or make comments.

Furthermore, the teacher intended to make the students interested in the lesson by adding the expressions and choosing the topics related to students for they will react well to the speaker. Reacting to others by showing interest in the topic of conversation can provide fluid interaction (Thornbury, 2005; Richards, 2008). Moreover, materials related to students' lives and interests can increase students' involvement in the classroom (Brown, 2001; Harmer, 2007b; Rowley and Hart, 1998; Hammack and Grayson, 2009).

The last one is drilling, simply a fine-tuning for articulation, as Thornbury (2005) argues that drilling is a strategy to improve pronunciation. Drilling yields several benefits, allowing students to pay attention to the new materials presented by teachers, emphasizing words, phrases, or utterances on students' mind, moving new items from working memory to long term memory, and providing a means of gaining articulatory control over language (Thornbury: 2005).

In the meantime, regarding the strategies used by the teacher, the overall result shows positive feedbacks on the strategies used by the teacher. It reveals that 16 students (72.72%)

agreed that the lessons help them speak English, 15 students (68.18%) agreed and six students (27.27%) strongly agreed that the activities require students to be active and to participate in the class, particularly in speaking, 15 students (68.18%) agreed that the lessons facilitate varied students visually, motorically as well as audibly, and 14 students (63.63%) agreed that the lessons make them brave to speak English.

The strategies the teacher used help and encourage students to speak English as speaking activities need to maximize the production of language to provide the best conditions for autonomous language use (Brown, 2001; Thornbury, 2005). This also implies that the strategies for speaking require students to produce the language orally. It is also supported by Brown's principle (2001) of criteria for speaking activities, which is to encourage the use of authentic language in meaningful contexts.

E.   CONCLUSIONS

The strategies of teaching speaking that the teacher used were cooperative activities, creative task, role play, and drilling. While, students' responses towards the strategies reveal positive attitude as they responded that the strategies helped them to speak, as well as concerned oral production of students whose participation was emphasized. Thus, it is suggested that teachers use strategies of teaching speaking in accordance with students' characteristics and level of proficiency, and provide materials involving students to be active by using various available media for the implementation of teaching speaking.

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WHAT DID THEY SAY ABOUT THEIR READING MATERIALS? (AN INVESTIGATION OF SIXTH GRADE STUDENTS OF ELEMENTARY SCHOOL' PROBLEMS IN READING ENGLISH DESCRIPTIVE TEXT)

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Abstract

Reading is one of language skills, but the lack of Indonesian students' proficiencies in reading; and/ or understanding the reading material this time is being public concern. The data from PISA showed that Indonesia is in 57th place out of 65 countries in terms of its reading proficiency. The failure of students in understanding the reading materials is not fully their faults, moreover that they are expected to read foreign language (English); textbook or e-book. So, it is important for them to understand the English reading materials to support their reading spirits. This study aims to investigate the problems facing by students in reading English descriptive texts and their efforts to overcome those problems. This study applies qualitative method; using observation and open- ended questionnaire as the instruments. The result of this study shows that level of difficulty of the texts is causing difficulties in reading, as well as the illustration of the texts (pictures) at some point is not clear enough. Students' reading frequency also becomes their problem. They solve the problems by making group or pair work, asking for help, looking up their dictionary, and repeating to read the text.

Keywords: reading, problems, descriptive text, english

A. INTRODUCTION

Reading literature is an excellent way for students to make progress in English language learning; it exposes them to exciting plots, interesting characters, and authentic dialogues as they learn the language in context. Reading problems can partially be caused by the fact that English is one of the most difficult languages to learn. Learning to read is arguably the most important work of students in the early elementary grades. In the early age, elementary students need guidance in learning process, so they will be accustomed to reading. "Efficient reading consists of clearly identifying the purpose in reading something" (Brown, 2007:366). When reading becomes the students' habit, it will help them much in learning process. As a foreign language, English descriptive text brings its own culture, such as the use of each preposition that does not occur in Indonesian. It is one of the causes that make students get problems in understanding descriptive text, because their current knowledge, experience, culture and even their backgrounds are different. Most teachers of English as a

Second/Foreign Language (ESL/EFL) will agree that their job is not just to teach the language, but also to teach culture (Rucynski, Jr, 2011:8).

The early age students that are accustomed to reading are precious things for the world. The important idea is the child as an active learner and thinker, constructing his or her own knowledge from working with objects or ideas. It shows that reading is a very precious thing to be taught and mastered by the early age learners. Elementary students as the basic stage need this important treatment; building their reading habit. It will make them easy in learning English as a foreign language. Cameron (2001:13) states, "Children learn a second language better than adults, and this is often used to support the early introduction of foreign language teaching". But, whole word reading systems ask students to commit big amounts of material to memory. Phonics programs ask students to become fluent in phonetic pronunciation, and still demand they memorize almost as many exception and variants as the basic set of phonics "rules". It is very different from the students' mother tongue (Bahasa Indonesia), some rules do not occur, so the students need extra work to understand and learn it while their mindset are quite difficult to be changed. These complex systems with rules and exceptions to the rules make learning to read and spell one of the most difficult tasks a child encounters.

According to PISA (2009) Indonesian students' mean score was below the OEDC average score and it puts Indonesia in 57th place out of 65 countries; Indonesia reading scale was 402 while the OEDC average was 493. It shows the reading proficiency of the Indonesia students is still low. A poor figure of Human Development Index (HDI) in South Sumatera Province is only 71.1 and places the province at the rank of 13th out of 33 provinces in Indonesia. Supporting the data above, research findings that was conducted by Diem (2011:134) shows that whole the literacy skills achievement of the fifth graders in Palembang is still in at the poor level. It is a fact that EFL literacy is still low. But, the statistic data from BPS (Badan Pusat Statistik) Republic of Indonesia (2009) for Education Indicator; school participation numbers for age 7- 12 (elementary age) in formal and informal education are increasing every year. It is 98.02 and for Percentage of illiterate citizen based on the age is decreasing for sure; age 10+ is 6.34, age 15+ is 7.09, age 15- 44 is 1.71 and age 44+ is 18.25. The data showed that people starting reading and joining education in formal or informal way. Looking at the English achievement of the Sixth grade students in final exam of the first semester, not all of them could pass the passing grade that is decided by school for English subject. Their mean score was below 6.5. Thus, the study was conducted in order to find out the causes of the Sixth grade students' problem in English that made their English scores below the school standard, especially in reading descriptive text. The objectives of this study are (1) the sixth- grade students' problems in reading descriptive texts, (2) the reasons why they have the problems in reading descriptive texts, and (3) the students' actions in solving their problems

B. LITERATURE REVIEW

1. Early Reading Proficiency

There is greater potential for learning reading skills in the early age. Children continue to build upon prior knowledge to develop grade- level academic skills and knowledge. So, students who felt behind in the early grades have a harder time catching up, making it particularly important to identify struggling students early. Musen (2010:4) states, "Low early reading scores are often addressed by improvements to human capital. Despite gaps in school readiness, strong teaching practices can significantly improve students' academic skills". Elementary school teachers, who understood how different children learn to read, could teach varied strategies for developing reading skills. The statement above shows that teacher is one of the core factors that would influence the students' ability in reading.

Johnson et al (2009:1) have formulated some students' needs in learn to read. Children generally require the following to learn to read well. They are (1) strong receptive and expressive language, (2) well- developed phonological and print awareness, (3) knowledge of letter- sound relationships (decoding), (4) large vocabularies, (5) an ability to comprehend what they read, and (6) the ability to read naturally and effortlessly (fluency).

2. Teaching Young Learners

Children had a less complicated view of the world than older people or adults, but this fact does not imply that teaching children is simple. Children are often more enthusiastic and lively as learners. Cameron (2001:19) conducts some key learning principles in teaching language to young learners. They are (a) children actively try to construct meaning, (b) children need space for language growth, (c) language in use carries cues to meaning that may not be notices, (d) development can be seen as internalizing from social interaction, and (e) children's foreign language learning depends on what they experience.

3. The Concept of Problem

Problem comes to everybody in their daily life. Problem is the teacher of this life, without problem people do not know their weakness. By having problem, people are being custom to have critical thinking in order to find the problem solving. According to Hornby (2000:1049), "Problem is a thing that is difficult to deal with or to understand. Problem is (a) a question raised for inquiry, consideration, or solution, (b) a proposition in mathematics or physics stating something to be done, (c) an intricate unsettled question, (d) a source of perplexity, distress, or vexation, (e) difficulty in understanding or accepting". This study looked for what kinds of problems that causing the Sixth grade students of elementary school got failed in achieve the passing grade for English subject.

4. The Concept of Reading

Reading is vital to daily life. People even read announcements in every place, in their milk box, television, and every sign at the street. Reading is a mental process. Reading is the instruction recognition of various written symbols with existing knowledge, and comprehension of information and ideas communicated. People believe that reading is

process to learn something new from the text such as new vocabularies and understanding the context of the whole reading passage. It can be said that reading is decoding written symbols and reconstructing the world of the writer had in mind", (Satria, 2006:24). It is difficult to do, and the readers always understand both more and less the writer intended, even their native language.

5. Descriptive Text

Descriptive text is one of the types of texts. "A descriptive text is a text which lists the characteristics of something", (Ahmad, 2009:1). Descriptive writing or text is usually also used to help writer develop an aspect of their work, for example to create a particular mood, atmosphere or describe a place so that the reader can create vivid pictures of characters, places, objects and soon. As a feature, description is a style of writing which can be useful for other variety of purposes as (1) to engage a reader's attention, (2) to create characters, (3) to set a mood or create an atmosphere, and (4) to being writing to life.

According to Kane (2000:352), description is about sensory experience—how something looks, sounds, tastes. Mostly it is about visual experience, but description also deals with other kinds of perception. There are two generic structures in writing descriptive text. They are identification and description itself. So, a descriptive text describes the thing that is identified before

C. METHODOLOGY

In this study, the writer used the descriptive method that popularly called as qualitative research, a type of educational research in which the researcher relies on the views of participants (Creswell, 2005:39).

1. The Procedure of the Study

In this study employed the questionnaire as the instrument to the students in order to gain their opinions to answers the research questions.

2. The Population of the Study

The population of this study consists of all the Sixth grade students of Elementary school in academic year 2011/ 2012. The total population of this study was 59 students.

3. Sample

The writer took all of the population to be her sample of this study. It is called *total sampling*. Arikunto (2002:108) explains that it is chosen because of the number of writer's population is under 100 people. It is also chosen in order to reduce the mistake maximally of this study (Sugiyono, 2009:68).

4. The Procedure of the Study

The writer asked for the respondents' opinions on what problems they faced in reading descriptive text, the reason why they have those problems and their action to solve those problems, by using questionnaire that were formulated in Bahasa Indonesia.

5. Validity of the Questionnaire

Validity refers to the extent to which an instrument gives the information that is needed. Validity also is the most important idea to consider when preparing or selecting an instrument to use. Validity has been defined to include appropriateness, meaningfulness and usefulness. In order to measure whether each item in questionnaire were valid, the writer asks for the expert's judgment.

6. Techniques for Analyzing the Data

The data of this study are analyzed descriptively. The writer does this study in order to explore the students' responds based on the questions given. So, to analyze the data, the writer presents the results of questionnaire that will answer research questions that are proposed by her. Based on the responses that are gained, the writer gives some codes to interpret her findings. Some supporting data from questionnaire also will be analyzed by using percentage formula.

D. FINDINGS
1. The Findings of the Study

The findings of the study involve the results of the students' questionnaire. The questions in the questionnaire are divided into three parts. The question number 1, 2, 3, 5, 6, and 7 are the supporting questions that will be a consideration used by the writer to complete the interpretation of the findings.

Table 1. Students' Responses to The Supporting Questions

Students' Responses to The Supporting Questions	Responses (Percentage)	
	Yes	No
1. Do you like learning English?	79.27%	23.72%
2. Do you want to be smart in English?	98.30%	1.69%
3. Do you think English is difficult?	55.93%	44.06%
5. Are you happy when you study about descriptive text with pictures?	94.91%	5.08%
6. Does the picture in the descriptive text help you when you read it?	96.61%	3.38%
7. Do you get problems when you read the descriptive text that is given to you?	40.67%	59.32%

In item number 1, 79.27% students respond that they like English and 23.72% of them do not like English. Item 2, 98.30% students want to be smart in English and only 1.69% students said no. in item number 3, 55.93% students think that English is difficult to be learnt

and almost close to that number, 44.06% students keep in positive thinking that English is not difficult. In relation to the title that is chosen by the writer, in item number 5: students that are feeling happy when reading the descriptive texts are 94.91% and 5.08% students are not. For item number 6, the students respond to the picture that is following the descriptive text they read and 96.61% students said that the picture is helpful, while 3.38% of them said it is not. Item number 7 is asking for the students' responses whether they have problems in reading descriptive text with picture. It is quite equal; 40.67% students of the Sixth grade at Elementary school got problems in reading the descriptive text with picture, but 59.32% of them said it is not a big deal and they did not get any problems.

The writer also asked for the students' opinion of what kind of teaching- learning English way that they probably like in order to get advice for the teacher in the next teaching-learning process. She formulated it into the question number 4:

Table 2. Students' response to the additional questions

Students' Responses to the Additional Question	Code Responses
4. How do you like to learn English?	☐☐With nice teacher ☐☐Question- answer section ☐☐Colorful pictures

Based on the information gained from the students by asking the question number 4, students love to study with a nice teacher who gives them question- answer section in the meeting with the colorful pictures as the material.

In order to answer the research questions of this study, the writer had formulated the descriptions of question number 8, 9, and 10 in the questionnaire. It will be explored in the table below:

Table 3. Students' Responses to The Main Questions

No	Research Questions	Questions	Code Responses
1	What are the Sixth grade students' problems in reading descriptive texts at Elementary school?	*What are the problems that you find when you read that descriptive text with picture?*	☐ Vocabularies ☐ unclear picture
2	Why do the Sixth grade students have problems in reading descriptive texts at Elementary school?	*Why do you get those problems like in the question number 8 above?*	☐ difficult words ☐ seldom practice ☐ grammar
3	What do the Sixth grade students do to solve their problems in reading descriptive texts at Elementary school?	*How do you overcome those problems when you read that descriptive text with picture?*	☐ group/ pair work ☐ asking friends/ teacher ☐ looking up dictionary ☐ reread the text

By using question number 8, the writer codes some problems that are faced by the Sixth grade students of Elementary school in reading descriptive text with picture. They are (1) lack of vocabularies, and (2) misunderstanding the text due to the unclear pictures. Looking at the students' responses of the causes that make them got in to problems, the writer codes: (1) lacking of practice time, (2) having difficulties in getting the meaning of the words, and (3) getting difficulties in text structure. These students state to solve their problems by (1) making group/ pair work, (2) asking friends/ teacher, (3) looking up dictionary, and (4) repeating read the whole text.

In short, the students' common problems when they read the descriptive text with picture were because of they had limited English vocabularies, unfamiliar with the English vocabularies, and could not connect the picture and the text so they misunderstood the text meaning. The reasons why they got those problems are commonly because they were lacking of the time to learn English, so they got stuck in understanding the text. It was also caused by unfamiliar structure of the text so they got confused when read it. But they had their own problems' solutions. Most of them loved asking their friends or teacher to overcome the problems they had. They also wrote that they loved making group work and opened up the dictionary.

E. DISCUSSION

Looking at the information that was obtained from the students; responses that is explained in the distribution table for supporting questions, the writer interprets those findings into a conclusion that problems in reading the descriptive texts with picture that were faced by the students do not mean that they did not like English. They had some problems but they still had self- motivation to master English and they also had their own idea to make English learning process easier based on their opinion. Cameron (2001:4) states that children (young learner) are active 'sense- maker', but that their sense- making is limited by their experience, a key to understand how they respond to tasks and activities in the language classroom. However, it is very helpful for the English teacher in creating and managing the English class especially in teaching reading. Some students' ideas that were concluded in question number 4 that have answered research question number 3, are good considerations for the teacher before began the class; preparing the interesting materials that are suitable to the students' ages: colorful and many pictures. The way teacher behaves really influence the class atmosphere and the transfer system to the students The students claimed that they got problems in reading descriptive texts with picture as they described in their answers of question number 8 that have answered research question number 1. Their problems are vocabularies and unclear pictures. The students described the causes of their problems, too. The reasons were (1) lack of vocabularies, and (2) difficult grammatical form (they said that it is confusing), and (4) time limitation in studying English. Due to this condition the students were not accustomed to English word and their mindset were still in the box of Indonesia culture. It is also supported by Halliwell (2000:4): In the early stages of their mother tongue development children excel at making a little language go a long way. They are creative with grammatical forms. They are also creative with concept. The other factor that makes students'

got difficulties, because they had lack of background knowledge. According to Soebottom (2012:1), another difficulty arises in cases where the necessary background knowledge is missing. Unless the student has a basic understanding of statistics, for example, there is little point him/her looking up the unknown words in the following passage since the definitions are unlikely to further comprehension. It means that, actually the students have chances to master English but as we know that English is not our first language, so the students do have problems in some sectors and get stuck because of the differences from their mother tongue. That is why, this study explored the Sixth grade students' problems in reading descriptive text with picture in order to know their problems and the teacher can help them out of those problems

F. CONCLUSION AND SUGGESTION

1. Conclusions

Based on the interpretations of findings in the previous chapter and referring to the problems of this study, three conclusions can be drawn as follows: first, the students' problems in reading descriptive text with picture are (1) the students had lack of English vocabularies in their mind, and (2) the students got confused because of the unclear picture. So, they misunderstood the idea of the text. Second, the causes of the problems they had are (1) difficult words, the students had lack of the vocabulary so they could not understand what the text is about, (2) the students seldom practice or the time for studying English is not enough, and (3) the students do not master the English structure itself, so they feel strange to the composition of the English text. Third, the students did the following things to solve the problems they faced in reading the descriptive text with picture: (1) the students made group or pair work with their friends, so they could share each other, (2) the students ask for their friends' helps or to the teacher, (3) the students tried to solve the problems by looking up their dictionary, and (4) some students tried to understand the text and able to pronounce the words by repeating to read the text

2. Suggestions

Based on the interpretation of the findings, the writer would like to suggest to (a) the school, (b) the English teacher (c) the students, and (d) the further studies. First, the school should provide the suitable material for the elementary grade; consider the content and the interesting face of the material. The colorful handbooks are the best one for elementary students, it is not boring. Second, the English teacher not only should create the nice class atmosphere, so that the students can enjoy the learning process but also be nice to the students. The teacher also should provide additional material in order to support the handbooks from school, so varieties of media will help them much. The variety of teaching technique is also one of factor that could succeed learning process; give the students extra time to ask and give special time as the question- answer section in every meeting with creative way. Third, the students should be more active in learning process and practice a lot; do more exercises. Fourth, the writer hopes that this study will be useful for further studies.

Other researchers could conduct some continuation studies by using the data that was gained by the writer

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A CULTURAL CONTENT ANALYSIS OF AN ENGLISH TEXTBOOK IN INDONESIA

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Abstract

English textbook is considered as a mediator for teaching and learning. Meanwhile some English textbooks may ignore the cultural contents. On the other hand, Indonesian government expects students to have cultural diversity awareness. Students are expected to be able to expose their own culture as well as international culture knowledge in English (*Permendiknas No. 22 Th. 2006*). Considering the issue above, this study was conducted to identify the proportion of cultural contents and the cultural elements presented in an English textbook. It was a descriptive study with a qualitative and quantitative analysis. A quantitative analysis was aimed to discover the proportion of cultural contents and a quantitative analysis was for identifying the cultural elements presented in the textbook. This study involved an English textbook published in 2007 by Erlangga for eleventh grade. *In order to* obtain the data, document analysis was administered. The data analysis was based on a theory of Cortazzi and Jin (1999). This study found that the textbook lacked of cultural content in which the proportion of texts which did not contain any cultures content was the greatest one. The textbook tended to focus on *the mastery of text organization*. Meanwhile the cultural elements discovered in the textbook could be identified based on the characters names, places, situation, and materials or things environment. Since this study involved a textbook published by a private publisher, *for further research,* a study concerning with culture contents involving English textbooks published by Indonesian Government (BSE) can be conducted.

A. INTRODUCTION

1. Background

A textbook is used as a means of providing teaching and learning materials. In relation to language teaching, a textbook can be used to represent the culture of languages. Unfortunately some English textbooks may not consider the culture elements. On the other hand textbook is one of teaching resources used by teachers. Moreover textbooks should be based on the existing curriculum. It should be able to fit the curriculum demands. Regarding to KTSP, Permendiknas No. 22 Tahun 2006 mentions that curriculum is developed by considering students' background diversity, including culture, ethnics, economic social status, and gender. In addition curriculum is expected to be able to fulfill the local and national needs. A study conducted by Noerkhasanah (2010) finds that some English textbooks used by

teachers lack of local culture (Indonesian culture). Similar to Noerkhasanah, Siddiqie (2011) discovers that the proportion of local cultural content in an English textbook is considered deficient. He finds that international culture is greater than local culture. Menawhile Kirkgoz & Agcam, (2011) suggest that local culture and international culture should be balanced. Thus as a teaching guide a textbook should be able to facilitate students to acknowledge their own culture as well as other countries' cultures.

Hardy (2004) believes that source culture (learners' own culture) should be included in English textbooks since English as international language can be a mediator for learners to expose their own culture to the others. Moreover Sándorová (2014) claims that textbooks can be a media for connecting the source and target culture. Therefore English textbook is expected to be able to ease learners to convey their culture information in English. Considering those issues, this study is aimed to discover the prportion of culture contents and the cultural elements in an English textbook.

2. Research Questions

What proportion is cultural contents presented in the textbook?
What culture elements are presented in the textbook?

3. Significance of the Study

English texbook should be facilitate learners to learn cultures, both local and international cultures. Thus this study hopefully can encourage textbook publisher to gain the proportion of culture contens. Furthermore teachers as the users of the textbook can be selective in choosing English textbook to ease learners expose their local culture as well as other cultures in English.

B. LITERATUR REVIEW
1. Related Theories
a. Textbook in language teaching

Textbook is helpful for teachers in teaching. It can be their teaching materials resource. Lebrun, et al (2000) believes that textbooks take a role in providing materials, teaching strategies, and lesson plan. Moreover, textbook materials can help teachers lead their students to be enthusiastically involved in learning activities (Harmer, 2007). In terms of its efficiency, textbooks help teachers save their time of doing teaching preparation (Charalambous, 2011). In other words, teachers should not search for teaching materials from other resources since textbooks have provided what teachers need in teaching.

b. Culture in English Textbook

Textbook as a teaching and learning guide can help students and teachers to expose the knowledge, not only the language aspect but also the culture which is integrated with the language. Byram (1989) believes that a language can be used to represent a group's cultural identity involving their traditional dress, house and social institution in order to distinguish from the other groups. Moreover a textbook can lead students to learn about English-speaking

cultures (Hinkel, 1999). In line with Hinkel, Sándorová (2014) claims that textbooks can be a media for connecting the source and target culture. Thus by learning a language using textbook, students can learn the culture of the language that they learn. In addition, Kirkgoz & Agcam (2011) suggest that textbooks should contain balanced culture contents.

c. Cultural Elements in Textbooks

Cortazzi and Jin (Hinkel, 1999) assume that a textbook should contain three main cultural content. They are source culture, target culture, and international target culture. Source culture refers to the culture of the learners', target culture deals with the culture of countries with English as their first language, and international target culture represents culture of other countries where English is considered as an international language. Moreover Siddiqie (2011) mentions that the culture in the textbook can be identified from the topics, images, characters, incidents, and places used by the textbook.

d. Genres in Eleventh Grade

According content standard in Permendiknas No. 22 Th. 2006, there are several genres which should be mastered by students of grade eleven. Those are Report, Narrative, Analytical Exposition, Spoof, and Hortatory Exposition.
1) Report
According to Professional Development Service for Teachers (2013) report is a descriptive text which explains classification of things, such as animals and plants.
2) Narrative
Narrative is a text which tells about a story with the purpose of entertaining the readers, such as fable, legend, fairy tales, etc. (Professional Development Service for Teachers, 2013).
3) Analytical Exposition
The purpose of analytical exposition is "to persuade the readers or the listeners that something in the case is worth doing or not doing" (Suherdi, 2013:75).

4) Spoof
Spoof is a text which is aimed to "tell an event with a humorous twist" (Suherdi, 2013:79).
5) Hortatory Exposition
Similar to analytical exposition, hortatory exposition text is used to "persuade the reader or listener that something should or not be the case.
This study focus on the reading passages provided by the textbook in relation to those genres are presented in each unit. As stated by Zu (2009), written text is the main mediator to deliver culture features since they can describe numerous incidents which occurs in target culture as well as source culture.

2. Related Previous Researches

Cultural content in the textbook is an issue which attracted several previous researchers to conduct a study related to cultural analysis. A study conducted by Kirkgoz & Agcam (2011) found that Turkish EFL textbooks includes 47,13% target culture, 13,35% refers to source culture, and the international target language 21,52%. Siddiqie (2011), in his Bangladesh textbook analysis, finds that 26% of the textbooks contain local culture, 22% involves international culture, 36% belongs to local and international culture, while 16% of the textbook conten does not represent any cultures. Meanwhile Cortazzi and Jin (Hinkel, 1999), Venezuelan textbooks mostly represent national heroes, local cities and places. He identifies those cultures based on the existing of characters, incidents, places, story, and literature in the textbook. In addition, Ilieva (2000:50) concludes that "in the selected texts culture is constructed as a national attribute consisting of sets of stable values and behavior patterns, a construction that ignores the conflicts and fluidity ofcultural forms that characterize human encounters." Those previouse studies indicate that the proportion of culture contents is considered insufficient.

3. Concluding Remark

Based on the related theories and research above, it can be conclude that cultural content in the textbook is needed in order to ease students to acknowledge their own cultures as well as international cutures. Those three cultural content recommended to be presented in the textbooks are source culture (students' culture), target culture (English countries' culture), and international target culture (other countries' cultures). Those culture contents can be reflected on the characters' names, places, social situation, and material environtment.

C. RESEARCH METHODOLOGY

1. Research Design

This study is descriptive design which deals with a quantitative and qualitative analysis. The proportion of culture content is analyzed quantitatively while the culture elements presented in the textbook is carried out qualitatively.

2. Data Collection

This study was conducted in order to find out the cultural elements presented in an Indonesian textbook, entitled Look Ahead published by Erlangga covering grade eleven. The textbook was published in 2007 based on school based curriculum (KTSP 2006). The textbook was selected since it was one of teaching references used by several teachers besides a textbook published by Indonesian government.

Cultural analysis was administered by examining the cultural representation focused on the reading passages of each unit based on a theory of Cortazzi and Jin (1999) and Rissager (1999). Thus all the reading passages of the textbook were analyzed. A coding scheme was created by categorizing cultural contents: source culture, target culture, international target culture, and neutral.

Table 1. Culture Contents Categories (Cortazzi and Jin, 1999)

No.	Unit	Genre	Total Number of Texts	Total Number of Culture Contents				Culture Elements
				Source Culture	Target Culture	International Target Cultures	Neutral	

Since English subject at grade eleven is emphasized on the mastery of genres, the analysis of this study focuses on reading texts. Moreover reading text is considered as a media that can reflect cultures.

3. Data Analysis

This research was carried out to identify the presence of culture content and the culture elements presented in the textbook. A document analysis was administered. In order to check the proportion of cultural content, a quantitative analysis was used. The total number of reading texts in each unit was calculated and three cultural contents (Indonesian culture, target culture, international target culture, and neutral) in each text were identified in order to find the percentages of each cultural content. In other words, the percentages reflected the portion of each cultural content. Those categories were based on a theory of Cortazzi and Jin (Hinkel, 1999). Meanwhile those texts which did not belong to any culture were considered as neutral. The next step was categorizing those cultural contents and compiling them.

A qualitative analysis was administered with the purpose of identifying the culture elements. As well as quantitative analysis, the qualitative analysis used a framework of Cortazzi & Jin and Rissager.

The culture elements were identified based on the characters' names, places, situation, and topics. Afterward those culture elements were classified into source culture (Indonesian culture), target culture, international target culture, and neutral. The next step was identifying those culture contents of reading texts of each unit. The finding was discussed qualitatively based on the relevant theories.

D. RESEARCH FINDING AND DISCUSSION

1. The proportion of culture contents in the English textbook

With the aim of identifying the portion of the local, target, and international target culture, the texts of *Look Ahead* book was categorized as presented in the following table.

Table 2. Proportion of Culture Contents in the English Textbook

No.	Categories	Frequency	Percentage (%)
1.	Source culture	9	30
2.	Target culture	6	20
3.	International target culture	1	3
4.	Neutral	14	47
Total		**30**	**100**

The table above shows that reading texts without culture reference or neutral is the biggest portion (47%). The culture elements in those texts could not identified since those texts did not present the characters' names and places. In this textbook source culture (Indonesian culture) was identified 30% which is greater than target culture (20%). Meanwhile the international target culture was only found in one text. It was a narrative text which took place in a city called Kampung Sepang in Malaysia. The characters' names were identified as Malaysian people, Jabri and Halil. Thus this textbook lacks of international target culture. It did not let students acknowledge other countries' culture. It can be concluded that the textbook lack of cultural elements. Most of the reading texts did not reflect any cultures. According classification of Rissager (Sándorová, 2014), the texts were classified as texts based on the author views and stories. On the other hand, a textbook should be able to lead students to learn about English-speaking cultures (Hinkel, 1999). Meanwhile Hardy (2004) believes that source culture (learners' own culture) should be included in English textbooks since English as international language can be a mediator for learners to expose their own culture to the others. In line with Hinkel, Sándorová (2014) claims that textbooks can be a media for connecting the source and target culture. Therefore the cultural contents of textbooks should be balanced to help learners expose their culture knowledege in English.

2. Cultural Elements

According to the table of cultural elements (see Appendix), in the unit 1 which discussed report text, characters' name (Bridget), places (Queensland, Australia) and materials environment (Kiwi, an Australian animal) belong to target culture. Since this unit focuses on report text which is defined as a descriptive text that explains classification of things, such as animals and plants (Professional Development Service for Teachers, 2013), three topics (solar system, mosquitoes, tornados) were found neutral in which they did not include cultural elements. There were three texts in unit 2 discovered covering target culture derived from characters' names: Rosie, Sherlock Holmes, Dr. Watson, Miss Morstan, Theodore Sholto, and place: 221 Baker Street, London. In this narrative text, the authors tended to put three texts lacking of cultural elements: Story of Hawk and Chicks, story of mosquitoes, Story of The Moon and The Sun since those are classified as fable (Professional Development Service for Teachers, 2013 and the other text was covering international target culture in which the text raised Malaysian culture that can be recognized from the characters' names (Jabri and Halil) and the place (Kampung Sepang, Malaysia). Thus, the cultural contents could not be identified. Functional text in unit 3 is analytical exposition. It is a text aimed "to persuade the readers or the listeners that something in the case is worth doing or not doing" (Suherdi, 2013:75). Two texts were neutral covering topics: Being Fat Matters, the importance of English language. Meanwhile one text was found using source culture elements: name (virni Aprilia) and places (Semarang, Jakarta). Unit 4 is narrative part 2 in which the authors decided to raise Indonesian folk tales: Timun Mas, Bunga Batu with characters' names (Putri, Pinkan, Galuh Chandra Kirana, Dewi Tisnawati, Tumenggung Arungbinang, Timun Mas, Buto, Yolanda, ahmad puji) and places (Kahuripan Kingdom, Wanakerta, Central Java, Jakarta). However they also put some stories which could not be

classified in to those three culture categories. Those stories were Story of the lion and the mouse, the stronger man, a farmer and his three sons, the wretch and the mouse. Spoof text was discovered in unit 5. Spoof is a text which is aimed to "tell an event with a humorous twist" (Suherdi, 2013:79). In this unit the authors only concluded three reading texts. Two texts was identified deal with target culture (stories of disc jockey and American body language) and the other belonged to neutral (a story of a new baby). Unit 6 as the last unit consists of four Hortatory Exposition texts. Three texts included source culture based on their topics (Corruption in Indonesia, AFI (Akademi Fantasi Indosiar), places (Tanjung Priok, Jakarta), and name (Masarani S. W.). In the meantime one text recognized belong to neutral since it included a short story about a professor's article without mentioning the character's names or places.

In conclusion, culture elements found in the textbook were identified based on the characters names, places, situation, and materials or things environment. Neutral category was found in the texts which included general topics, such as in report and exposition texts which focused on language features mastery. Rissager (Sándorová, 2014) classifies them as texts with broad social facts about contemporary society. International target culture was only found in unit 2 which told about a story of two Malaysian boys. Cortazzi (Hinkel, 1999) states that international target culture deals with cultures of other countries where English is considered as an international language. However the table shows that the textbook lacks of culture elements.

D. CONCLUSION AND RECOMMENDATION

This study indicated that proportion of cultural contents in English textbook is insufficient. The authors tended to raise general topic which did not include any cultural contents. They focused on the mastery of text structure and language features. Meanwhile the cultural elements found in the textbook were identified based on the characters names, places, situation, and materials or things environment. Thus this textbook may not helpfully ease learners to acknowledge cultures and expose their knowledge about their own culture in English.

Since this study involved a textbook published by a private publisher, it is recommended for further research, a study concerning with culture contents involving English textbooks published by Indonesian Government (BSE).

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AN ANALYSIS OF READING DIFFICULTY AND VOCABULARY LEVELS OF HIGH SCHOOLS' ENGLISH READING TEXTS

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Abstract

This study attempts to analyze English reading texts for third grade senior high school level. Three texts were randomly selected from each four different sources of reading texts: government textbook, imported textbook, UN and SBMPTN. This study investigates the readability and vocabulary levels of the reading texts. The study employs the Flesch Reading Ease, Flesch Kincaid Grade Level, Coh-Metrix and BNC-20 vocabulary level. The study concludes that in the reading difficulty levels of the English reading texts are quite similar except for the UN texts which have a low readabiliry index. Results also show that in terms of vocabulary level to accomplish 80% comprehension, all the text books lay in the same level which is K2 level but UN. It is also shown that the government books, SBMPTN and UN cover the same average number of AWL (Academic Word List).

Keywords: readability, vocabulary level, UN, SBMPTN, textbook, reading text.

A. INTRODUCTION

Mastering reading skill for senior high school students in Indonesia has somehow become one of the most difficult challenges. The lack of vocabulary and the lack of practice are the main source of problem. Apparently, the government is also aware about this problem. Therefore, the government has released the national curriculum standard of reading text used in every school in Indonesia in order to maintain the relevance with educational setting of Indonesia.

Some schools in Bandung use Imported books for their English textbooks while referring to the national curriculum as their standard. Thus, it is assumed that there are different standard in the vocabulary and readability levels of reading texts in high school. Moreover, National Exam and SBMPTN English texts also pose similar problem. Thus, there is a need to analyze whether those texts are relevant to each other in terms of readability and vocabulary level. This study particularly investigates the English reading texts of one imported textbook in comparison with government standard textbook, UN and SBMPTN texts.

B. LITTERATURE REVIEW
1. Readability

Readability is often associated with legibility, while in fact, they refer to two different things. Readability means 'what makes some texts easier to read than others' whereas legibility is related to 'typeface and layout' (DuBay, 2004). Regarding readability, McLaughlin (1968) defines it as 'the degree to which a given class of people find certain reading matter compelling and comprehensible.' Edgar Dale and Jeane Chall (1949 in Kondru, 2006) define readability as 'the sum total (including all the interactions) of all those elements within a given piece of printed material that affect the success a group of readers have with it. The success is the extent to which they understand it, read it at an optimal speed, and find it interesting.' The readability level of a text is affected by sentence length, new word counts and 'grammatical complexity' (Richards, et al., 1992 in Zamanian & Heydari, 2012).

a. Flesch's Reading Ease Formula

Readability can be measured analytically using readability formula. A good readability formula is developed through comprehensive research with relevant results to expert judgments, comprehension test and the Cloze Procedure (Kondru, 2006). There are currently over 40 readability formulas available, but the most commonly used and reliable is Flesch's Reading Ease formula by Rudolph Flesch (Heydari & Riazi, 2012; Chall, 1958, Klare, 1963 in DuBay, 2004). Flesch Reading Ease uses the following equation:

$$\text{Score} = 206.835 - (1.015 \times \text{ASL}) - (84.6 \times \text{ASW})$$

Where ASL is Average Sentence Length (the number of words in the text divided by the number of sentences in the text) and ASW is Average Syllables per word (the number of Syllables in the text divided by the number of words in the text). Flesch Reading Ease scores range from 0 (very difficult) to 100 (very easy).The following is the interpretation of the Flesch Reading Ease Score.

Table 1: Flesch Reading Ease score Interpretation

Reading Ease Score	Description	Predicted Reading Grade	Estimated Percentage of U.S Adults
0-30	Very difficult	College graduate	4.5%
30-40	difficult	13th – 16th grade	33%
50-60	fairly difficult	10th – 12th grade	54%
60-70	standard	9th – 8th grade	83%
70-80	fairly easy	7th grade	88%
80-90	easy	6th grade	91%
90-100	very easy	5th grade	93%

b. The Flesch Kincaid Grade Level formula

The Flesch Kincaid Grade Level formula calculates the reading difficulty of the text based on U.S school grade level using the same formula in the Flesch Reading Ease score.

$$\text{Flesch Kincaid Grade Level} = (0.39 \times \text{ASL}) + (11.8 \times \text{ASW}) - 15.59$$

c. Coh-Metrix

Coh-Metrix is a computational tool developed by University of Memphis, that 'analyzes texts on over 50 types of cohesion relations and over 200 measures of language, text and readability (Graesser, McNamara, Louwerse & Cai, 2004). Crossley, Greenfield &

McNamara (2008) asserts that Coh-Metrix is 'an improved means of measuring English text readability for L2 readers' that analyzes not only the surface of a text, but also deeper levels of text processing.

2. Word Counts and Vocabulary Level of Text

Words in a text can be counted based on several units: tokens, types, lemmas, and families. Tokens or running words are the number of words calculated by counting every single word in a text. Types refer to the number of words without counting the same words twice. Lemmas are counted based on headwords and their inflected and reduced forms under the same parts of speech. Families are the number of headwords and their inflected forms, including the derived forms (Nation, 2001).

According to Nation (2001) there are four vocabulary categories in a text: high-frequency words, academic words, technical words and low frequency words. High-frequency words are 2,000 word families of the General Service List of English Words by Michael West (1953). Academic words are words coming from different kinds of academic texts. Technical words refer to words related to the subject area of the text. Low frequency words are 'words that we rarely meet in our use of the language (Nation, 2001).

In order for a text to be comprehensible, the current convention puts the threshold of 95% of running words in a text (Nation, 2001; Chujo & Utiyama, 2005; Chujo & Genung, 2005).

3. Previous Research

Browne (1996) studied the readability level of Japanese EFL reading texts using Flesch Reading Ease, Flesch Kincaid Grade, Coleman-Liau Grade and Bormuth grade. Results showed that college reading texts published by Japanese publishing companies vary greatly, with most texts far above the reading ability of most Japanese college students.

Aziez (2011) designed a corpus of junior high school and senior high school English National Examination from 2007 until 2010. He examined the vocabulary levels of the texts based on the K1-K20 vocabulary levels and Coxhead's Academic Words List. Results indicated that senior high school national exam texts contained more AWL than junior high school texts.

Chujo and Genung (2005) investigated the measure the vocabulary levels of TOEIC tests by applying BNC and junior and senior high school textbook vocabulary. They also extracted the words and created a word list as a supplementary vocabulary for learners.

4. Research Question

The research questions are formulated as follows:
a. What are the reading difficulty levels of English reading texts published by the Government (UN, SBMPTN and BSNP books) and foreign publishers (Opportunities)?
b. What are their vocabulary levels and if 2,000 English word families are required to accomplish 80% comprehension of a text, how many new words in each text should students learn to get the 95% comprehension?

c. What percentage of the words in each text does Coxhead's (2000) Academic Word List cover?

C. METHODOLOGY

1. Materials

There were four sources of texts selected in this study, namely Opportunities which is used in some high schools, an English textbook published by the government entitled Developing English Competencies, 2013 National Exam (UN) and 2013 University Entrance Exam (SBMPTN). Altogether, four text sources were included in the study.

2. Instruments

The instruments used in this study were:

a. Readability statistics of Microsoft Word 2007

The readability statistics consists of: (1) word, character, paragraph, and sentence counts; (2) sentences per paragraph, words per sentence, and characters per word averages; (3) readability indexes of passive sentence, Flesch Reading Ease, and Flesch-Kincaid Grade Level.

b. Coh-Metrix 3.0

Coh-Metrix is a computer tool developed by Graesser, McNamara, Louwerse and Cai (2004). It determines text cohesion based on a cohesion matrix of five elements (local and global, vocabulary- and grammar-driven, referential, locational, temporal, causal, and structural). Coh-Metrix 3.0 can be accessed via the internet (http://cohmetrix.memphis.edu/).

c. VocabProfilers Program

There are two sub-programs utilized in this study: (a) VP English v.3 – a Laufer and Nation's classic four-way (GSL1/GSL2/AWL/OFFLIST) word sorter, and (b) BNC-20 – 20 1000-word bands of British National Corpus (K1-K20). VocabProfilers Program is available at http://www.lextutor. ca/vp/

3. Procedures

Three reading texts were randomly chosen from each source, which makes 12 texts in total. Each text was typed into Microsoft Word 2007. The texts were then analyzed for readability using the readability statistics feature available in the program. In addition, text cohesion scores were calculated by Coh-Metrix 3.0 and text vocabulary levels were examined using VocabProfilers program. In analyzing the vocabulary levels, words containing proper nouns, numerals, interjections, alphabetical symbols, units and abbreviations were excluded from the texts (Aziez, 2011).

D. FINDINGS

Table 1 shows the readability statistics of the third year high school English reading texts in average. In terms of word, paragraph and sentence counts, reading texts from the imported book outnumbered government book, UN and SBMPTN reading texts. Meanwhile, the least number of word, paragraph, and sentence count is obtained by SBMPTN texts.

Compared to imported book, texts from government books are not significantly different at around 200-word difference.

As for the average number of sentence per paragraph, word per sentence and character per word, there was no significant difference among all texts. If compared with government book, the average was more or less similar. However, the highest level for average words per sentences is attained by SBMPTN reading texts.

In relation to the use of passive sentence in the texts, Opportunities used the least and SBMPTN used the most, while the others ranged from 16% to 22%. According to Flesch Reading Ease, the score of each text source varied greatly from standard to difficult; with government books scoring nearest to UN with the lowest level of reading ease. Regarding Grade level, Opportunities was categorized as Grade 9, the same as government textbook. On the other hand, SBMPTN texts were listed as Grade 11, while surprisingly UN texts were the lowest. The cohesion level of the texts ranged between 7 to 13. Similar results were seen in government book and Opportunities texts. Unexpectedly, UN scored noticeably low in text cohesion.
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Table 1.
Readability Statistics of Third Year High School English Reading Texts (Averages)

	Opportunities	Govt. Book	SBMPTN	UN
Counts				
Words	661.67	444.00	198.33	222.00
Paragraphs	8.00	5.67	2.00	4.67
Sentences	38.33	26.00	10.33	16.00
Averages				
Sentences per paragraphs	5.83	4.63	5.17	3.57
Words per sentences	17.13	17.00	19.37	10.63
Characters per word	4.77	4.73	4.97	4.67
Readability				
Passive sentences	13%	16%	26%	22%
Flesch Reading Ease	54.20	58.03	46.50	62.83
Flesch-Kincaid Grade Level	9.90	9.10	11.53	7.87
Coh-Metrix L2 Readability	13.09	12.53	7.18	13.90

Based on the analysis of BNC-20 in percentage in Table 2, the 95% threshold of Opportunities, Government books, SBMPTN, and UN texts lay in K6, K6, K10 and K5 respectively. This means that SBMPTN had the highest vocabulary band. Nevertheless, when compared to Opportunities and government book's 95% threshold in K6 band, UN texts were below them.

As for the 80 % comprehension threshold, all texts lay in K2 words frequency level except for UN text which has the 80 % threshold at K1 words frequency level.

Table 2 BNC-20 Results in Percentage

Freq. Level	Opportunities	Govt. Book	SBMPTN	UN
K1 Words	72.47%	69.40%	75.55%	81.85%
K2 Words	85.52%	81.29%	84.86%	89.30%
K3 Words	88.65%	89.34%	89.37%	91.99%
K4 Words	91.08%	91.65%	91.23%	94.73%
K5 Words	94.34%	92.89%	91.85%	95.89%
K6 Words	95.87%	95.25%	92.80%	97.78%
K7 Words	96.72%	95.77%	94.50%	98.07%
K8 Words	97.62%	96.25%	94.91%	98.57%
K9 Words	98.49%	96.25%	94.91%	98.84%
K10 Words	99.00%	96.61%	95.05%	99.22%

Regarding the number of Academic Word List (AWL) of the texts, as we can see from Table 4, Government books, SBMPTN and UN texts approximately cover the same number of AWL. In contrast to those, Opportunities texts hold a very high number and percentage of AWL tokens.

Table 4 AWL Coverage

AWL	Opportunities	Govt. Book	SBMPTN	UN
okens	28	14	11	12
Percentage	4.38%	3.18%	5.46%	5.60%

E. DISCUSSION

From the results, it can be inferred that texts from imported book has more or less the same quality with government book's reading texts. In spite of the similar qualities, UN texts are lower in quality compared to both texts. The reason behind this might be that UN is designed as the passing grade for high school students. Moreover, a quite significant disparity can be seen between SBMPTN texts and other texts. The question is how can high school students successfully understand SBMPTN texts when they are not used to that level of readability and vocabulary? It seems that there is no collaborative agreement in arranging material for senior high school and SBMPTN.

There is also the dilemma lying behind the result. Is it the high level of government book and SBMPTN that cause the problem or the low level of UN? It seems to be the homework for the government who arrange the curriculum for content standard. In this case, the government should make clear guidelines. so that, there will be a balance between the effort and result, between the texts that students learn in the learning process and the texts they face during the test.

F. CONCLUSION

Based on the findings, there are three points which can be concluded. First, the difference in the reading difficulty levels of English reading texts published by the Government (UN, SBMPTN and BSNP books) and foreign publishers (Opportunities) are not quite significant. Yet, the quality of UN texts which is the lowest among others raises a serious question to the government. Second, in terms of vocabulary level to accomplish 80% comprehension, all the text books lay in the same level which is K2 level but UN. It also shows that UN has the lowest expectation than others. Third, regarding the number of Academic Word List (AWL) of the texts, the government books, SBMPTN and UN cover the same average number of AWL. Surprisingly, the Imported book has the highest number of AWL. It can be concluded also that the government should state the guideline for the schools to enrich the academic vocabularies in school texts

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Appendix

Reading Texts Used

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THE IMPLEMENTATION OF THE ENGLISH CURRICULUM 2013
AS PERCEIVED BY TEACHERS AT A VOCATIONAL SCHOOL

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Abstract

There is a consensus that the newly launched Curriculum 2013 yields vary of perceptions from teachers; some even find difficulties dealing with applying this curriculum in their teaching. Therefore, this study is intended to portray the teachers' perception of the implementation of English Curriculum 2013 and the problems in implementing the curriculum at a vocational school. Employing a qualitative research design through interviews and classroom observation in collecting the data, this study revealed that the teachers perceive that the English Curriculum 2013 is difficult to be implemented in a vocational school. The limited time allocated for English subject is not enough for the scientific approach emphasized in the curriculum, also the unavailability of books makes it difficult for teachers to teach. To conclude, teachers see that the Curriculum 2013 is not effective to be implemented for English subject compared to the previous curriculum.

Keywords: *Teachers' perception, English Curriculum 2013*

A. INTRODUCTION

The keep changing needs of society yields changes on curriculum as well. Through eras, the development of science and technology grows very fast that it demands everyone to adapt themselves to it. Education is one of many ways to get students and teachers adapted to this demand. Curriculum keeps on changing to meet the changing needs of society, including the curriculum on language teaching. Brown (1995) asserts that the field of language teaching has undergone profound changes through the decades. The changes include the approaches, the methods and the materials. Innovative and creative methods and materials are developed in every curriculum design concerning about the current issues happening in society. Seel and Djikstra (2004) as cited in Erden (2010) convince that those students who use the innovative materials will later remember how the instruction helped their understanding and learning. Due to the importance of those innovative and creative changes in language teaching, countries started to go on curriculum reforms, covering from the early childhood education until the higher education level. Indonesia, as well, went on the curriculum change in every level of education system. The latest curriculum launched by the government is the Curriculum 2013. Reformation in every component of the curriculum were established, from

the content until evaluation. Theoretically, all these newly reformed components in the Curriculum 2013 which were designed carefully with many considerations from the curriculum designers for the better results of education in Indonesia, are surely useful. However, in the implementation, not all of the teachers appraise this new curriculum better than the previous ones. Some teachers even find difficulties dealing with applying this curriculum in their teaching. Therefore, in this study, the teachers' perception of the implementation of English Curriculum 2013 and the problems faced by the teachers in implementing the curriculum at vocational school is going to be investigated.

Marks *et al.* (1978: 457) define the curriculum as "… *the sum total of the means by which the student is guided in attaining the intellectual and moral discipline requisite to the role of an intelligent citizen in a free society ...*". They also contend that it is not merely a course of study, nor does it only list goals or objectives, but encompasses all the learning experiences which learners have under the guidance of the school. Referring to the National Research Council (1996), Loucks-Horsley *et al*. (1998: 65) describe the curriculum as the way the content is designed and delivered, including the structure, organization, balance and presentation of the content in the classroom. The definition of curriculum in Indonesia is not far different from the two previously mentioned definitions. Pradipto (2007: 210) clarifies the curriculum as formulated in Surat Keputusan Menteri Pendidikan dan Kebudayaan No. 060/U/1993, 25 February 2003, as "… *seperangkat rencana dan pengaturan mengenai isi dan bahan serta cara yang digunakan, sebagai pedoman dalam penyelenggaraan kegiatan belajar-mengajar di sekolah.*"

As the needs of society keeps on changing, so does the history of curriculum in Indonesia. Since the independence day of Indonesia in 1945 until now, there have been at least nine curriculums applied as noted in Pradipto (2007: 210-211) and Idi (2011). During the period of *Orde Lama*, three curriculums were launched, which were labelled the Curriculum 1947, the Curriculum 1952 and the Curriculum 1964. In the *Orde Baru* regime, four curriculums provided guidance for the education in Indonesia, i.e. the Curriculum 1968, the Curriculum 1975, the CBSA (*Cara Belajar Siswa Aktif*) Curriculum launched in 1984 which was the revision of the previous curriculum, and the Curriculum 1994. Now, in the *Era Reformasi*, the first curriculum established was in 2004 named the KBK (*Kurikulum Berbasis Kompetensi*) Curriculum (see Pradipto, 2007: 210-211). In 2006, with the approaches of the KBK Curriculum, the KTSP (*Kurikulum Tingkat Satuan Pendidikan*) Curriculum was designed and has being used until now (see Idi, 2011: 41-46). Without ceasing the using of the KTSP, the latest curriculum that is now also being applied in some schools is the Curriculum 2013. The implementation of the Curriculum 2013 is under the surveillance of the government since it has not been officially launched as the prevailing curriculum to replace the KTSP. It is now being implemented to be tested before the government decide whether it can take the place of KTSP or not.

Research on teachers' perception of the implementation of curriculums has been a concern to many educators and education practitioners both in EFL and ESL contexts. A research was conducted by Gyamtsho (2009). The research aimed at investigating teachers' perception of the new English Curriculum in Bhutan at that time, how the curriculum was

implemented and how the learners responded to it. The research revealed that the content of the curriculum is very much relevant and suiting to the adolescence ingenuity. However, the new curriculum observed was not without limitations. Some negative points were found in the curriculum, such as the non-existence of exercises of some topics which makes the students unmotivated enough to take the lesson seriously, and the scope of very little grammar to be taught in classes. In addition, intended to find out the challenges in implementing English curriculum at primary level in rural schools of Bangladesh, Salahuddin (2013) conducted another study. The study indicated that most of the rural school students were poor in English due to lack of skilled teacher, proper teacher training, using proper teaching methods and materials, physical facilities and so on. As a result, English curriculum implementation at primary level in Bangladesh had become unsuccessful.

Learning from the theories and related research above, it is obvious that even though many considerations and revisions inserted in the design of every new curriculum, there may still be possibilities that difficulties and dilemmas might happen in the implementation. In order to reach the goals expected by the government of the Curriculum 2013, it is worth conducting to find out how the teachers perceive the curriculum and what difficulties faced by the teachers in implementing the curriculum. Regarding to the consensus that research on this field at senior high schools are excessive compared to vocational schools which are rarely exposed, hence, this study is conducted to portray the teachers' perception of the implementation of the English Curriculum 2013 and the problems faced by the teachers in implementing it at a vocational school.

1. **Research Question**

    In order to cover the purpose of the study, research questions are formulated as follows:
    1. What is teachers' perception of the implementation of the English Curriculum 2013 at vocational school?
    2. What are the problems faced by the teacher in implementing the English Curriculum 2013 at vocational school?

2. **The Scope of the Study**

    To avoid misunderstandings and to clarify the problem it is important to set some limitations of the study. The study is limited to portray the English teachers' perception of the implementation of the newly launched English Curriculum 2013 and the problems faced by the teachers in implementing it at one of the vocational schools in Cimahi.

3. **Significance of the Study**

    It is worth conducting that this study provides significance for teachers, the government, curriculum developers, and other researchers. For teachers, it gives the information about the implementation of the English Curriculum 2013 that it might inspire them to do better in their teaching by solving or may be by avoiding the difficulties that other teachers face. Meanwhile, the government and curriculum developers can make the use of this study as an encouragement to design a better and more effective English curriculum by considering the teachers' perception of the prevailing curriculum. In the meantime, for other researchers or anybody who is interested in this field, this study may

contain ideas or references that need to be developed and lead to other research on related topics.

B. REVIEW OF THE LITERATURE

1. Perception

Dictionaries define perception as the way a person see or understand something. Fludd (1996) writes that perception is the process of attaining awareness of understanding of sensory information, which is derived from the Latin word '*perceptio*' meaning 'receiving, collecting, and action of taking possession apprehension with the mind or senses'. When people are faced with a phenomenon, they will try to apprehend that phenomenon with their way of thinking and sensing. In line with that, another definition of perception is formulated by Rakhmat (1998) as certain experience toward the object or the result of thinking which come from the conclusion toward information or make the meaning of message. It leads us to a point that people conclude a phenomenon based on what they have experienced with the phenomenon itself, neglecting what other people think about it. Meanwhile, Michaels (2000: 244) in Smeets and Brenner (2001) defines perception as "the detection of information" which forces one to conclude that it is impossible to study action separately from perception. From the definition above, it can be derived that people will act according to what they believe, or in other words, their actions are based on their perception of something.

2. Curriculum Development

Curriculum refers to a very broad field of inquiry that deals with what happens in school and other education institutions, the planning of instruction, and the study of how curriculum plans are implemented (Richards, 2001: 39). Rodgers (1986: 26) in Richards (2001: 39) further commented that curriculum is all those activities in which children engage under the auspices of the school, including not only what pupils learn, but how they learn it, how teachers help them learn, using what supporting materials, styles and methods of assessment, and in what kinds of facilities. Generally, curriculum can be defined as a set of educational materials and teaching given to the students based on the goals that have been set up to be achieved (Idi, 2011: 206). According to Permendikbud No. 69 year 2013, curriculum is defined as a set of plan and system dealing with purpose, content, and materials as well as the method as a guidline in conducting instruction to reach certain education goals. Referring to those definitions, it can be concluded that curriculum is a planned program set up to achieve certain educational goals.

Curriculum development involves several components . Brown (1995: 20-23) mentions the process of developing curriculum includes six process, initialed with conducting the needs analysis, determining the objectives, developing the tests based on the goals and objectives, developing the materials, teaching the language materials before then evaluating the program.

According to Richards (2001: 2), curriculum development focuses on determining what knowledge, skills, and values students learn in schools, what experiences should be provided to bring about intended learning outcomes, and how teaching and learning in schools

or educational systems can be planned, measured and evaluated. To clarify, Richards (2001: 2) adds that language curriculum development refers to the field of applied linguistics that addresses these issues which describes an interrelated set of processes that focuses on designing, revising, implementing, and evaluating language programs.

In Indonesian context, Idi (2011: 208) states that curriculum development basically is the development of the curriculum's components which forms the system of the curriculum, i.e. the goals, materials, methods, learners, teachers, media, society, learning sources, etc. Those components of curriculum need to be developed in order to reach the goals of education as expected.

3. English Curriculum 2013

The development of Curriculum 2013 was the sequence of the development of Competency Based Curriculum launched in 2004 and KTSP 2006 which included the competencies of attitude, knowledge and integrated skills (Kemendikbud RI, Desain Kurikulum 2013-2014). Curriculum 2013 itself has not been officially launched as the only curriculum used in education in Indonesia, meanwhile it is being tested to see the effectiveness of the curriculum to replace the prevailing KTSP. As it was named, Curriculum 2013 was released and started to be used in 2013.

The basic changes in Curriculum 2013 was affirmed with the Permendikbud replacing the Permendiknas related to the standard competencies, standard content, standard process and standard evaluation. Scientific approach is the basis of teaching-learning activities in Curriculum 2013. Besides, reduction happened in the time allocated for the English subject. In KTSP, English was taught in 4 credit hours a week for vocational school, while in Curriculum 2013, it became only 2 credit hours per week. In the practice, below are the changes expected to occur in English classes.

Table 1. Perubahan pada Mata Pelajaran Bahasa Inggris

No.	Implementasi Kurikulum Lama	Implementasi Kurikulum Baru
1.	Materi yang diajarkan ditekankan pada Bahasa/ struktur Bahasa.	Materi yang diajarkanditekankan pada kompetensi berbahasa sebagai alat komunikasi untuk menyampaikan gagasan dan pengetahuan.
2.	Siswa tidak dibiasakan membaca dan memahami makna teks yang disajikan.	Siswa dibiasakan membaca dan memahami makna teks serta meringkas dan menyajikan ulang dengan bahasa sendiri.
3.	Siswa tidak dibiasakan menyusun teks yang sistematis, logis dan efektif.	Siswa dibiasakan menyusun teks yang sistematis, logis dan efektif melalui latihan-latihan penyusunan teks.
4.	Siswa tidak dikenalkan tentang aturan-aturan teks yang sesuai dengan kebutuhan.	Siswa dikenalkan dengan aturan-aturan teks yang sesuai sehingga tidak rancu dalam proses penyusunan teks (sesuai dengan situasi dan kondisi: siapa, apa, di mana)
5.	Kurang menekankan pada pentingnya ekspresi dan spontanitas dalam berbahasa.	Siswa dibiasakan untuk dapat mengekspresikan dirinya dan pengetahuannya dengan Bahasa yang meyakinkan secara spontan.

(Taken from Syahmadi (2013))

Generally, the compulsory English competence for vocational school is the communication competence in three contexts, which are interpersonal, transactional, and functional. Below are the compulsory competencies and materials in vocational school.

Kompetensi	Ruang Lingkup Materi
• Menunjukkan perilaku yang berterima dalam lingkungan personal, sosial, budaya, akademik, dan profesi. • Mengidentifikasikan fungsi social, struktur teks dan unsur kebahasaan dari teks pendek dan sederhana, dalam kehidupan dan kegiatan siswa sehari-hari. • Berkomunikasi dalam wacana interpersonal, transaksional, dan fungsional tentang diri sendiri, keluarga, serta orang, binatang, benda, konkrit dan imajinatif, yang terdekat dengan kehidupan dan kegiatan siswa sehari-hari di rumah, sekolah dan masyarakat. • Menangkap makna dan menyusun teks lisan dan tulis, pendek dan sederhana dengan menggunakan struktur teks secara urut dan runtut serta unsur kebahasaan secara akurat, berterima dan lancar.	• Teks-teks pendek dan sederhana dalam wacana interpersonal, transaksional, fungsional khusus, dan fungsional berbentuk deskriptif, recount, narrative, procedure, dan factual report pada tataran literasi fungsional. • Penguasaan setiap jenis teks mencakup tiga aspek, yaitu fungsi social, struktur teks, dan unsur kebahasaan, yang keduanya ditentukan dan dipilih sesuai tujuan dan konteks komunikasinya. • Sikap mencakup menghargai dan menghayati perliaku jujur, disiplin, tanggungjawab, peduli (toleransi, gotong royong, santun dan percaya diri). • Keterampilan mencakup mendengarkan, berbicara, membaca, menulis, dan menonton, secara efektif dengan lingkungan social dan alam dalam jangkauan pergaulan dan keberadaannya. • Unsur-unsur kebahasaan mencakup penanda wacana, kosa kata, tata bahasa, ucapan, tekanan kata, intonasi, ejaan, tanda baca, dan kerapian menulis tangan. • Modalitas dengan batasan makna yang jelas.

(Taken from Syahmadi (2013: 28-29))

In term of assessing the students, the learning assessment is conducted by considering some methods and instruments either in formal or non-formal form to collect some information needed. Assessment can be conducted during teaching learning process which is called assessment of process, and is conducted after teaching learning process which is called assessment of product (Permendikbud 81A Tahun 2013).

In the implementation of Curriculum 2013, the process of assessment is conducted by considering some principles, approaches and characteristics which are stated in Permendikbud No. 81A Tahun 2013, that assessment needs to be reliable, objective, equality, integrated and comprehensive, systematic, criteria-based, accountable, educative. The characteristics of the

assessments are mastery learning, authentic, continuous, criteria-based, uses various assessment techniques.

4. Related Research Reports

Researches on curriculum implementation have been conducted in many countries. Those researches have yielded findings that are beneficial for teaching and learning activities, especially in achieving the goals of the curriculum being applied. They focus on the investigation of how the teachers perceive the curriculum implementation, and what problems and difficulties faced by teachers during the implementation of the curriculum. For instance, Gyamtsho (2009) conducted a research on the new English Curriculum implementation in Bhutan. This research focus on three research objectives which encompassed the teachers' view on the curriculum, the students' response, and the limitations of the curriculum. Through observations, survey and interviews with the students and the English teachers, it was found that the English Curriculum had many positive characteristics. In general, the curriculum provided more avenues for learners to widen their creativity and proclivity. It also provided various experiences of learning in different genres, which therefore made the researcher believed that the curriculum was an answer to diverse skills and language abilities that the students possessed. Further, it also presented a very good scope of using inter-textual methods especially while teaching poetry and essays. Since the curriculum in fact presented rich contents in which so many ways and methods are applicable, it is believed that teachers are ever ready to handle the curriculum from various angle. However, the students' responses were not very encouraging. Out of 107 students surveyed, 6 students said that the curriculum had more weaknesses such as unfriendly texts, difficult to comprehend the texts, vast topics to cover, and not exam oriented (Essay and Poetry). Only 42 of them were of the opinion that the curriculum contained more strengths such as different ideas and views, useful information based on real life experiences, easy to understand and more options to choose. And despite all those positive characteristics, the new curriculum did possess but they do not overpower its strengths. The limitations were viewed as opportunities for dwelling upon to bring out further more effective curriculum.

Another related research was done by Salahuddin (2013) exploring some challenges of implementing English curriculum at primary level in rural areas of Bangladesh. Higher teacher-student ratio, lack of effective teacher training, lack of quality teacher, unavailability of language skills learning tools were the most problematic factors toward implementing English curriculum effectively in rural areas. Recruiting high qualified and subject specialist teacher, providing adequate training for their professional development, increasing their salary level so that they could respect their own job and proving sufficient materials for language learning skills could be the solutions to overcome the thwarts of English language learning. Therefore, it was expected that the authority would concern to solve those problems.

C. METHODS

1. Research Design

This study used qualitative method since all the data collected were analyzed descriptively under descriptive study. Lambert and Lambert (2012) state that in qualitative descriptive method data collection also may include observations, and examination of records, reports, photographs, and documents. The data of this study were collected through observations and interviews to portray the teachers' perception of the implementation of English Curriculum 2013 at a vocational school and the problems the teachers face, and then were analyzed descriptively as it was solely to describe the situations as it was.

2. Data Collection

a. Sample/object/respondents, Population, or Subjects

The objects in this study was two of the English teachers teaching English to grade X in a vocational school in Cimahi using the English Curriculum 2013. These teachers were involved in the administration of an interview and classroom observations.

b. Instrumentations and Materials

Instruments used in this research are semi-structured interviews and field note which was obtained through an observation of the objects. The interviews and observation were undertaken to investigate how the teachers perceive the English Curriculum 2013 and what problems they face in the implementation. Semi-structured interview consisting of eight questions was administered, and the observations were done with the aid of field note to record how the teaching-learning activities using the English Curriculum 2013 was going on.

c. Procedure

The data collection was conducted on 2^{nd} May 2014. Some steps were carried out when the research site had been chosen and permission to get access to it were obtained. Before collecting the data the first thing to do was preparing the instruments. Hatch (2002) indicates that Wolcott (1995) suggests that researchers keep in mind what their research is aimed at:

> 'Try to assess what you are doing (that is, your participation), what you are observing, and what you are recording, in terms of the kind of information you will need to report rather than the kind of information you feel you ought to gather'. (Wolcott, 1995, as cited in Hatch 2002: 81)

Learning from the statement, in order to get the answer of the research question, preparations of the instruments needed to be carefully considered before collecting the data. Two kinds of techniques were employed; interview and observation. Before going to the field, interview guidelines and observation sheet were designed. In the field, the teacher was interviewed before the teaching learning activity started. Since the interviews were in the form of semi-structured interview, some follow-up questions were asked to the teachers to solicit further information. After the interviews, classroom observations were done. The observations were going on process without interfering the nature of the class situation. Notes

were taken during the teaching-learning process focusing on how the English Curriculum 2013 was being implemented in it.

d. Data Analysis

The data of this research were analyzed descriptively since it takes the qualitative research design. The data was taken from the observation (field notes) and interview.

Having collected the data, several steps were undertaken to analyze the data gained. The steps undertaken for data analysis are categorized into two main parts, which are analyzing field note taken from the classroom observations, and analyzing the interview data from the teachers. The first step to do before analyzing the data was to transcribe the data collected from classroom observations (field note and classroom interaction), and from interviews administered to the teachers. The data from classroom observations and interviews are intended to identify and describe the teachers' perception of the implementation of the English Curriculum 2103 and the problems the teachers face in the implementation of the curriculum.

To analyze the data, the three subprocesses in the interactive model proposed by Denzin and Lincoln (1998) was adapted, including data reduction, data display, and conclusion drawing/verification.

D. FINDINGS AND DISCUSSION
1. Teachers' Perception of the Implementation of English Curriculum 2013 at a Vocational School

This sub-section is aimed to answer the first research question about how teachers perceive the implementation of English Curriculum 2013. Emilia (2011: 3) states that a teacher's perception of a curriculum or the teaching approach serving as the basis of a curriculum is expected to end up with the teacher's flexibility in achieving the goals considering the students' ability. Regarding to this, teachers' understandings about a curriculum would determine the success of the curriculum implementation. Below is the explanation of how teachers perceive the English Curriculum 2013.

From the interviews conducted with the two teachers, it was revealed that the teachers envision the English Curriculum 2013 is difficult to implement. Before starting to apply the curriculum, the teachers had not got any training regarding to the implementation of English Curriculum 2013. This made the teachers have no clear idea of how to teach English to achieve the goals of the curriculum. Teacher training is crucial for English teachers to have in order to enrich the teachers' knowledge about the curriculum and to ease the teachers to achieve the goals of the curriculum itself.

Besides, the teachers are of the opinion that the scientific approach is not suitable to be applied for teaching English. The teachers stated that the reduction of the English subject in vocational school has brought certain difficulties for them to teach the materials to the students. In scientific approach, there are five steps to do in the teaching-learning activities, i.e. observing, questioning, associating, experimenting, and networking. In observing, time matters since it needs quite much time to observe a phenomenon. Moreover, observing is not

the only thing to do in the classroom; there are still four the other steps following. While English subject has now been only 2 credit hours per week, then it is considered inappropriate and ineffective to apply in English teaching-learning.

However, the teachers added, if the five steps were optional, then it would be more effective to apply only experimenting and networking activities to English teaching-learning activities. In experimenting, students can practice their English in the class freely because that is actually the essence of English learning: practice, while networking allows the students to exchange information with their teacher and other students and even to access information from other sources. But overall, the teachers perceive that the English Curriculum 2013 is not effective in the implementation compared to the previous curriculum.

2. Problems Faced by the Teachers in Implementing English Curriculum 2013 at a Vocational School

Kasihani (2000) and Sujana (2000) in Emilia (2011: 2) mention that the expected significant changes in the classroom following the curriculum change is difficult to happen in if the teachers' understandings about the basic concept of the curriculum has not developed. This initially might be the basic problem of the implementation of English Curriculum 2013 at vocational school since the teachers were not helped by the government to develop their understandings by providing them the teacher trainings. Hence, this sub-section is going to answer the second research question on what problems the teachers face in implementing English Curriculum 2013 at vocational school.

In the interviews, the teachers commented that their greatest difficulty in the teaching-learning is to find the materials to be taught to the students based on what is expected in Curriculum 2013. Since the government has not provided any English books for the school to be used, so the teachers need to find or even create the materials by themselves. The curriculum notes the materials to be taught to the high school and vocational students in general, while actually the vocational students' needs are different from the high school students'. This difficulty was shown in the classroom observation conducted by the researcher. In the classroom, before starting to teach the materials, the teacher give the materials to one of the students to go out to have the materials copied and then to distribute them to other students in the class. The teacher admitted that it is time-wasting but still needed to be done since it is impossible for the students to study without any handout (despite the fact that actually the teacher could have prepared the materials copied before entering the class).

Another difficulty follows is the way teachers assess the students. There are two kinds of assessment given to the students, labelled the affective assessment and the cognitive assessment. In the previous curriculum, the scores emanating from the two kinds of assessment could be concluded into one scoring, whereas in Curriculum 2013 the scoring have to be given separately. In the teachers' opinion, this kind of scoring is complicating them for a class may contain of more than 35 students and it is not so simple to assess them in person with the two kinds of assessment.

E. CONCLUSION AND RECOMMENDATION

To sum up, the teachers perceive the implementation of English Curriculum 2013 at a vocational school is not effective compared to the previous curriculum. The unavailability of the teacher training regarding to how the English Curriculum 2013 needs to be implemented appears to be the basic problem of the difficulties perceived by the teachers. The reduction of time allocated from 4 credit hours to 2 credit hours for English subject matters a lot in the completion of material teaching in practice. Besides, the inexistence of books promised by the government brings another difficulty for the teachers to teach the students since the materials needed by the vocational school students are different from the materials needed by the high school students. In addition, according to the teachers, the scientific approach emphasized in Curriculum 2013 is considered ineffective to be applied for English subject regarding to the time needed compared to the time available.

Based upon the findings of the research, some suggestions are expected to be useful for English teachers, the government, curriculum developers and further researches are as follows:

1. It is important for the teachers to really understand the basic concept and the approach of a curriculum before implementing it in the teaching-learning activities.
2. Regarding to the point above, it is suggested to the government to provide the teacher training on the new curriculum about to launch to the teachers in order to create a more effective teaching-learning situation and to achieve all the goals set up in the new curriculum. Materials need to be provided as well before launching the curriculum to be implemented at schools.
3. In designing the curriculum, the curriculum developers need to very carefully considering the time allocated for a subject with the materials to be taught and the steps or method to be taken in teaching the materials.
4. It can be useful to make other attempts to investigate the teachers' perception on other curriculums or to compare the implementation of two curriculum existing in the same school. Moreover, other studies may focus on solutions to offer in solving the problems faced by teachers in the implementation of a curriculum.

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THE EFFECT OF MULTIMEDIA GLOSSES IN VOCABULARY LEARNING

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Abstract

This paper discusses the importance of vocabulary in language learning, the problems students encounter in learning vocabulary and the use of multimedia glosses in vocabulary learning. Vocabulary acquisition is an essential part of language learning because it is one of the main components of language proficiency which determines how well learners read, speak, listen, and write. As students move from one level to the next, the language used in language learning becomes increasingly complex. A limited vocabulary size often hinders learners from mastering the four language skills.: listening, reading, writing, and speaking. In addition, vocabulary learning and word retention are always the problems encountered by students. By providing vocabulary glosses students may understand new words in a specific context more effectively. Glosses are considered as helpful and valuable tools which are helpful for facilitating vocabulary learning. Multimedia glossing is the easiest way for understanding the meanings of unfamiliar words since they are easier to use than dictionaries and able to draw learners' attention to targeted words which help learners to connect words to meanings immediately.

Keywords: vocabulary learning, multimedia glosses

A. INTRODUCTION

Vocabulary is central to English language teaching because without sufficient vocabulary, students are unable to understand others or express their own ideas. According to Richards and Renandya (2002), vocabulary is the key component of language proficiency which provides the basis for how well learners speak, listen, read, and write. The ability to master more vocabulary words make a learner an effective speaker, good listener, reader and writer. On the other hand, lack of vocabulary significantly affects these four language skills.

Vocabulary learning is an indispensable process for language learners to acquire proficiency and competence in the target language. It is the major issue in learning English Language because it comprises the basic building blocks of English sentences. Without words that express a wider range of meanings, communication in L2 could not happen in any meaningful way (McCarthy, 1992).

In order to develop the advanced literacy levels required for success in school and beyond, it it important to improve students' vocabulary (Graves & Watts-Taffe, 2008). The importance of vocabulary has also been recognized in language pedagogy all the times. Berne

& Blachowicz (2008) claimed that vocabulary is an area where teachers are asking for guidance on instructional approaches, strategies and materials.

A number of researchers have suggested some ways to promote vocabulary gains in vocabulary learning: the use of dictionary, guessing from context, glosses, and others. Providing vocabulary glosses may be an effective way to help students to understand new words in a specific context (Akın & Seferoğlu, 2004). There are several reasons to use glosses in aiding vocabulary learning. It helps students to understand new words more accurately, considering the fact that deriving meaning from context is difficult and risky in some aspects (Stein 1993).

According to Bowles (2004), glosses have been used to promote comprehension of the text and vocabulary learning. Glosses do not interrupt the reading process since the definition is available in the text. Besides, with frequent input, looking at the words in the glosses and in the context, it helps to retain the meaning in the memory longer (Watanabe, 1997). Students prefer to have glosses in their second language reading materials (Jacob & Dufon, 1990).

Effective materials can meet the wants and needs of learners of different backgrounds in different settings (Tomlinson, 1998). To develop efficient multimedia materials, some features that can facilitate language learning should be integrated into materials. These may include multimedia presentation formats and learners' target language proficiency. Mayer (2001) suggests that learners are able to create a deeper understanding of words when they establish connections between words and pictures than from words or pictures alone. From a pedagogical view point, multimedia can be used as a visual aid to illustrate meaning, and give organization to the material being taught.

B.   IMPORTANCE OF VOCABULARY IN LANGUAGE LEARNING

Many researchers such as Knight (1994) and Laufer and Shumueli (1997) consider vocabulary learning as an important aspect of language learning. Other researcher such as Ghabanchi and Anbarestani (2008) accept the importance of vocabulary learning in language proficiency and academic achievement. However, their ideas about how vocabulary is learned vary widely. They argue that one of the main concerns in vocabulary learning is the need to develop efficient and effective pedagogical methods for teaching L2 vocabulary. They believe that traditional pedagogical methods such as word-lists, dictionary use, workbooks, teacher-materials, and marginal glosses embedded in language textbooks are ineffectual for teaching L2 vocabulary. L2 learners are aware that the limitations in their vocabulary knowledge hinder their capability to communicate efficiently (Read, 2004). Zhang and Li (2011) argue that L2 vocabulary learning is a fundamental task in second language acquisition and proficiency of L2 skills builds on lexical.

In a recent study, Schmitt, Jiang, and Grabe (2011) claimed that 98 percent of words ought to be known for L2 learners to comprehend academic texts. Studies on L2 vocabulary learning have been carried out from different perspectives, including incidental and intentional vocabulary learning, effects of lexical support, learning words in authentic and communicative tasks with a focus on form, multiple exposures, and the use of technology in

L2 vocabulary learning (Laufer, 2009). L2 vocabulary learning can be enhanced by glosses, additional vocabulary exercises, modified texts, and strategy training (Chodkiewicz, 2001).

Vocabulary is an important element in language and it is a necessary component for improving competency in all areas of communication (Godwin-Jones, 2010). Rubin and Thompson (1994), found that vocabulary learning is the heart of mastering a foreign language, since one unable to speak, understand, read, or write a foreign language without knowing a lot of words. Similarly, Schmitt and McCarthy (1997) pointed out that vocabulary learning has been considered as one of the most important components in a second or foreign language acquisition. In language learning, vocabulary takes place in building the language proficiency. Students are able to have good language proficiency in the language skill depending on the quality and quantity of the vocabulary that they have mastered.

Learners who have limited vocabulary knowledge have difficulties to develop advanced levels of reading, listening, writing and speaking skills in the target language. Granowsky (2002) shows the importance of vocabulary knowledge in students' reading comprehension and in their school success. He also stated that by having limited vocabulary knowledge, students are not able to express and communicate well. Macaro (2003) also emphasized the vital role of vocabulary teaching and learning of vocabulary in ESL and EFL contexts. It is challenging for learners who have limited vocabulary in the second language because it prevents them from comprehending a text. This challenge has to be faced since vocabulary acquisition is part of language learning.

Nation P. (1994) stated that when an individual working memory is not burdened with uncertainty about the accurate spelling, pronunciation and contextual use of the words, one can concentrate fully on higher level aspects of language such as using precise sentence structures and appropriate expressions for the type of conversation that is going on.

Vocabulary knowledge contributes to young children's phonological awareness, which in turn contributes to their word recognition (Goswami 2001, Nagy 2005). It is an essential component for successful communication in the second language classroom. Vocabulary is the core component of all language skills, the more vocabulary the learners get to know, the better their language competence is. In order to help learners master as much vocabulary as possible, educators should use different teaching techniques.

C. CHALLENGES IN LEARNING VOCABULARY

Vocabulary is essential for expressing meaning and in using the receptive (listening and reading) and the productive (speaking and writing) skills. Unfortunately, mastering vocabulary is not an easy task for students, especially for students in Malaysia where English is learned as a second language because English is not used in daily communication. So, it is more challenging to master English vocabulary. As a result, students' vocabulary acquisition is still low.

Many studies have been carried out in order to increase competence in vocabulary learning (Akın & Seferoğlu, 2004; Erten & Tekin, 2008). In spite of numerous studies in vocabulary learning, learners show insufficient effort to deal with their problems about newly learned words and teachers tend to have an attitude to make students deal with this problem

outside the class on their own (Baykal & Daventry, 2000). However, learners have inadequate knowledge about the vocabulary learning techniques and they are struggling in dealing with this problem themselves (Akın & Seferoğlu, 2004).

Vocabulary expansion begins at the intermediate level, however the learners' vocabulary resources are found to be inadequate at this level. The delay in vocabulary acquisition often imposes a handicap on ESL learners' language development (Hajar Abdul Rahman & Abdul Ghani, 1996). Admittedly, lack of vocabulary knowledge will affect the four language skills: listening, reading, writing, and speaking. In addition, vocabulary learning and word retention are always the problems encountered by students. Meara (1980) reported that language learners admitted that they experienced significant difficulty with vocabulary even at advanced levels. Studies on written works of Malaysian ESL learners have shown that their writings are full of errors. Vahdatinejad (2008) discovered that Malaysian students committed errors in tenses, word choice and prepositions. According to James (1988) errors in writing such as tenses, prepositions and weak vocabulary are the most frequent type of mistakes that are committed by learners.

In addition, students have the tendency to forget newly learned words quickly. Long-term retention has received wide attention as one of the greatest problems in learning new words (e.g. Leeke & Shaw, 2000; Yoshii & Flaitz, 2002). The inability to recall known words is experienced not only in the production of spoken or written discourse, but also in comprehension. According to Crothers & Suppes (1967) there is a limit to the number of words that can be learned at one time. It is easier to forget a word than remember it. Initial word knowledge is very fragile and memories of new words that are not met again soon, are lost.

It is very difficult to guess the meaning of any new words unless learners are familiar with a large number of words on the page. Due to this reason, learners should use the newly acquired L2 words on a regular basis while learning to guess the meaning of words from their contexts and their derivation. Nation (2001) emphasizes that learning vocabulary must be deliberately taught, learned, and recycled because of several reasons:

1. Learners need to encounter the words in a variety of rich contexts.
2. Learners have the ability to recall words when they have manipulated them in different and numerous ways, so variety is essential for vocabulary teaching.
3. Learners tend to forget words within the first twenty-four hours after class, so it is essential to assign learners with vocabulary exercises that recycles the words.

According to Read (2000), traditionally, learners learn vocabulary by memorizing long lists of the target words, and when they encountered an unfamiliar word, they quickly refer to a bilingual dictionary. Learners were also exposed to images, realia, signs and gestures to guess the meaning of a word. However, the nature of L2 learning has changed because of technology (Oxford, 2008). The computer, with its multimedia and hypermedia features is a powerful learning device. Computers allow learners to use multisensory elements, text, sound, pictures, video and animation, which provide a meaningful context to facilitate comprehension. Computer-based learning and online learning are much appreciated and enjoyed by learners in school and at tertiary levels (Condie & Livington, 2007). Given the

important role of vocabulary in language learning, researchers are now investigating different strategies and methods to create an interest among ESL learners to successfully acquire and extend vocabulary successfully.

D.   MULTIMEDIA GLOSSES IN VOCABULARY LEARNING

Advances and increased availability of computers have amended and developed the possibilities of gloss formats. The research of annotation has expanded with the advancement of multimedia application in second language teaching and learning. Annotations in multimedia are facilitative for language learning (Nation, 2001). According to Ko (2005), glosses assist readers comprehend words more accurately by preventing misleading guessing, and also to avoid interruption in reading comprehension when readers try to check dictionaries to find out the meaning of unknown words. There are four advantages for multimedia glosses: enhancing comprehension, increasing vocabulary learning, catering to students' preferences, and providing greater use of authentic texts (Jacobs, Dufon, and Fong, 1994). The process of language learning becomes more entertaining and engaging by activating students' visual and auditory senses by using multimedia. (Kayaoglu, Akbas & Ozturk, 2011).

Unlike traditional glossing, the usage of pictures through multimedia annotations can be beneficial for readers (Martinez-Lage, 1997). Learning vocabulary words from textual definitions alone creates inadequate links for retrieval of meanings, whereas learning vocabulary words from textual definitions and some visual supports constructs stronger meaning representations for future retrieval. With the innovation of multimedia, the process of language learning can be more entertaining and supportive. Martinez-Lage (1997) implies the effectiveness of multimedia annotations which provide instant and direct access to text, sound and visual annotations. When there is an interaction between students and text, it facilitates understanding because students learn with language as well as promoting active reading. If vocabulary learning can be made more effective and exciting with the aid of theory-based learning principles, learners may formulate more rapid, satisfying progress and become more proficient in the target language.

Nagata (1999) summarized the four functions of glosses on vocabulary learning. He stated that, marginal glosses are easier to use than a dictionary, besides, glosses draw learner's attention to target words, supporting the notion of "consciousness-raising" and "input enhancement". In addition, glosses help to connect words to meanings immediately, contributing to the "meaning-form connection" approach. Finally, glosses encourage learners to perform lexical processing, which may contribute to the retention of the words. Myong (2005) also stated four advantages of glossing. First, glosses can help readers know the meaning of new words more accurately. Second, glosses allow readers not be interrupted while they are reading since meanings are provided for the new words. Third, glosses can help readers connect prior knowledge with new knowledge in the text, which can help them understand and remember the content of the text. Lastly, glosses make the learners more autonomous in reading activity. They can look up for the meaning of unfamiliar words at any time.

Numerous researchers (e.g., Yoshii, 2006; Nation, 2002) referred to glossing as one of the most effective tools for increasing noticing that enhances vocabulary learning among ESL/ EFL learners. Yoshii (2006) examined the effect of L1 and L2 glosses on L2 vocabulary learning in a multimedia context. The study revealed no significant differences between the L1 and L2 glosses, however it suggests that both L1 and L2 glosses could be equally effective for L2 vocabulary learning. Glosses minimize the interruption of reading flow compared to using dictionary that is time-consuming and interrupts the reading process. (Nation, 2002).

Furthermore, Hu and Deng (2007) revealed that multimedia could improve students' capability to memorize words because multimedia transmits information through auditory and visual modalities which attracted learners' attention, and accordingly improve their word retention. A number of researchers have discussed the effects of presenting information using multimedia on L2 vocabulary acquisition (Akbulut, 2007; Kim & Gilman, 2008). The results of these studies show that text along with video, pictures, and graphics promotes L2 vocabulary acquisition. The results of Akbulut (2007) study showed that students having access to word definitions along with pictures and short video clips achieved significantly higher vocabulary scores than those assigned to the definition only groups. In a study of 172 Korean students, Kim and Gilman (2008) reported that information presented with visual text and supplementary graphics, or with visual text supplemented by spoken text and graphics could facilitate students' vocabulary acquisition the best.

A study conducted by Rouhi A. and Mohebbi H. (2013) examined the effect of pictorial, pictorial + sound, and video glosses on L2 vocabulary learning in multimedia context. They investigated whether learners' high spatial intelligence ability has any effect on their ability to take advantage of multimedia glosses in L2 vocabulary learning. Sixty-two Azari-Turkish pre-university students were randomly assigned to three experimental groups and a control group. All groups took a Persian equivalent test, a multiple-choice test, and a sentence completion test once as the immediate posttest and 25 days later as the delayed posttest. The result showed the positive effect of multimedia glosses on L2 vocabulary learning. However, there was no significant difference among the participating experimental groups and no significant difference was observed between the high and low spatial ability groups.

In a similar vein, Yeh and Wang (2003) investigated the effect of three types of multimedia glosses, text-only, text and picture, and text, picture and sound, on the incidental vocabulary learning of 82 university students in Taiwan. The researchers used both L1 (Chinese translation) and L2 (English explanation) in textual glosses. The results indicated that the combination of text and picture was the most effective type of annotation. Jones (2004) who conducted two studies to examine how pictorial and/or written annotations affect students' performance on incidental vocabulary stated that the presence of both pictorial and verbal cues can assist learning, in particular when the corresponding visual and verbal are contiguously present in working memory.

Cheng and Good (2009) studied the effects of three types of glosses on reading comprehension and L2 vocabulary learning. The three different glosses were L1 glosses plus

L2 example sentences, L1 in-text glosses, and L1 marginal glosses. The findings showed the effectiveness of L1 glosses in fostering L2 vocabulary learning. Another researcher such as Shahrokni (2009) had investigated the effect of online textual, pictorial, and textual pictorial glosses on the incidental vocabulary learning of 90 adult elementary Iranian EFL learners. The participants were tested on their incidental vocabulary learning through two research instruments, word and picture recognition tests after reading each text under each research condition. The result indicated that a combination of text and still images performed significantly better in incidental vocabulary learning.

In a recent study, Ko (2012) investigated the effect of L1, L2, and no glosses on vocabulary learning. Ninety university students in Korea were randomly assigned to three groups. They were asked to read texts for a reading comprehension test and they sat for an unexpected multiple-choice vocabulary test, which was repeated again four weeks later. The result revealed that the experimental groups outperformed the no glosses group in the immediate vocabulary test, however, there was no significant difference between L1 and L2 glosses groups. The same results were obtained in the delayed posttest. The participants also showed enthusiasm in having access to glosses. Interestingly, they favored L2 over L1 glosses.

E. CONCLUSION

Vocabulary development is vital to the progress of other aspects of language learning. The need for an efficient way for developing students' performance in English involving the four skills is a necessity. Learners who have limited vocabulary knowledge are less likely to be able to develop advanced levels of reading, listening, writing and speaking skills in the target language. Multimodality in multimedia glosses, that is, a combination of different modes of input, would result in an effective learning process in vocabulary teaching and learning.

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FOREIGN LANGUAGE ANXIETY AND BELIEFS ABOUT LANGUAGE LEARNING: A STUDY OF EIGHT GRADE STUDENTS LEARNING ENGLISH AS A FOREIGN LANGUAGE

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Abstract

The purpose of this study is to investigate the correlation between foreign language anxiety and beliefs about language learning of junior high school students who study in an Islamic Boarding School in Subang, West Java. One hundred eight graders was participated in this study. To collect the needed data, two sets set of questionnaires consisting the Beliefs About Language Learning Inventory (Horwitz, 1988) and Foreign Language Classroom Anxiety Scale (Horwitz, 1988) were administered to the research subjects. Pearson product moment was employed to analyze the collected data. The finding of this study reveals that two of five BALLI factors were found significantly correlate with language learning anxiety. Those two BALLI factors are motivational beliefs and strategies (r = -.196, p < .05), and language differences and value of language learning (r = .976, p < .05). The result of this study informs the English teacher that the learners' beliefs about language learning and language learning anxiety should be considered whenever conducting foreign language learning activity. The result of this study could be a source for finding appropriate treatments to cope with the students' anxiety. It also generates other fresh research ideas in the same topic to investigate by researchers and language practitioners.

Keywords: eight graders, beliefs about language learning, language anxiety.

A. INTRODUCTION

One of the ultimate goals of learning English is leading the students to be proficient in using English both spoken and written. It cannot be completely achieved if only the students feel threatened when they learn English (Chen&Chang, 2004). Some studies inform that one of the factors which drive students feeling threatened in the process of learning is their anxiety (Pappamihiel, 2002; Worde, 1998; Horwitz, 1991). He stated that the students with high level of anxiety tend to avoid learning situation which makes them get anxious. In this case, the learning activities might be viewed as something not pleasurable for the students (Gregersen, 2005). This fact implies that students' anxiety might restrict the students' moves to gain what is expected during and after the learning process.

In addition, some language scholars believe that students' anxiety in learning English generally goes in accordance with their beliefs about language learning (Horwitz, 1987; Wenden, 1987). The students with stronger beliefs about language learning are usually lesser anxious when engaging with language learning activities or tasks. It means students' beliefs about language learning is predicted to correlate with students' learning motivation, autonomy, language learning strategies, and strategies to cope with anxiety (Peacock, 2001; Sakui and Gaies, 1999; Truitt, 1995). As a result, beliefs about language learning are considered to contribute to the students' success in attaining their language learning goals (Dörnyei, 2005; Weinert & Kluwe 1987; Schommer 1990; Sakui & Gaies 1999).

Seeing the fact that students' anxiety and beliefs about language learning play a major role in students' language learning, some studies were carried out to seek the relationship between student's anxiety and their beliefs about language learning (e.g. Wang, 2005; Pramuktiyono, 2008). However, these studies were mainly subjected to university students. Only a little information is found about the investigation on the relationship language anxiety and beliefs about language learning with junior high school students as its subject. Therefore, this study would like to explore junior high school students' language anxiety and their beliefs about language learning. In Indonesian context, mostly junior high school students are regarded to be the learners who have just started the foreign language learning. This fact is forecasted to be influential on determining the level of language anxiety and beliefs about language learning. This study is also intended to seek the relationship between these two examined variables for enriching the existing literatures on this topic.

B. LITERATURE REVIEW
1. Language Learning Anxiety

Anxiety is believed to be almost always experienced by the learners in the process of learning a language (Horwitz, 1986; Young, 1991). The term of anxiety is generally attached with "threats to self-efficacy and appraisals of situations as threatening" (Papamihiel, 2002, p.331). It means the key point of anxiety basically relies on unpleasant feeling because of something threatening. In the context of foreign language learning, Horwitz et al. (1986), one of the pioneer researchers on language learning anxiety, defined anxiety as "a distinctive complex of self-perceptions, beliefs, feelings and behaviors related to classroom language learning arising from the uniqueness of the language learning process"(p.128). This notion is clarified by Oh (1992) who stated that anxiety in language learning deals with a situation-specific anxiety experienced by students in the classroom which is identified through negative-self thoughts, feelings of inadequacy, fear of failure, and emotional reactions.

Horwitz et al. (1986) informed that there are three kinds of anxiety which are commonly found in the language learning process. The first anxiety type is communication apprehension. As implied in its name, communication apprehension deals with students' shyness which is characterized by fear of or anxiety about communicating with people (Horwitz et al., 1986). This anxiety generally occurs when students are exposed to perform their oral abilities in foreign language class. The second anxiety type is test anxiety. This anxiety is associated with a fear of failure when the students have to deal with a language test.

Regarding to this case, Sarason (1984) argued that test anxiety is caused by the students' past experience on having poor test performance which result negative, irrelevant, and distractive thoughts during taking the test. The third anxiety type is fear of negative evaluation. This anxiety is defined as "apprehension about others' evaluation, avoidance of evaluative situations, and the expectation that others would evaluate oneself negatively."(Horwitz et al., 1986, p. 128). It means the students feel afraid of being evaluated negatively by others because of their performance in the class. Aida (1994) contended that the students who have fear of negative evaluation tend to be passive in the class, avoid classroom activities, or even leave the class for being far away from anxiety situations. These three types of anxiety proposed by Horwitz et al. (1986) are simplified by Pappamihiel (2002) into two major types of anxiety: state anxiety and trait anxiety. State anxiety is prompted by exposures of language learning given to the students. It is different from trait anxiety which mainly comes from the students' character not from the learning exposure. Regarding to this, Worde (1998) viewed that trait anxiety belongs to personal disorder.

The students' anxiety when learning a foreign language is predicted because of external and internal factors. External factors are the source of anxiety which come from the environment in which the students are involved in it. Some examples of external factors which might contribute to the arousal of students' anxiety are instructor beliefs about language teaching (Young, 1991), instructor-learners interaction (Horwitz et al, 1986; Aida, 1994; Young, 1991), classroom procedures (Young, 1991), and language testing (Young, 1991; Bailey et al., 1999). It can be seen that instructors' belief about language learning determines the way they teach their students, the style of classroom rapport, and the kind of test given to the students could become the contributor of students' anxiety if it is not managed carefully. In this case, the teachers are suggested to be aware to give positive reinforcement and motivation to their students for creating convenience feeling and conducive environment of teaching and learning process. Furthermore, students' anxiety is also contributed by internal factors which are mainly from the students themselves. Young (1991) categorized internal factors into two categories: personal and interpersonal issues, and learners' belief about language learning. Personal and interpersonal issues are indicated through shyness, embarrassment, negative self-esteem, low competitiveness, and social-evaluative anxiety. It means personal and interpersonal issues promote anxiety because it drives students not to have positive empowerment of their innate capabilities. Meanwhile, learners' belief about language learning determines students' approach to learn the language and to cope with challenges and difficulties found in the learning process. Anxiety is mostly experienced by the students who have negative beliefs about language learning.

2. Learners' Belief about Language Learning

It is widely acknowledged that language learners hold a particular belief on language learning (Horwitz, 1987). Learners' belief is often assumed as their notion, perceived ideas, concepts, understanding, and insights on how a language is learned (Horwitz, 1987; Wenden, 1987). Wenden (1987), in further, called learners' belief as 'mini-theories' of second language acquisitions since it drives the learners to have general assumption on how a second or

foreign language is naturally acquired. Similarly, Huang (1997) viewed beliefs about language learning as "preconceptions language learners have about the task of learning the target language" (p. 29). That is why it is generally agreed that learners' belief pays an influence on the learners' approaches to learn a second/foreign language. Horwitz (1986, 1987,2000) suggested that understanding the learners' belief about language learning is helpful for language instructor to have appropriate teaching approaches which fit with their learning strategies.

Learners' belief about language learning is considered to be one of key factors which determine the learners' success or failure in learning a language (Horwitz, 1986). The learners who have strong belief about the importance of learning a language tend to have higher degrees of endurance and persistence in their learning tasks (Pintrich&De Groot, 1990; Cotterall, 1999). Horwitz (1988) added that learners' learning belief also plays an important role to cultivate learners' commitment and consistent effort to achieve the learning goals. Thus, learners' belief should be taken into account when handling with a language course. It can be said the learners who hold low learning beliefs might be imposed to be less-motivated in coping with any learning challenges.

Furthermore, Horwitz (1986) characterized beliefs about language learning into five sub-themes namely 1) foreign language aptitude, 2) the difficulty of language learning, 3) the nature of language learning, 4) learning and communication strategies, and 5) motivation and expectation. Each learner has different level of language learning beliefs depending on learning circumstances and the nature of the target language. For example, Indonesian students who learn English as a foreign language have different beliefs from the students of the other foreign languages in terms of the difficulty of language learning, foreign language aptitude, the nature of language learning, and expectations about job opportunities. Indonesian students might believe that learning grammar and vocabulary are important, while others do not think so. And, Indonesian might think that learning English will help them a lot to get a better job, while the others might assume that learning English has been a must. That is why learners' belief about language learning is different from one another. Specifically, Bernat and Gvozdenko (2005) added that the development of learners' beliefs about language learning is gradually constructed following learners' experience in language learning and also influenced by other agents in their learning process such teachers, perceived successful language learners, and even mass media.

C. METHODOLOGY

1. Research Questions

This study was conducted mainly to address this research question:

What is the correlation rate between students' language anxiety and students' belief about language learning?

2. Population and Sample

The population of this study was 240 eight graders of an Islamic Boarding School in Subang, West Java. Using stratified random sampling technique, 100 of 240 students were

selected to be the sample of this study. They come from four different classes which consist of 52 female students and 48 male students.

3. Instruments

This study employed two kinds of questionnaire to be its main instrument namely the Belief about Language Learning Inventory (BALLI) and Foreign Language Classroom Anxiety Scales (FLCAS) which were both designed by Horwitz (1988). Thirty four statements were stated in BALLI questionnaire and thirty three statements were stated in FLCAS questionnaire. These statements were translated into Bahasa Indonesia to minimize misunderstanding among the research subjects about the questionnaire's statements. The translated questionnaires were firstly piloted to the eight graders who did not become the sample of this study for ensuring its wording accuracy and appropriateness. Then, the fixed questionnaires were administered on February 28th, 2014 up to March 15th, 2014.

4. Data Collection Procedures

This study was conducted following five main steps in collecting the required data. The first step was translating the questionnaires which was intended to make each statement in the questionnaire were easy to understand by the research subject. The second step was piloting the translated questionnaires to the students who did not become the subject of this study. The intention of piloting the questionnaire was to identify whether or not the questionnaire statements were understandable for the research subject. The third step was revising the questionnaire by fixing some statements which were regarded ambiguous based on the information gained in the piloting step. The fourth step was administering the fixed questionnaires for gaining the intended data. The last step was computing the data gathered from questionnaires applying the aid of Statistical Package for Social Science (SPSS ver. 21).

5. Data Analysis Technique

All the data gathered from questionnaire were computed first. After completing the data computation, the Pearson Correlation analysis was employed for examining the correlation rate of the two variables tested in this study: students' belief about language learning and students' language anxiety. The correlation analysis process was performed by the help of SPSS software.

D. FINDINGS

In order to examine the correlation between beliefs about beliefs about foreign language learning and foreign language anxiety, a factor analysis was carried out on the BALLI to find out the underlying construct of the beliefs about foreign language learning reported by the subject of this research. A principal component analysis of the BALLI proposed five factors: 1) motivational beliefs and strategies, 2) perceived difficulty of English learning, 3) language differences and value of language learning, 4) importance of formal learning, and 5) beliefs about foreign language aptitude.

The correlation between the research subjects' beliefs about language learning and their foreign language anxiety was tested by using correlations technique particularly Pearson Product Moment correlation. The correlation rate between five BALLI factors and the total FLCAS scores is performed in the following table.

Table 1. The correlation rate between 5 BALLI factors and total FLCAS scores

Investigated Items	Significance Level (1-tailed)	Correlation Point
Motivational beliefs and strategies and FLCAS scores	,029	-,191*
Perceived difficulty of English learning and FLCAS score.	,072	,147
Language differences and value of language learning and FLCAS score.	,000	,976*
Importance of formal learning and FLCAS score.	,226	,076
Beliefs about foreign language aptitude and FLCAS score.	,057	,159

The table above informs that there are two BALLI factors which are indicated to have significant correlation with foreign language anxiety. Those two BALLI factors are motivational beliefs and strategies (r = -.191, p < .05) and language differences and value of language learning (r = .976, p < .05). These findings indicate 1) a strong positive relationship between language differences and value of language learning and foreign language anxiety, and 2) a significant but weaker negative relationship between motivational beliefs and strategies and foreign and foreign language anxiety. It means the higher students think that learning English is different from their native language and value English as the important language to learn, the higher anxiety they perceive in the process of foreign language learning. It is contradictive with the motivational beliefs and strategies factor. The finding of this study also testifies that the more students hold motivational beliefs and strategies, the least anxiety is felt by the students when learning English as a foreign language.

E. DISCUSSION

Learning motivation is forecasted to be able to promote beliefs and diminish anxiety in the learning process (Peacock, 2001; Sakui and Gaies, 1999; Truitt, 1995). Learning motivation also encourages students to employ strategies to be more persistent with the learning challenges. This view is in line with the result of this study. The subjects of this study tend to have least anxiety when they hold strong motivational beliefs and rich strategies. Their motivational beliefs and strategies were their means to cope with anxious feeling when dealing with English language learning. It is supported by the statement of Coterall (1999) and Pintrich and De Groot (1990). They said that learning motivation contributes to the possession of learning endurance and perseverance in handling learning challenges which represent their strategies used to manage learning difficulties and anxiety. This statement is

enriched by Horwitz (1988) who argued that not only motivation but also learning beliefs could contribute to the students' unswerving commitment to reach the expected learning goals. Thus, it is acceptable if motivational beliefs and strategies possess negative correlation with students' language learning anxiety.

Furthermore, this study indicates that learners' view on language difference and value of language learning has strong positive correlation with language learning anxiety. Horwitz (1986) contended that the different nature of native language and targeted language could be a predictor of students' anxiety. This might result difficulty in understanding the language that is being learned by the students. The difficulty found in the learning process is predicted influencing students' value on language learning. It means the more differences the targeted language has, the more difficult language will be valued by the learners. This high value on the targeted language, in this case is English, encourages students to serve more efforts for accomplishing each learning task which is probable to promote learning anxiety. Therefore, it is tolerable if language difference and value of language learning could positively correlate with language learning anxiety.

The finding of this study which indicates significant correlation between learners' belief about language learning and their language learning anxiety informs that these two issues are suggested to be considered when conducting foreign language learning. It is required for alleviating students achieving their learning success.

F. CONCLUSION

This study concludes that basically learners' beliefs about language learning correlate with their language learning anxiety. Specifically, this study found that two of five BALLI factors have significant correlation with language learning anxiety. Those two BALLI factors were 1) motivational beliefs and strategies, and 2) language differences and value of language learning. The finding of this study emphasizes that learners' belief about language learning and foreign language learning anxiety should be put into account when handling foreign language learning activity, especially English learning activity. It needs to do for succeeding the process of attaining the expected language learning goals.

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OBSERVING STUDENTS' PERCEPTIONS ON THE USE OF AUTHENTIC MATERIALS IN SENIOR HIGH SCHOOL

Eka Firmansyah

Abstract

The issue of using authentic materials in language teaching has been so familiar nowadays. Many teachers experienced that their students felt bored when they were using commercial materials such as text books. The benefits of using authentic materials may range from highlighting comprehension, presenting real language, providing opportunities to introduce cultural issues, to enhancing motivation, and creating language awareness. However, the use of authentic materials in learning contexts has always been a controversy. In this respect, the present paper aims to find out the senior high school students' perception on the use of materials (authentic and non-authentic) in the classroom. To select the representative sample, a sampling method was used. It observes the perceptions of 10 first-grade students of a Senior High School on the use of authentic and non-authentic materials. They were taught using both materials, authentic and non-authentic for 4 times. After that, to collect the data, they were asked to fill in the questionnaire (Likert Scale) which showed the students' perception toward both materials, authentic and non-authentic. Then, the data were analyzed based on two different categories proposed by Peacock (1997) which covered: (1) overall class interest & enthusiasm and (2) self-reported interest & enthusiasm. The result of the study indicated that authentic and non-authentic materials had their own benefit. The students showed consistency in responding the 12 statements in the questionnaire. Related to the overall class interest & enthusiasm and self-reported interest & enthusiasm category, they valued the authentic materials slightly higher than the non-authentic ones. Other aspects which prove positive when using authentic materials are that they are highly motivated, giving a sense of achievement when understood and encourage further learning. It's hoped that the implication from the study could provide insights into the selection and development of teaching methodologies.

A. INTRODUCTION

Using authentic material in language teaching has been popular recently. Many teachers experienced that their students felt bored when they were using non-authentic/commercial material such as text book. They cannot get beyond the limitation of a text. The benefits of using authentic material may range from highlighting comprehension, presenting real language, providing opportunities to introduce cultural issues, to enhancing motivation, and creating language awareness. However, the use of authentic material in learning context has always been a matter of controversy. In this respect, the present study

aims to find out the senior high school students' perception on the use of authentic material in the class.

The first thing we have to consider is the difference definition from both authentic material and non-authentic/commercial material. Nunan (1999) defines authentic materials as spoken or written language data that has been produced in the course of genuine communication, and not specifically written for purposes of language teaching. We can also refer to Gebhard's (1996) brief description of the term "authentic": Authentic material means anything that is used to communicate. In contrast, (Peacock (1997) argues that non-authentic material (commercial material) texts that are especially designed for language learning purposes. The language in non-authentic material text is artificial and unvaried, concentrating on something that has to be taught.

Some researcher such as McNeil (1994) and Miller (2005) claimed that all levels of students even lower levels are able to use authentic material. While Kilickaya (2004) and Kim (2000) believed that authentic material can only be applied on intermediate and advanced level students.

However, the issue of authentic material is not only about which one is better, but also about how it is best applied to the teaching and learning process. In many school contexts, learners commonly are not involved in choosing what materials to be used, instead it is the teachers themselves who give and determine the kind of material for them. For some cases, students' perception to the material is usually ignored, although the ones who need the material are the students. Based on the condition above, this study is going to investigate students' perception on the use of authentic material in the class. It's hoped that this study can help the English teachers in senior high school level to understand the learners' perception on the use of authentic material in learning English and able to deliver material, either authentic or commercial depend on students' needs.

1. Statement of the Problem / Research Questions

Students often have difficulties learning English as a second language without appropriate learning material in the classroom. Without appropriate material that suits them, learners spend long ours in the classroom with poor achievement. Students' performance varies according to the type of material delivered to them. A significant amount of research shows that there is something about the type of material that should be looked into and analyzed carefully. This study, therefore aims to find out whether there is a difference in performance when students use authentic and non-authentic materials.

At the end of the study, it will answer the research question: What is students' perception on the use of authentic material in the level of Senior High School? It's hoped after the research question was answered, teachers will be able to identify the most suitable type of material to be delivered for students.

2. Significance of the Study

Principal, the expectation of this study is to make the teachers recognize the most suitable type of material which should be delivered for students in language teaching process.

In addition, this study is also expected to provide insight into the selection and development of teaching methodologies.

Therefore this research will bring some benefits to:
1. Students who are studying English in Senior High School level.
2. Teachers who want to provide their students with appropriate material.

B. LITERATURE REVIEW

1. Theories Relevant to the Objectives of The research

Nunan (1999) defines authentic material as spoken or written language data that has been produced in the course of genuine communication, and not specifically written for purposes of language teaching. We can also refer to Gebhard's (1996) brief description of the term "authentic": Authentic material means anything that is used to communicate. From that statement, it can be assumed that communication is the most important thing in teaching-learning process. Meanwhile, the students will get involve deeper in the communication unless they have a god perception to the materials delivered by their teacher.

In line, Peacock (1997) argues taht the purpose of authentic material is for social importance, Newspaper for example, it is made for the sake of information and communication through reading the news. Teacher can take material from newspaper, but of course without the teaching-learning purpose, still, he also describes that non-authentic material (commercial material) texts that are especially designed for language learning purposes. The language in non-authentic material text is artificial and unvaried, concentrating on something that has to be taught.

2. Related Previous Research

According to Berardo (2006) authentic material have a positive value that make students highly motivated. The main reason for using authentic material in the classroom is to make students not only learn in the 'safe' area and controlled language learning environment, but also to encounter the language used in the real world. Meanwhile, the language in non-authentic text is artificial and unvaried, concentrating on something that has to be taught and often containing a series of "false-text indicators" that include: perfectly formed sentences (all the time); a question using a grammatical structure, gets a full answer, repetition of structures; very often does not "read" well. Those indicators show that the non-authentic material will not make students know how English is really used in a real-world context and apply their knowledge in the real-world English. Non-authentic materials are actually useful for teaching structures but are not very good for improving reading skills.

His study shows that by using authentic material, students will be able to apply their knowledge that they get in the class into the real condition outside the class. He also finds that in developing reading comprehension, one of the most useful authentic material resources is the internet, with large amounts of varied material being easily accessible.

In contrast, Peacock's study (1997) on the effect of material authenticity toward EFL learners used three different categories (on-task behavior, overall class interest & enthusiasm, and self-reported interest & enthusiasm). His research project aims to investigate whether

authentic materials increase the classroom motivation of learners. A definition of motivation relevant to teachers was adopted-learner interest, persistence, attention, action, and enjoyment. Two beginner-level EFL classes participated, and both used authentic and artificial materials alternately. Results from two observation sheets and a self-report questionnaire indicate that while on-task behaviour and observed motivation increased significantly when authentic materials were used, self-reported motivation only increased over the last 12 of the 20 days of the study. However, learners also reported authentic materials to be significantly less interesting than artificial materials.

3. Synthesis

According to some experts' statements above, the next analysis needs to be done to discover further findings to prove their hypothesis in a different time and place. Moreover, this study will use Peacock's criteria (1997) on the effect of material authenticity toward EFL learners; they are overall class interest & enthusiasm, and self-reported interest & enthusiasm.

C.   RESEARCH METHODOLOGY

1. Design

In accordance with the field of the investigation, this study draws on a survey conducted with 10 first-grades a Senior High School student (sample). It employs questionnaire (they are set to 4 Likert Scales: Strongly Disagree, Disagree, Agree, and Strongly Agree).   At the end, it will answer the research question: What is students' perception on the use of authentic material in the level of Senior High School?

2. Data Collection

a. Sample

Arikunto (1998:117) clarifies that "sample is a smaller part of population, and it's considered as a representative of the overall population." Not all the population was analyzed.

To select the representative sample, a sampling method was used. The writer used a quota sampling method in this study. As Arikunto (1998: 130 states that "quota sampling method is based on a particular proportion of a population."

The population of this study was 38 students class X-2 from one of Senior High Schools in West Bandung Regency – West Java, academic year 2013/2014, meanwhile the sample was 10 students from this class. I chose the samples from 5 top rank and 5 below rank in order to make balance proportion. Their language backgrounds were Indonesian and Sundanese. English was taught as a foreign language.

b. Instrumentation

The instrumentation of this study employs questionnaire. The students were asked to fill in the questionnaire which showed the students' perception toward both materials, authentic and non authentic (the questionnaire is set to 4 Likert Scales: Strongly Disagree, Disagree, Agree, and Strongly Agree).

c. Procedure

Having determined the sample in this study, 10 students from X-2 class. I chose the samples from 5 top rank and 5 below rank in order to make balance proportion. Then, a twelve-statement-questionnaire (see Appendix 1) was given to the sample. It was used as the instrument of data collection. The questionnaire was written in English; however the teacher explained the questionnaires' content to the students earliest in order to avoid misunderstanding.

The questionnaires were adapted from Peacock's study (1997) on the effect of material authenticity toward EFL learners. Unlike Peacock's questionnaires which used three different categories (on-task behavior, overall class interest & enthusiasm, and self-reported interest & enthusiasm), I only used the last two categories (overall class interest & enthusiasm, and self-reported interest & enthusiasm), while omitting the first one (on-task behavior) because it was in the form of observation and administered by the teacher. Therefore, it was not in accordance with the purpose of the study.

In regard to the two categories, overall class interest & enthusiasm was meant to find out the students' attitude toward materials (authentic or non-authentic) in use as manifested by levels of learner interest, enthusiasm, persistence with the learning task, concentration, and enjoyment during class. In the questionnaire, this category was represented in statement 1 until 8. For example, statement number 2 "I can concentrate well on the English material delivered in the class" dealt with the students' concentration when being taught using authentic and non-authentic material. Similarly, statement number 6 "I am enthusiastic with the learning process" asked the students' enthusiasm in the use of authentic and non-authentic material in learning English.

On the other hand, self-reported interest & enthusiasm was used in order to asses the value of the teaching materials (authentic or non-authentic) in regards to the level of meaningfulness, excitement, satisfaction and variation. In the questionnaires, this category was represented in statement number 9 until 12. For example, statement number 9 asked: "the materials are meaningful for my learning process). Here, the questionnaire asked how the students valued the meaningfulness of authentic as well as non-authentic materials in relation to their learning English. The same thing also occurred in statement number 11: "The materials are satisfying me", which was meant to know the students' level of satisfaction on the use of authentic and non-authentic materials in their learning. In all twelve statements in the questionnaire, the participants' perceptions were set to 4 Likert Scales: *Strongly Disagree, Disagree, Agree, and Strongly Agree).*

Before the administration of the questionnaire, I had piloted it to four students excluded the samples. Its purpose was to make sure the students really understood the statements in the questionnaire, and thus they could supply this research with their truly intended answers. In the administration of data collection, the samples were taught by Mrs. Lia Siti Romlah (a senior English teacher). The reason why I choose her was to make it easier for me to cooperate with her in facilitating my data collection which required two kinds of materials, authentic and non-authentic, every meeting. I was not involved in the teaching and learning process, because I was a researcher. I only focuss on the research, however, in every

data collection day, I was in her class to administer the questionnaire and examined the students' attitude when they were given both materials. Before the students were given the questionnaire, Mrs. Lia explained about what was meant by authentic and non-authentic materials first. The students filled in one set of questionnaire after they had been taught two kinds of materials, authentic and non-authentic: one questionnaire asking their perception toward authentic material and the same questionnaire for non-authentic one.

As the time given and permitted by the school, the administration of data collection was conducted for 4 times, and thus 8 different students' perceptions on both authentic and non-authentic materials were acquired. On the first day teaching, the teacher taught about "describing people". The material was taken from some peoples' description with their colorful pictures which are printed from internet for the authentic material and a text entitled "Vote for Susan Daron" taken from "Look Ahead 1" text book for the non-authentic material.

The second day teaching was about "describing places". At that time, for the authentic material they were shown some pictures about beautiful places in the world (Kuta Beach, Pyramid, and Niagara Waterfall) taken from the internet. For the non-authentic material, they were shown a brochure "To Bali, With Love" taken from "Look Ahead 1" text book.

On the third day teaching, the students were taught grammar review "preposition" from *Developing English Competencies Grade X* text book for the non-authentic materials. They were given news text from newspaper to determine preposition appeared for the authentic material.

The last, on the fourth teaching day, the teacher taught about news item. The students were given some current news taken from The Jakarta Post Newspaper for the authentic material. For the non-authentic material, they read a news entitled "Man jailed for striking RI maid" taken from "Look Ahead 1" text book.

In order to ensure reliable answers from the students, they filled each set of the questionnaire (authentic and non-authentic) one after the other; first, the students filled the questionnaire for the authentic material after the authentic material was delivered, then they filled the questionnaire for the non-authentic material after the non-authentic material was taught. The questionnaires for both materials were distributed at the beginning of the teaching process so they were not distracted in the middle of the teaching. After that, the questionnaires were submitted at the end of the class.

3. Data Analysis

After all the data had been collected, they were counted and compared to see how the students' perceptions were differed over four meetings. In order to simplify the discussion, I put all the result of the questionnaires into a table. First, the data were divided into two categories, i.e. authentic and non-authentic data. Beside that, I also divided the students' perceptions into two: positive and negative. The perceptions were considered positive, when they belonged to strongly agree and agree. On the other hand, the perceptions were classified into negative, when they belonged to strongly disagree and disagree. All of the perceptions (positive and negative) were counted in percentage.

Apart from dividing the students' perceptions into two categories, i.e. authentic and non-authentic as well as positive and negative, in the analysis I also discussed the findings from two different categories proposed by Peacock (1997) which covered: (1) overall class interest & enthusiasm, and (2) self-reported interest & enthusiasm. In the overall class interest & enthusiasm I discussed the students' attitude toward materials (authentic and non-authentic) in use as manifested by levels of learner interest, enthusiasm, activity, persistence with the learning task, concentration and enjoyment during class. While, in the self-reported interest & enthusiasm I discussed how the students valued teaching materials (authentic or non-authentic) in regards to the level of meaningfulness, excitement, satisfaction and variation. To enrich the discussion, I also linked the findings with some previous studies as well as some literature review. Finally, based on the overall discussion, conclusions were drawn.

D. FINDINGS AND DISCUSSION
1. Data Presentation to Answer Research Question

To answer the research question "What is students' perception on the use of authentic material in the level of Senior High School? the result of the research showed that the samples had positive attitudes toward both authentic and non-authentic materials. In the first meeting (80,82%) of the samples had positive attitudes toward authentic material, while (80%) of them showed the same attitudes toward non-authentic material. In the second meeting (91,68%) of the students gave positive answers to the authentic material and (83,32%) of them to non-authentic material. In contrast, in the third meeting (79,99%) of the students showed their positive attitude to the authentic material, while (92,51%) of had the positive answers to the non-authentic material. Finally, in the last meeting (95,01%) of the students had positive answers to the authentic material and (79,15%) of them showed positive answers as well to the non-authentic ones.

Based on the students' perceptions in all questionnaires, it was found that the students favored authentic material more than the non-authentic ones in three different meetings, i.e. meeting 1, 2 and 4. On the other hand, in the meeting 3 the students' positive perception in non-authentic material was higher than the authentic one. However, overall I found that on average positive attitudes toward authentic materials (86,87%) did not significantly differ from the non-authentic ones (83,74%). In other words, the result of the study showed that the students' attitude toward both materials, authentic and non-authentic, was almost the same equal.

Table 1. The percentage of the total response on both

Observation day	Authentic Material		Non-Authentic Material	
	Strongly disagree and disagree	Strongly agree and agree	Strongly disagree and disagree	Strongly agree and agree
Meeting 1	19,18 %	80,82%	20%	80%
Meeting 2	8,32%	91,68%	16,68%	83,32%
Meeting 3	20,01%	79,99%	7,49%	92,51%
Meeting 4	4,99%	95,01%	20,85%	79,15%
Average	13,12%	86,87%	16,25%	83,74%

2. Interpretation to the Findings

In regards to overall class interest & enthusiasm category, I found that the students gave various perceptions to both authentic and non-authentic materials. Related to statement number 1, from all questionnaires, the students admitted that they were more actively involved in the learning when they were being taught using authentic materials (82,5%) compared to non-authentic ones (80%). In other words, we could say that the students' attitude manifested by the level of activity was higher when they were being taught using authentic materials.

Table 2. The percentage of the total response on each statement

Questionnaire Statements	Authentic Material		Non-Authentic Material	
	Strongly disagree and disagree	Strongly agree and agree	Strongly disagree and disagree	Strongly agree and agree
Statement 1	17,5%	82,5%	20%	80%
Statement 2	12,5%	87,5%	15%	85%
Statement 3	5%	95%	12,5%	87,5%
Statement 4	15%	85%	17,5%	82,5%
Statement 5	12,5%	87,5%	17,5%	82,5%
Statement 6	10%	90%	15%	85%
Statement 7	7,5%	92,5%	30%	70%
Statement 8	12,5%	87,5%	20%	80%
Statement 9	12,5%	87,5%	22,5%	77,5%
Statement 10	10%	90%	12,5%	87,5%
Statement 11	10%	90%	15%	85%
Statement 12	20%	80%	22,5%	77,5%
Average	10,04%	87,92%	16,45%	81,66

Similarly, on the statement number 2, when being asked about their level of concentration, I found that students could concentrate more when they were learning English using authentic materials (87,5%) than the non-authentic ones (85%). It might indicate that the students' activity and concentration had a sort of relation. When the students could concentrate in certain lesson, they might be more active in following that lesson.

From these two statements, related to students' "activity" and "concentration" level, the students gave higher positive attitude to authentic materials (both on statement number 1 and 2).

On the other hand, regarding to the level of enjoyment (statement number 3) in using authentic and non-authentic materials. I found that the students slight enjoyed learning English using authentic materials (95%) than non-authentic ones (87,5%). The finding was quite predictable because earlier stated that the students were actively involved when being taught using authentic materials. Also, they enjoyed learning English more using authentic ones. It could be assumed that authentic materials made the students much more relax and gave them more enjoyment than in non-authentic materials when learning English. The finding might also suggest that there was a close relationship between students' active

learning and the level of enjoyment toward the materials, though further analysis needed to be carried out.

It was also found that on average, regarding to statement number 4, the students paid better attention to the authentic materials (85%) compared to the non-authentic materials (82,5%). It means that the authentic materials were more interesting for the students, it attracted the students' attention more than the non-authentic ones. In line with this fact, Kienbaum (1986) stated that a material had to relate to or be able to awaken the students' interest. For additional evidence, on the first day teaching, the teacher taught about "describing people". For the authentic material, the material was taken from some peoples' description with their colorful pictures which are printed from internet (David Beckham and Ashanti pictures). At first, when the students saw the pictures, the students really liked them, as we know that David Beckham was a famous foot ball player from Manchester United in 1993-2003, and Ashanti is one of the best Indonesian female singers. They started to describe physical appearance from David Beckham and Ashanti enthusiastically. Meanwhile, when the students were given a text entitled "Vote for Susan Daron" taken from "Look Ahead 1" text book for the non-authentic material, the students didn't really like it. When some questions about that description text were asked, only two until three students raised their hands. They felt that Susan Daron was not familiar to them. From that point, it could be inferred that the authentic materials had successfully attracted more attention from the students because the level of difficulty was lower and the topic was more familiar than the non-authentic ones.

Statement number 5 also had a strong relation with the level of difficulty. It was showed that the students preferred to work harder when they were given the authentic materials (87,5%) than when they were given the non-authentic ones (82,5%). When we talked about the students' hard work in following the lesson, we could review again Peacock's theory (1997) of overall class interest & enthusiasm which discussed the students' attitude toward materials (authentic and non-authentic) in use as manifested by levels of learner interest, enthusiasm, activity, persistence with the learning task, concentration and enjoyment during class. Here, related to the students' hard work, I focused on the term "persistence with the learning task". This case might occur because the students thought that in the authentic materials, they had higher possibility to understand the materials and complete the task than the non-authentic ones.

Furthermore, the result of questionnaire number 6 showed that (90%) students on average felt more enthusiastic when they were being taught using authentic materials compared to when being taught using non-authentic materials (85%). In line with this finding, Berardo (2006) argued that the students' lack of enthusiasm could be caused by the language in non-authentic text which is artificial and unvaried, concentrating on something that has to be taught and often containing a series of "false-text indicators" that include: perfectly formed sentences (all the time); a question using a grammatical structure, gets a full answer, repetition of structures; very often does not "read" well. From those evidences, it could be inferred that authentic materials could make the students feel more enthusiastic than when they were being taught with non-authentic materials.

The similar thing occurred in the statement number 7, that most of the students stated that the authentic materials (92,5%) were more challenging or motivating them in learning English than the non-authentic ones (70%). To emphasize this fact, take a look at Berardo's argument (2006) which stated that authentic materials have a positive value that makes students highly motivated.

Moreover, when being asked about the appropriateness of the materials to the students' need (statement number 8), the students answered that the authentic materials were slightly more appropriate (87,5%) than the non-authentic ones (80%). Overall, they feel that both materials were appropriate for them, it was proven by the number of the students' perception on both materials were more than 95%.

From eight statements which were categorized in the first category, overall class interest & enthusiasm, it was found that in average students' positive attitude to the authentic materials (88,43%) were higher than their positive attitude to the non-authentic materials (81,56%). From those 8 statements, almost all statements (1-8) in which students gave higher positive attitude to the authentic materials than to the non-authentic ones. I could say in other words that in regards to the overall class interest & enthusiasm, the students showed higher positive attitude toward authentic materials in use as manifested by levels of learner interest, enthusiasm, persistence with the learning task, concentration, and enjoyment during class than to the non-authentic ones.

In regard to self-reported interest & enthusiasm, on average, the students favored authentic materials (86,87%) more than non-authentic ones (81,87%). Although students gave high positive attitude toward both authentic and non-authentic materials, the students' positive attitude was higher on the authentic ones. We could see in the statement number 9 "The materials are meaningful for my learning process". It was shown that the students valued the authentic materials more meaningful for their learning (87,5%) than the non-authentic ones (77,5%). It might suggest that the students' experience when being taught using authentic materials would enrich their English related to the real-world application. The other evidence was when the teacher asked the students which material that was more meaningful to them, they answered that both materials were meaningful and important for them, but the authentic one could give them better simulation of communication in the real-world because the found many real things in the authentic materials. From that point, in this case, it could be inferred that the students valued the authentic materials more meaningful than the non-authentic ones because the authentic material was important and meaningful for them to apply in the real-world.

In the statement number 10, students felt that the authentic materials were more interesting (90%) than the non-authentic ones (87,5%). We absolutely think that the term interesting/exciting always related to enthusiasm (statement number 6) since it has synonymous meaning when we looked up in an English dictionary. However, statement number 10 was on different category with statement number 6. Statement number 10 was included in the self-reported interest & enthusiasm which valued the materials in use, while statement number 6 was included in the overall class interest & enthusiasm which was used to know overall students' attitude toward the authentic and non-authentic materials.

In regards to statement number 11, the students valued the authentic materials as more satisfying (90%) than the non-authentic ones (85%). It might indicate that the students got what they needed in the authentic material. They were more relieved when being taught using authentic materials. Finally, in statement number 12, the students valued the authentic materials as more varied (80%) than the non-authentic ones (77,5%). It's because of the authentic materials had many sources from our surrounding such as internet, newspaper, television, radio, etc. So, the students got more variation in their materials. For a second time, from overall questionnaires the authentic materials had higher students' positive attitude than the non-authentic ones.

E. CONCLUSION AND RECOMMENDATION

1. Conclusion

This study had a purpose to investigate the students' perception on the use of materials (authentic and non-authentic) in the context of Senior High School level. The result of the study showed that, from 4 meetings of data collection, the students showed consistency in responding the 12 statements in the questionnaire. Related to the overall class interest & enthusiasm category, from those 4 meetings, students seemed to give higher levels of interest, enthusiasm, persistence with the learning task, concentration, and enjoyment during class to the authentic materials. Moreover, in regard to self-reported interest & enthusiasm category, on average they valued the authentic materials slightly higher than the non-authentic ones. They valued authentic materials more meaningful, exciting, satisfying, and varied than the non-authentic ones. Though, overall, the students had high positive attitudes toward both authentic and non-authentic materials. Their attitude toward authentic materials were slightly higher (86,87%) than the non-authentic ones (83,74%). It means that the difference between those two materials were (3,13%).

These results indicated that authentic and non-authentic materials had their own benefit. The kind of material, whether it was authentic or non-authentic, might not really determine the students' attitude, but the way it was delivered. The other thing was the level of difficulty which could affect the students' perception toward both materials, authentic and non-authentic. Also, the familiarity to the topic was needed to be considered since the evidence showed that it affected the students' attitude toward the materials.

2. Recommendation

Having known the students' attitude toward both materials, authentic and non-authentic, it was suggested that the teacher could deliver the material, whether it was authentic or non-authentic, which was suitable with the students' condition. It was also necessary to ask the students about how the teaching which really fulfilled their needs and in accordance with their condition. In the future, English teacher in senior high school was hoped to understand the learners' perception toward the materials (authentic and non-authentic) in learning English and able to deliver both materials, in accordance with the students' needs.

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THE EFFECTIVENESS OF PROBLEM BASED LEARNING TO IMPROVE READING COMPREHENSION
(Quasi Experiment in English Education Students Grade VIII SMP Negeri 29 Bandung)

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Abstract

This study investigates the problem of process and result of learning English specifically in students' Reading Comprehension. This study investigates students in grade VIII of SMPN 29 Bandung. The main purpose of this study is to reveal the effect of Problem Based Learning to improve students' Reading Comprehension in learning English. This study used quasi-experiment method and employed pre-test and post-test. The data was collected by using two kinds of instrument; objective test with 4 alternative answers and non-test in the form of students' questionnaire. After the pre-test for the instrument conducted and found that 15 of them are valid and the instrument is reliable with the result R= 0.60. The subject of this study is 35 students in grade VIII G as the experiment class and 36 students in grade VIII H as the control class. The data was collected by using pre-test and post-test to investigates students' Reading Comprehension. The data was collected and analyzed by using SPSS 20. It was found that Problem Based Learning model is significantly more effective than the present teaching method. the result shows that the improvement of pre-test and post-test in experiment class is 80.50 from 62.34 while the result from control class is 65.84 from 54.90. The gain value of 0.47 in experiment class and 0.23 in control class shows that the improvement in experiment class is more significant than in the control class. Then, it was found that the result of observation toward students' learning process and students' response is good because the whole mean shows 77.5% from 60-80. From the result of both tests shows that problem based learning is more effective to improve students' reading comprehension in learning English than the present teaching and learning model.

Keywords: effectiveness, problem based learning model, and students' reading comprehension.

A. PENDAHULUAN

Abad ke-21 dunia pendidikan di Indonesia semakin dihadapkan pada tantangan yang semakin berat. Tantangan tersebut kesadaran akan bahaya keterbelakangan pendidikan di Indonesia. Salah satu hal mendasar memasuki abad ke-21 adalah gelombang globalisasi dirasakan kuat dan terbuka. Proses pendidikan harus sesuai dengan tuntutan zaman, sehingga

perkembangan ilmu pengetahuan, dan teknologi membawa pada perubahan dalam semua aspek kehidupan, khususnya proses pendidikan.

Dalam Undang-Undang Sistem Pendidikan Nasional No 20 tahun 2003 Pasal 3 dijelaskan tentang fungsi dan tujuan pendidikan yaitu untuk mengembangkan kemampuan dan membentuk watak serta peradaban bangsa yang bermartabat dalam rangka mencerdaskan kehidupan bangsa, sedangkan tujuannya adalah untuk mengembangkan potensi peserta didik agar menjadi manusia yang beriman dan bertakwa kepada Tuhan Yang Maha Esa, berakhlak mulia, sehat, berilmu, cakap, kreatif, mandiri, dan menjadi warga negara yang demokratis serta bertanggung jawab. Pembaharuan dalam bidang pendidikan harus dimulai dari bagaimana anak belajar, dan bagaimana cara guru mengajar. Salah satu kebijakan yang telah disiapkan pemerintah, dalam hal ini menteri pendidikan (KEMENDIKBUD) adalah inovasi kurikulum.

Kurikulum 2013 merupakan salah satu yang disiapkan di era globalisasi ini, sebagaimana dalam kurikulum 2013 proses pembelajaran yang efektif dengan Pendekatan *Scientific (Problem Based Learning, Discovery,* dan *Project Based Learning)* yang mengedepankan pengalaman personal melalui observasi (menyimak, melihat, membaca, dan mendengar), asosiasi, bertanya, menyimpulkan, mengkomunikasikan, sehingga tercapai pembelajaran yang dilaksanakan dalam dunia nyata dan berguna untuk kehidupan. Kurikulum 2013 merupakan sebuah inovasi dalam pembelajaran. Dalam kurikulum 2013 perubahan proses pembelajaran dari siswa diberi tahu menjadi siswa mencari tahu. Pembelajaran yang aktif melalui Pendekatan *Scientific* (*Problem Based Learning, Discovery,* dan *Project Based Learning*) sehingga tujuan pendidikan nasional dalam Undang-undang No 20 akan tercapai.

Bahasa Inggris sebagai bahasa internasional yang paling banyak digunakan baik dalam kurikulum Sekolah Dasar (SD) sebagai salah satu muatan lokal, di Sekolah Menengah Pertama (SMP), Sekolah Menengah Atas (SMA), dan Perguruan Tinggi (PT). Dalam pembelajaran Bahasa Inggris ada empat kemampuan yang harus dikuasai siswa, diantaranya *listening skill*, *speaking skill*, *writing skill,* dan *reading skill.* Untuk memiliki kemampuan ini guru sebaiknya menggunakan pendekatan dalam keempat kemampuan ini, sehingga kemampuan siswa dalam pembelajaran Bahasa Inggris meningkat. Sebagaimana penjelasan di atas salah satu kunci utama kemajuan suatu bangsa adalah pendidikan dalam hal ini kurikulum yang telah dibuat, namun pelaksanaan pendidikan khususnya pembelajaran yang ada di Sekolah Menengah Pertama (SMP) mulai dari penjelasan materi, penyajian contoh-contoh soal beserta penyelesaiannya masih didominasi oleh guru yang mengakibatkan siswa tidak aktif dalam proses pembelajaran. Guru-guru Bahasa Inggris masih menggunakan metode ceramah, dan belum sepenuhnya menggunakan model-model pembelajaran yang menarik, guru-guru beranggapan bahwa tidak menggunakan model ataupun menggunakan model sama saja, ada juga sebagian guru beranggapan menggunakan model hanya menghabiskan waktu sehingga kurikulum tidak tercapai.

Analisis Trend Kemampuan Siswa Indonesia Hasil PISA 200-2009 Literasi membaca pada PISA merupakan kemampuan seorang dalam memahami, menggunakan, dan merefleksikan teks atau bacaan tertulis untuk mencapai tujuan. Kemampuan literasi membaca

berkaitan erat dengan kemampuan berfikir, kemampuan bernalar, dan kreativitas yang diperlukan seseorang untuk hidup di zaman informasi. Pada zaman era globalisasi seorang baru bisa dikatakan memiliki kemampuan literasi jika sudah bisa memahami sesuatu karena membaca dan melakukan sesuatu berdasarkan pemahaman bacaannya (Hirai L. Cook, Irene Borrego, Emilio Garza, dan Calrl T. Klock dalam Seminar PISA, 2011: 3) Membaca merupakan kegiatan untuk mendapatkan makna dari sebuah teks.

Hasil PISA 2000-2009 standar isi membaca SMP, implementasi model-model pembelajaran aktif dan kontekstual, serta karakteristik soal pada UAS dan UN yang digunakan berisi kompetensi membaca dengan jenis teks. Tingkat berfikir siswa masih 18% berisi kompetensi dasar yang membelajarkan tingkat berfikir refleksi evaluatif (Harsiati, 2006 dalam Seminar PISA 2000-2009: 11). Kompetensi dasar (mengomentari berita, membahas nilai, merefleksi isi cerpen, menganalisis unsur instrinsik), seharusnya pembelajaran maksimal ada relevansi dengan kemampuan merefleksi dan mengevaluasi. Pembelajaran dengan merangsang pola pikir kreatif dan berfikir kritis kurang diimplementasikan sehingga PISA dengan soal yang banyak berfokus pada kemampuan refleksi dan mengevaluasi kurang dapat dicapai secara maksimal. Tiga hasil studi internasional menyatakan, kemampuan siswa Indonesia untuk semua bidang yang diukur secara signifikan ternyata berada di bawah rata-rata skor internasional yang sebesar 500. Jika dibandingkan dengan siswa internasional, siswa Indonesia hanya mampu menjawab soal dalam kategori rendah dan sedikit sekali, bahkan hampir tidak ada yang dapat menjawab soal yang menuntut pemikiran tingkat tinggi.

B. TINJAUAN PUSTAKA
1. Konsep Kurikulum

Kurikulum merupakan suatu program atau rencana yang dikembangkan oleh lembaga (sekolah) untuk memberikan berbagai pengalaman belajar bagi siswa. Kurikulum berhubungan dengan sebuah program, sebuah perencanaan, isi atau materi pelajaran serta pengalaman belajar. Konsep terpenting dalam kurikulum adalah kurikulum sebagai substansi, sistem, dan bidang studi.

Tanner (dalam Sanjaya, 2009: 8) mengemukakan bahwa:

"The planned and guided learning experinces and intended learning outcomes formulated throught, the systematic recontruction of knowledge and experiences under auspices of the school, for the learner's continous and willful growth in personal social competence".

Oliva (2013: 18) mengemukakan bahwa "pembelajaran berkaitan dengan metode, tindakan mengajar, implementasi, dan presentasi. Dalam Undang-undang Sistem Pendidikan Nasional Nomor 20 tahun 2003 menyatakan bahwa "pembelajaran adalah proses interaksi peserta didik dengan pendidik dan sumber belajar pada suatu lingkungan belajar". Sebagaimana Saylor, Alexander &Lewis dalam Sanjaya (2008) mengemukakan " *Without a curriculum or plan, there can be no effective instruction and without instruction the curriculum has litle meaning".*

Kurikulum dan pembelajaran merupakan dua sisi mata uang, keduanya sangat penting, saling membutuhkan, apa yang didiskripsikan kurikulum harus memberikan petunjuk dalam

proses pembelajaran di dalam kelas, dan apa yang terjadi dalam kelas merupakan masukan yang dapat dijadikan bahan pertimbangan dalam penyempurnaan kurikulum. Sehingga proses pembelajaran, penyempurnaan kurikulum berada dalam satu lingkaran besar bergerak secara terus menerus, dan tanpa ujung. Franklin Bobbit (dalam Oliva, 2013: 4) mengemukakan bahwa kurikulum "*... that series of things which children and youth must do and experience by way of developing abalities to do the things well make up the affairs of adult life; and to be in all respects what adult should be*".

Oliva (2013: 8-9) mengemukakan hubungan kurikulum dan pembelajaran dalam beberapa model sebagai berikut.

a. Model Dualistik (*the dualistic model*)

The Dualistic Model

b. Model Berkaitan (*the interlocking model*)
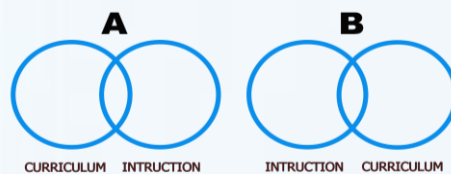
The Interlocking Model

c. Model Konsentris (*the concentric model*)

The Concentric Model

d. Model Siklus (*the cyclical model*)
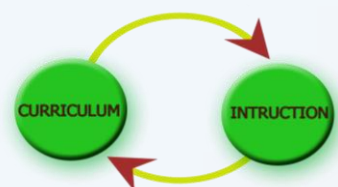
The Cyclical Model

2. Landasan Filosofis Problem Based Learning

Landasan filosofis *Problem Based Learning* berangkat dari konstruktivisme dan paradigma pembelajaran rekonstruksi. Teori belajar yang memandang pengetahuan merupakan hasil konstruksi diri kita sendiri dikenal dengan konstruktivisme. Rusmono (2012: 12) mengemukakan bahwa kontruktivisme merupakan interaksi kognitif, akan terjadi sejauh realitas tersebut disusun melalui struktur kognitif yang diciptakan oleh subjek itu sendiri. Struktur kognitif senantiasa harus diubah dan disesuaikan berdasarkan tuntutan lingkungan dan organisme yang sedang berubah. Konstruktivisme dalam proses pembelajaran merupakan proses aktif siswa mengkonstruksikan arti, wacana, dialog, pengalaman fisik, dan lain-lain. Panen (dalam Rusmono: 16) proses konstruktivisme bercirikan: 1) belajar berarti membentuk makna. Makna diciptakan oleh siswa dari apa yang mereka lihat, dengar, rasakan, dan alami; 2) konstruksi arti merupakan proses terus menerus setiap kali berhadapan dengan fenomena atau persoalan yang baru dan siswa akan mengadakan rekonstruksi; 3) belajar bukan kegiatan mengumpulkan fakta, melainkan proses pengembangan pikiran dengan membuat pengertian yang baru; 4) proses belajar terjadi pada waktu skema seseorang dalam merangsang pemikiran lebih lanjut; 5) hasil belajar dipengaruhi oleh pengalaman siswa dengan dunia fisik dan lingkungannya; 6) hasil belajar siswa tergantung pada apa yang diketahui siswa (konsep, tujuan, dan motivasi yang mempengaruhi interaksi dengan bahan yang dipelajari).

3. Konsep Model *Problem Based Learning*

Problem Based Learning mulai diperkenalkan dalam kurikulum pendidikan di Amerika Serikat tahun 1990. Tokoh yang melakukan studi ini adalah Achiles dan Hoover (1996) dengan menggunakan *Problem Based Learning* dalam proses pembelajaran yang tujuannya untuk perbaikan sekolah. *Problem Based Learning* adalah suatu pendekatan pembelajaran melalui upaya-upaya menghadapkan siswa dengan permasalahan nyata dalam pembelajaran. Robert Delishe (dalam Tan, 2003: 30) mengemukakan bahwa:

> *"Problem Based Learning work well with all student, making its strategies ideal for heterogeneous classrooms where students with mixed abilities can poll their talents collaboratively to invent a solution. These techniques also lend themselves to an interdisciplinary orientation since answering a problem frequently requires information" from several academic areas…. Teacher… Say they have seen their students learn more material, understand more ideas, and enjoy scholl more"*.

Barrow (dalam Miftahul huda, 2013: 271-272) mendefinisikan *Problem Based Learning* sebagai "pembelajaran yang diperoleh melalui proses menuju pemahaman akan resolusi suatu masalah. Masalah tersebut dipertemukan pertama-tama dalam proses pembelajaran". *Problem Based Learning* sebagai peralihan paradigma pengajaran menuju paradigma pembelajaran (Barr dan Tagg. 1995). Jadi fokusya adalah pada pembelajaran siswa dan bukan pada pengajaran guru.

Implementasi dari pembelajaran masalah meliputi orientasi siswa kepada masalah, mengorganisasi siswa untuk belajar, membimbing penyelidikan individual maupun kelompok, mengembangkan dan menyajikan hasil karya serta menganalisis dan mengevaluasi proses

pemecahan masalah. Pembelajaran berbasis masalah akan lebih efektif jika siswa diberikan banyak latihan dengan berbagai macam bentuk masalah.

Ibrahim dan Nur (2000: 13) sintak untuk pembelajaran berbasis masalah dalam tabel berikut.

Tabel 1. Sintaks untuk Pembelajaran Berbasis Masalah

Tahap	Prilaku Guru
Tahap I Mengorientasikan siswa kepada masalah.	Guru menjelaskan tujuan-tujuan pembelajaran, mendiskripsikan kebutuhan-kebutuhan logistik yang penting, dan memotivasi siswa agar terlibat dalam pemecahan-pemecahan masalah yang mereka pilih sendiri.
Tahap 2 Mengorganisasikan siswa untuk belajar.	Guru membantu siswa menentukan dan mengatur tugas-tugas belajar yang berhubungan dengan masalah tersebut.
Tahap 3 Membantu penyelidikan mandiri dan kelompok.	Guru mendorong siswa mengumpulkan informasi yang sesuai, melaksanakan eksperimen, mencari penjelasan dan solusi.
Tahap 4 Mengembangkan dan menyajikan hasil karya serta memamerkannya.	Guru membantu siswa dalam merencanakan dan menyiapkan karya yang sesuai seperti laporan. Rekaman, video, dan model serta membantu mereka untuk berbagi tugas dengan temannya.
Tahap 5 Menganalisis dan mengevaluasi proses pemecahan masalah	Guru membantu siswa untuk melakukan refleksi atas penyelidikan dan proses yang mereka gunakan.

4. Konsep Membaca

PISA mendefinisikan membaca sebagai suatu proses memahami, menggunakan, dan merefleksikan teks tertulis untuk mencapai tujuan, memperoleh pengetahuan, mengembangkan potensi serta berpartisifasi dalam masyarakat (OECD, 2006b). Literasi membaca diukur dalam hubungan dengan:1) format bacaan/teks: *continuous texts, non continuous text*, narasi, eksposisi, dan argumentasi, formulir, iklan dan sebagainya; 2) proses membaca (aspek); mencari informasi, membentuk pemahaman yang luas dari teks, menginterpretasikan, merefleksi, (konten, bentuk, dan cirinya); dan 3) situasi: pribadi, masyarakat pekerjaan, pendidikan dan lain sebagainya. Kemudian membaca bukan hanya *decoding* sederhana tetapi memadukan pemahaman dan penggunaan informasi tulis untuk tujuan-tujuan fungsional.

Pada PISA, aspek membaca sebagai berikut.
a. Mengungkapkan kembali informasi (*retrieving information*).
b. Membentuk pemahaman luas dan meyeluruh (*forming a broad understanding*.
c. Mengembangkan interpretasi (*develoving an interpretation*).
d. Merefleksikan dan mengevaluasi isi teks (*reflecting and evaluating on the content of a text*).

Hayat (dalam Analisis Trend Literasi Membaca, 2011: 3) mengemukakan bahwa literasi membaca berkembang sesuai dengan perkembangan tuntutan zaman. Pada awalnya

literasi adalah arti sebuah kemampuan membaca dan menulis atau melek aksara. Pada era perkembangan informasi teknologi dan globalisasi, literasi membaca dimaknai secara luas. Membaca mencakup melek teknologi, berfikir-kritis, peka terhadap lingkungan sekitar, serta mampu mengaplikasikan apa yang dibaca.

5. Membaca Pemahaman (*Reading Comprehension*)

Pemahaman membaca mencakup pemahaman berfikir tingkat tinggi yang menuntut pembaca memberikan reaksi kritis-kreatif terhadap bacaan dalam kehidupan yang lebih luas serta dampak dari masalah yang dipaparkan pengarang berfikir kriritis-kreatif. Pembaca menggunakan berbagai jenis wacana yang ada dalam komunikasi nyata secara kritis-kreatif (Burn, Roe, dan Roos, 2002 dalam Analisis Trend Membaca PISA 2000-2009: 3).

PISA 2009 menambahkan unsur keterlibatan dalam membaca sebagai bagian integral dari literasi membaca yang difokuskan pada kemampuan memahami, menggunakan, merefleksikan, dan terlibat dengan teks tulis untuk mencapai tujuan. Merefleksikan adalah menuntut pembaca berfikir tentang teks, mengeksplorasi pengetahuan atau pemahaman awal. Kemudian dalam PISA 2009 ditambahkan motivasi membaca, karakteristik afektif dan perilaku yang mencakup minat dan kesenangan membaca, peka atas apa yang dibaca.

C. METODELOGI

Metode yang digunakan dalam penelitian ini adalah metode eksperimen dengan menggunakan desain kuasi eksperimen. Penelitian ini menggunakan dua kelompok subjek penelitian yaitu kelompok eksperimen yang diberikan pembelajaran dengan model *Problem Based Learning* dan kelompok kontrol yang diberikan pembelajaran saat ini. Kelas-kelas yang sudah tersedia di sekolah dipilih peneliti dengan mempertimbangkan kondisi siswa dalam pembelajaran yang dilakukan. Kedua kelompok ini akan diberikan *pre-test* dan *pos-test* dengan menggunakan instrumen yang sama.

D. PEMBAHASAN

Analisis pengolahan data bertujuan untuk melihat penigkatan hasil belajar yang dicapai siswa dalam *Reading Comprehension* sebelum dan sesudah pembelajaran menggunakan model *Problem Based Learning* .Terlihat nilai rata-rata (mean) kelompok eksperimen sebelum diberikan model pembelajaran *Problem Based Learning* sebesar 62.34 dan kelompok kontrol 54.90 sedangkan pada hasil *post-test* setelah perlakuan dengan menggunakan model *Problem Based Learning* kelas eksperimen sebesar 80.50 dan kelompok kontrol 65.84. Untuk nilai gain kelompok eksperimen 0.47 dan kelompok kontrol 0.23 artinya efektif proses pembelajaran dengan menggunakan *Problem Based Learning* pada kelompok pada kelompok ekperimen dibandingkan dengan kelompok kontrol yang tidak menggunakan model *Problem Based Learning*. Dilihat dari hasil gain kelas eksperimen lebih unggul dibandingkan kelas kontrol. Sehingga dari hasil penelitian ada peningkatan kemampuan *Reading Comprehension* siswa dengan menggunakan model *Problem Based Learning* pada kelas yang diberikan perlakuan.

Hasil pengujian hipotesis menunjukkan bahwa perbedaan sangat signifikan dari hasil *pre-test* dan *post-test*. Oleh karena itu dapat dikatakan bahwa model *Problem Based Learning* sangat efektif diterapkan dalam pembelajaran *Reading Comprehension*. *Problem Based Learning* merupakan salah satu model pembelajaran yang inovatif dan saat ini di terapkan di kurikulum 2013 (Pendekatan Scientifik) yang memberikan kondisi belajar aktif kepada siswa dalam dunia nyata.

Pembahasan Hasil Observasi proses pembelajaran dengan menggunakan model *Problem Based Learning* untuk menunjang data penelitian tentang bagaimana proses pembelajaran dilaksanakan berdasarkan instrumen observasi dalam penelitian. Pengamatan dimulai dari bagaimana guru dari kegiatan pendahuluan sampai penutup. Dari hasil analisis data diperoleh dari hasil *pre-test* dan *post-tes*.

Hasil analisis angket menunjukkan bahwa model *Problem Based Learning* mempengaruhi proses pembelajaran siswa. Angket menunjukkan bahwa respon siswa terhadap model *Problem Based Learning* dalam pemahaman siswa, motivasi siswa, dan partisipasi siswa. Angket ini meneliti pengaruh dari model *Problem Based Learning*.

Berdasarkan hasil analisis yang telah dijelaskan, ditemukan peningkatan perolehan nilai, ini menunjukkan model *Problem Based Learning* sangat efektif dalam meningkatkan belajar siswa terutama dalam *Reading Comprehension*.

E. SARAN

1. Bagi guru Bahasa Inggris

Guru dapat menggunakan model *Problem Based Learning* sebagai salah satu model pembelajaran yang dapat meningkatkan *Reading Comprehension.* Model *Problem Based Learning* juga membuat siswa aktif, kreatif, dan model ini merupakan salah satu model dalam kurikulum 2013 yakni Pendekatan *Scientific,* dimana guru harus menerapkan model ini dalam semua mata pelajaran.

2. Bagi peneliti selanjutnya

Bagi peneliti yang ingin mengadakan penelitian berhubungan dengan *reading skill* (*Reading Comprehension*). Hasil penelitian ini dapat dijadikan sebagai bahan kajian bagi penelitian lebih lanjut dan diharapkan untuk melakukan penelitian dengan model yang sama pada tingkat sampel yang berbeda misalnya SD atau SMA dengan cakupan dan teori yang lebih mendalam.

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ENGLISH TEXTBOOK MATERIALS' RELEVANCIES ON THE 2013 CURRICULUM CONTEXT

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Abstract

The curriculum changing is not only concerned with the creation of language course but also with the selection of course materials included in there is the selection of the textbook. The reason is because the textbook also plays important role in curriculum especially in learning process. On the other hand, the textbook also serve some drawback in learning process. Nowdays, Indonesia has changed its curriculum from school based curriculum to 2013 curriculum and it makes the appearance of a new textbook that based on 2013 curriculum. But the teacher cannot directly chosen and used the textbook. One of the criteria in choosing the textbook is curriculum. The textbook should be relevant with the curriculum of the education program because it will make the textbook is appropriate for the students' need. So, it is important to evaluate the textbook based on the current curriculum by finding out their relevancies. This study is aimed at to find out the relevancies of the textbook materials' on the new curriculum which is 2013 curriculum. The methodology used in this study is qualitative method with the design is descriptive study. The instruments of this study were written document consist of the English textbook and the syllabus based on 2013 curriculum. The result found that this English textbook covers seven of the main materials from the eleven main materials in 2013 curriculum. This textbook also covers 60% of materials represent by the indicators. It means that this English textbook materials' are relevant on the 2103 curriculum. In conclusion, although this textbook is relevant to the curriculum, some of the materials are not covered yet in this textbook. Then, The teacher need to seek out any other teaching resources in order to support the missing materials which are not covered in the textbook.

A. INTRODUCTION

Nowdays, Indonesian curriculum has changed from school based curriculum into 2013 curriculum. Has been launched since July fifteenth 2013, this 2013 curriculum proposed new teaching and learning method by including character building to be integrated in the study program (Kurinasih & Sani, 2014). The changing of curriculum make others factors that accompany the curriculum is also changing. It makes the whole learning process, syllabus, goals, objectives, content, and also the textbook is also changing. As for the textbook, the government and many publisher already make and publish new textbook that based on 2013

curriculum. The textbook plays an important role in learning process so it is important to choose and evaluate the textbook that is relevant to the curriculum.

Textbook is one of the commercial and prepared materials that teacher can use to support them in teaching and learning process. It is the commonest form of commercial materials in language teaching (Richard, 2002). Textbook plays important role in teaching and learning process with its advantages. Textbook serve some advantages for teacher to support them in language teaching. Textbooks provide teacher not only standardize instruction and qualified materials but also a variety of learning resources (Richard, 2002). they are also efficient because it saves time and they provide effective language lesson and input (Gebhard, 2009). Because of that reasons, textbook usually being use by the teacher and play important role in their language teaching.

Textbook also have some disadvantages for teacher. Textbook may contain inauthentic language because it is not being prepared by the teacher itself and textbook often not representative of real language use (Richard, 2002). The order of materials in the textbook may not fit with the learner and also the teacher because it is based on the publisher thinking not based on the teacher thinking itself (Gebhard, 2009). In brief, it is clear that textbook have both side advantages and disadvantages. Because of the reason, teacher need to evaluate and choose the appropriate textbook that suit to their teaching and learning process before using it in the classroom. The teacher need to choose the textbook carefully because textbook also serve the drawback for teacher.

There are some checklist of textbook evaluation proposed by some expert in their book such as Cunningsworth (1995), Harmer J (2007), Brown J (1995), Dudley-evans (cited in Richard, 2002), etc. One of the checklist criteria for evaluating textbook is about curriculum. As Brown J (1995) said in his checklist, textbook should fit to the curriculum. Furthermore, he proposed that textbook should fit to curriculum in term it is fit to the approach, needs, syllabus, goals, objectives, and content of the curriculum (1995, p. 161). Cunningsworth (1995) also proposed that textbook should fit the aims and approaches of the curriculum. Harmer J (2007) also proposed that textbook should appropriate for the syllabus of the curriculum. Previous research about textbook evaluation also provided the relevancies of the textbook with the curriculum. The related previous study aimed at finding out not only the strength and weaknesses of the textbook but also the relevancies of the materials presented in the textbook on the school based curriculum (Matra D, 2012). This study believes that if the textbook materials are relevant to the curriculum it will make the textbook is appropriate for the students' need. The finding showed that the textbook in this study covers around 83, 58% of student's needs, since this textbook provides almost off materials required in KTSP.

From all the explanation above, it is clear that textbook should be relevant with the curriculum of the education program where the teacher conduct the language teaching process. Then for the case of the changing of curriculum in Indonesia nowdays, in order to make successful teaching and learning language, the teacher should choose appropriate textbook that suit to the new curriculum which is 2013 curriculum. Then, based on the theories and previous study, this present research would like to find out the relevancies of the textbook materials' on the new curriculum which is 2013 curriculum.

1. Research Question:

What are the relevancies of the materials found in the textbook on the 2013 curriculum?

2. Significance of the study

The result of the study was expected can become one of the consideration for the teacher in choosing English textbook that suitable and appropriate for the new curriculum 2013. For the authors and designers, this research contributes feedback on the development of English textbook that are relevant to the new curriculum 2013. The study also can initiate another study for further research in the same field.

B. LITERATURE REVIEW
1. Theories Relevant to the Objectives of the Research
a. The 2013 Curriculum

Indonesia has been changing the education curriculum periodically. Nowdays, Indonesia has changed its curriculum from school based curriculum to 2013 curriculum. Has been launched since July fifteenth 2013, this 2013 curriculum has some background of reason for its appearance. Kurniasih and Sani (2014) said that the curriculum renewal or changing program is one of the demand, which have to conduct officially and periodically, from the Indonesian government. It means the curriculum renewal must to conduct periodically that is why the 2013 curriculum is conducted replacing the old one. The 2013 curriculum also appear as one of the effort to integrated Indonesian five basic principles which is *Pancasila* into curriculum and in learning process (Kurniasih & Sani, 2014). *Pancasila* is a basic philosophy of Indonesia that should be implemented in education so it is important to have it in curriculum and it is represented in the 2013 curriculum (Kurniasih & Sani, 2014).

Kurniasih and Sani (2014) also proposed that the 2013 curriculum is made because the government want to implement *Permendikbud nomor 65 tahun 2013* about thematic-integrated learning process which is included in 2013 curriculum for elementary level. Syahmadi (2013) also proposed that the changing of curriculum into 2013 curriculum happened because of the societies' perception that the previous curriculum which is school based curriculum is only contain and concern with the cognitive aspect and less contain or concern with character building aspect. The changing of curriculum also happened because of the violent and criminal activities in Indonesia education. With its character building aspect, the 2013 curriculum is expected to minimalize those negative activities among Indonesian learner such as narcotics, students' fight, and cheating.

There are some basic differences between the 2013 curriculum and school based curriculum proposed by Kurniasih and Sani (2014). Passing competence aspect of the 2013 curriculum concern with soft skills and hard skill which consist not only cognitive aspect but also the character and skill aspect while the school based curriculum only concern with the cognitive aspect. For the elementary level, it used thematic-integrated learning from I-VI grade of elementary school while the school based curriculum only from I-III grade of

elementary school. The amount of learning time for a week in the 2013 curriculum is higher than the amount of learning course while the amount of learning time in the KTSP is lower than the amount of learning course. The standard process in the 2013 curriculum consist of five elements (observing, asking, exploring, analysing, presenting) while KTSP only consist of three elements (exploration, elaboration, confirmation).

In the 2013 curriculum, the technology of information and communication subject is not as one of the courses in the learning process but as learning media while KTSP put it as one of the courses in the learning process. The evaluation process in the 2013 curriculum is used authentic evaluation which measure character competence, skill competence, and cognitive competence based on the process and result while KTSP the evaluation only measures on cognitive competence. Syahmadi (2013) also added that English language in English courses concern with English as a communication tool to express some idea and knowledge in the 2013 curriculum while KTSP concern with the structure of English language. The student is used to the spontaneity's of expressing language in the 2013 curriculum while KTSP do not concern with it. The students also is accustomed to not only read and understand the text but also to conclude and present the text with their own language while KTSP only ask students to read and understand the text (Syahmadi, 2013).

b. The Textbook

Curriculum design is not only concerned with the creation of language course but also with the selection of course materials included in there is the selection of the textbook (Notion & Macalister, 2010). The textbook plays important role in learning process because it provides teacher with some advantages in learning process. Richard (2002) proposed some advantages in learning process. The textbook help the teacher with standardize instruction. It provides teacher with prepared instruction for different classes so the instruction is standardized within different level. The textbook also provide teacher with qualified materials. Because the materials in the textbook has been tried, tested, and well-prepared by the publisher, the materials guarantee to have quality. The textbook also serve the teacher with variety of learning resources by providing the workbook, CD-room for listening, comprehensive teaching guides, etc. It is also very efficient.

The teacher can minimalize their time for seeking the materials of teaching process by just using the material lies in the textbook. The textbook also can provide effective language models and input. The teacher can demonstrate the learning content or subject by using the textbook. The textbook also serve the appealing materials because it is visually appealing. The students will be motivated to learn because seeing the visually appealing materials inside the textbook. Gebhard (2009) also proposed some advantages of the textbook. Using the textbook saves time. The teacher can directly use the textbook as an activity, exercises, and materials in the classroom without wasting time find them all in another sources. The textbook also systematically guide the teacher and students step-by-step through series of lessons. The textbook also provide lesson plan with some useful suggestion or techniques.

The textbook also has some drawback in learning process. As Richards (2002) said that the textbook may contain inauthentic language. The reason is because the textbook

content, exercise, text, dialogues are written to incorporate teaching points and not representative of real language use. The textbook also may distort content because they are fail to present the real issue that close to the students' life. The textbook may not reflect students' needs. Because it is often published for global market, they may not reflect the specific interest and needs of students. The textbook can also deskill teachers. The teacher is already provide with the teaching activity, exercise, and materials shortcut with the textbook but it will not train them to be independent choosing and seeking for their own teaching activity, exercise, and materials. The textbook also is often expensive. Some students cannot afford the textbook because of its high price. Gebhard (2009) also added the disadvantages of the textbook. There is possible that textbook appear the ideological conflict and teaching belief. Because the materials and the order of content in the textbook is based on the publisher thought not come from the teacher's thought, the textbook may not suitable for them and against the teacher's teaching belief. He also agree that the materials in the textbook may not authentic because it is for global market. The materials may not suitable and not relevant for their students because it is not specific and authentic.

The teacher need to choose the textbook carefully because textbook also serve the drawback for teacher. The teacher need to evaluate and choose the appropriate textbook that suit to their teaching and learning process before using it in the classroom. There are some checklist of textbook evaluation proposed by some expert in their book such as Cunningsworth (1995), Harmer J (2007), Brown J (1995), Dudley-evans (cited in Richard, 2002), etc. One of the checklist criteria for evaluating textbook is about curriculum. Litz. D (2005) said that other important criteria that should be incorporated in evaluating textbook are those that assess a textbook's methodology, aims, and approaches and the degree to which a set of materials is not only teachable but also fits the needs of the individual teacher's approach as well as the organization's overall curriculum. For syllabus category, Cunningsworth (1995) add that textbook should be a syllabus where they reflect pre-determined learning objectives. So the textbook should fits and match the current syllabus that teacher use in order to make the textbook itself become a syllabus for the teacher teaches in the classroom. Harmer (2007) also proposed the syllabus criteria in his textbook evaluation instrument. He proposed that the textbook should have appropriate syllabus for students. The textbook also have to cover the language areas that lies in the syllabus. The textbook also should follow the sequencing technique based on the syllabus. Brown J (1995) also added that the degree of relationship between a set of materials such as textbook and a particular program can be best determined by considering the degree to which the materials fit to the curriculum. Furthermore, he proposed that textbook should fit to curriculum in term it is fit to the approach, needs, syllabus, goals, objectives, and content of the curriculum (1995, p. 161).

2. Related Previous Research

The first related previous research is a thesis by Matra D (2012) which title is *English Student Book Evalution in School Based Curriculum (KTSP) Context.* This study aimed to find out the strength and weakness of the English textbook and also to find out the relevancies of the materials found in the textbook on the KTSP. Conducted in Pekalongan, the textbook

that is used to analyse was English textbook for Junior high school. A quantitative strategy analyses the frequency and percentage on respondents' answer on the weakness and strength of the textbook questionnaire. A qualitative checklist analyses, which consist of KD and indicator, was used to evaluate the relevancies of the materials presented in the textbook on the school based curriculum. The result of this study found some strength and weakness of the textbook. The textbook fulfils criteria of a good textbook in the term of practical consideration which concerns with accessibility and physical characteristics. The textbook seems to fail to present language skills proportionally. As for the relevancies on the curriculum, this textbook seems to present appropriate materials considering learners interest and needs, the right level of language, authenticity of language and the coverage of materials recommended by the current curriculum. The finding showed that the textbook in this study covers around 83, 58% of student's needs, since this textbook provides almost off materials required in KTSP.

The second related previous research is from journal article by Mahmood K (2010) which title is *Textbook Evaluation in Pakistan: Issue of Conformity to the National Curriculum Guidelines*. This study aimed at exploration of the textbook evaluation process through analysis of the approved textbooks by the ministry of education. Eight approved textbooks in the subject of science and mathematics for grade three, developed in the public and private sector, were analysed. Basic of the analysis was parameters of a quality textbook including conformance to curriculum guidelines and scheme of studies: format and design; culture and context. In Pakistan, the ministry constitutes National Textbook Review Committee for approving textbook. The ministry provides curriculum guidelines as reference document, while reviewing official documents at the ministry of education, no other explicit criteria could be traced for the evaluation task. The result point out that merely providing the main contents of the curriculum to the authors does not ensure coverage of the topics demanded in the curriculum. The evaluators do not ensure content coverage demanded in the National Curriculum while reviewing and approving the textbook. This result show that there is a need to make the criteria objective with respect to content coverage in relation to curriculum content scope.

3. Synthesis

The changing of new curriculum is one of the demand from the government periodically. The curriculum changing is not only concerned with the creation of language course but also with the selection of course materials included in there is the selection of the textbook. The reason is because the textbook also plays important role in curriculum especially in learning process. The textbook can help the teacher by providing them with qualified, effective, efficient, and varied materials, exercises, text, and topic. On the other hand, the textbook also serve some drawback in learning process. It sometimes provide inauthentic materials that is not relevant for the students' interest and needs. Nowdays, Indonesia has changed its curriculum from school based curriculum to 2013 curriculum. The government and many publisher also already make and publish new textbook that based on 2013 curriculum. But the teacher cannot directly chosen and used the textbook because the

textbook have both side advantages and disadvantages. The teacher need to evaluate and choose the appropriate textbook that suit to their teaching and learning process before using it in the classroom.

There are some checklist of textbook evaluation proposed by some expert in their book and one of the checklist criteria for evaluating textbook is about curriculum. There are many experts that the textbook should relevant to the curriculum. Litz. D (2005) said the textbook should fits the needs of the individual teacher's approach as well as the organization's overall curriculum. Cunningsworth (1995) add that textbook should be a syllabus where they reflect pre-determined learning objectives. Harmer (2007) proposed that the textbook should have appropriate syllabus for students Brown J (1995) the materials in the textbook should fit to the curriculum. The previous research about this issue also added some factor of the relevancies of the textbook and curriculum. The thesis from Matra D (2012) proposed that if the materials in the textbook represent the curriculum, the textbook will contains appropriate materials considering learners interest and needs, the right level of language, authenticity of language and the coverage of materials recommended by the current curriculum. This study by Matra D (2012) believes that if the textbook materials are relevant to the curriculum it will make the textbook is appropriate for the students' need. Then, based on the theories and previous study, this present research would like to find out the relevancies of the textbook materials' on the new curriculum which is 2013 curriculum because it is clear that textbook should be relevant with the curriculum of the education program.

C. RESEARCH METHODOLOGY

1. Design

This study aimed at finding out the relevancies of the English textbook materials' on the new curriculum which is 2013 curriculum. This study used qualitative method. According to Cresswell (2009) qualitative study includes developing a description of an individual or setting, analysing data for themes or categories, and finally making an interpretation or drawing conclusions about its meaning personally and theoretically. Since this study aimed at describing and analysing the English textbook materials' based on its relevancies' on the 2013 curriculum categories, the qualitative method was chosen. The design of this study used descriptive study. According to Cohen (2005) descriptive study are set out to describe and to interpret *what is.* Knupfer and McLellan (1996) also said that, descriptive research is mainly concerned with *what is* type of questions that describe events focusing on a particular issue or phenomenon. Since the research question of this study focused at answering "what are the relevancies of the materials found in the textbook on the 2013 curriculum?" and this research also aimed at describing the English textbook materials' on their relevancies with 2013 curriculum, the descriptive study was chosen.

2. Data Collection

The data was collected at April 7th, 2014.

a. Sample

The population of this study was English textbook for Senior High School in Bandung. The sample was English textbook for Senior High School for tenth grader students

which title is *Advanced learning English 1 for grade X Senior High School General program* which publish by Facil publisher. The sample mentioned above is one of the English textbook that claim that the materials is already based on 2013 curriculum. The sample mentioned is also an English textbook which is recommended to the teacher at SMAN 6 Bandung which is one of the senior high school in Bandung that is already implemented the 2013 curriculum for their tenth grader students. It means the sample can give the information needed by the writer.

b. Instrument

Document analysis was the instrument used in this study. The document which was analyzed in this study is in the form of one particular English textbook for Senior High School for tenth grader students and also the syllabus that is based on 2013 curriculum. Those documents was analysed based on how they are related each other. The materials of English textbook for Senior High School for tenth grader students was observed based on the basic competence, main material, and learning process in the syllabus of 2013 curriculum to find the relevancies of the English textbook materials' on the 2013 curriculum.

c. Data Procedures

The data of this research was collected by doing some steps. First, the writer selected the school that is already conducted the 2013 curriculum. After the writer got permission from the school to collect the data, the writer went to school to ask the syllabus for their tenth grader students and the textbook which is recommended for the teacher to used. Next, the writer copied the syllabus and collected the English textbook. After the syllabus and the textbook had been collected, the writer analysed the textbook based on the syllabus by doing some steps in the data analysis section.

3. Data Analysis:

Since the instruments used in this research was document analysis in the form of one particular English textbook for Senior High School for tenth grader students and also the syllabus that is based on 2013 curriculum, the data obtained were in the form of the table of the relevancies checklist of the materials' or unit in the English textbook on the basic competences (KD), main material (materi pokok), and the indicator section in the syllabus of 2013 curriculum. The English textbook materials in term its content was analyzed and was observed based on its relevancies on the basic competences (KD), main material (materi pokok), and the indicator section in the syllabus of 2013 curriculum to find out whether the English textbook materials in terms its content is relevant or not on the 2013 curriculum. In the table of the relevancies checklist, the materials found in the textbook which are relevant to the 2013 curriculum is given thick sign ($\sqrt{}$), on the other hand the materials found in the textbook which are not relevant to 2013 curriculum is given negative sign ($-$). Furthermore, after given the thick sign, the the materials found in the textbook which are relevant to the 2013 curriculum is also given the further description of the relevancies to the 2013 curriculum by adding the unit or chapter in the textbook which is relevant in line with its relevant basic competences (KD), main material (materi pokok), and the indicator section.

D. FINDINGS AND DISCUSSION

The criteria used in the checklist table analysis were basic competence, main materials, and indicators. The basic competences means all the competences based on 2013 curriculum. The main materials was all the materials that represent the basic competences. Indicators are a guideline what the details materials coverage in each basic competences. Checklist represent the relevancies of the materials found in the textbook with the indicators. Detail represent the detail unit, exercises, and page that relevant with the indicators. The example of the checklist table analyses, as follows:

Table 1. The Example of the Checklist Table Analyses

Kompetensi Dasar	Materi Pokok	Indikator	Checklist	Detail unit
3.2. Menganalisis fungsi sosial, struktur teks, dan unsur kebahasaan pada ungkapan memuji bersayap serta responnya, sesuai dengan konteks penggunaannya. 4.3. Menyusun teks lisan dan tulis untuk mengucapkan dan merespon pujian bersayap, dengan memperhatikan fungsi sosial, struktur teks, dan unsur kebahasaan yang benar dan sesuai konteks.	Teks lisan dan tulis untuk memuji bersayap (*extended*) serta responnya *Fungsi sosial* Menjaga hubungan interpersonal dengan guru, teman dan orang lain. *Ungkapan* "*Excellent! You really did it well, Tina.*" "*That's nice, Anisa. I really like it.*" "*It was great. I like it, thank you,*" *Unsur kebahasaan:* Ucapan, tekanan kata, intonasi	KD 3.2. 1) mengidentifikasi struktur teks dan unsur kebahasaan pada teks lisan dan tulis untuk memuji bersayap serta responnya. 2) menyimpulkan fungsi sosial ungkapan-ungkapan untuk memuji. KD 4.3 1)mencontohkan penggunaan ungkapan untuk memuji bersayap 2) membuat percakapan singkat tertulis dengan menggunakanungkapan untuk memuji bersayap 3) memperagakan percakapan yang telah dibuat secara berpasangan	√ √ √ √ √	Unit 3; Speaking Section; exercises 2; page 83 Unit 3; Speaking section; exercises 3; note compliment; page 85 Unit 3; Listening Section; exercises 3; page 81 Unit 3; Listening Section; English Project; page 85 Unit 3; Listening Section; English Project; page 85

From the total table checklist analyses, the result found that this English textbook covers seven of the main materials from the eleven main materials in 2013 curriculum. The materials that did not covers were the materials which were not represented by the half of the total amount of each indicators. This textbook covered materials which consist of expression of compliment, care expression, and congratulation, descriptive text, recount text, narrative text, and song text. The materials which were not covered by this textbook consist of expression of self-identity, expression of planning to do something, past simple/present perfect tense, and text announcement. This textbook also covers 60% of materials represent by the indicators.

The first material of 2013 curriculum is expression of *self-identity* and this material was not covered in this textbook. The indicator for this material was not covered by this textbook. There were no example of the use of this expression in the form of written and spoken conversation. There were also no exercises and material in identifying the language structure and language function from this expression. There were no exercises or material that ask students to make a conversation about self-identity. There were no exercises and material that present the expression and utterances of this materials. This textbook only covered the self-identity in the form of text not in conversation. It makes the textbook failed to cover the self-identity expression because it was not covered all the indicator of this expression and only one indicator of this materials was covered in this textbook.

The second main material of 2013 curriculum is the expression of *compliment*. This material was fully covered because this textbook covered all the KD and indicators that represent this materials. This textbook succeed to cover the first basic competences of this materials by providing dialogue exercises that contain the complement expression and its responses and also by giving students the table of expression of compliment and its responses to conclude the material. This textbook succeed to cover the second basic competences by presenting the use of this expression in the form of spoken true/false exercises. This textbook also succeed to cover the second KD by giving the topic in the exercise of making and demonstrating a simple conversation using this expression. All the five indicators for this materials were covered in this textbook.

The third main material of 2013 curriculum is the expression of *care/sympathy*. This material also was enough covered in this textbook because among five indicators only three indicators were covered in this textbook. This textbook succeed to cover the first KD of this material by providing the exercise of the conversation of situational context using this expression to identify the language function, language structure, and language expression about expression of sympathy. As for the second indicator of the first KD which is to conclude expression of sympathy, this textbook provide the concluded table of this expression complete with the use of the expression in the different situation. This textbook also provide the written conversation of this expression complete with exercises to make students understand the detail aspect of this expression which is one of the demand of the second KD that was represented in one indicator.

The fourth main material of 2013 curriculum is the expression of *planning to do something*. This material was not covered in this textbook because it was even not stated in

this textbook. There were also no exercises and materials that represent this expression. There were no materials to identify the language function, language structure, and language utterance about this expression. All the indicator and KD that represent this material were not covered in this textbook.

The fifth main material of 2013 curriculum is the expression of *congratulation*. This material was covered in this textbook. Almost all the KD and indicators that represent this materials were covered in this textbook. The first KD was represented by written text about the letters of congratulation to identify the structure text and language element of expression of *congratulation*. It was also represented by concluded table which consist of the expression of congratulation and its responses. The second KD was represented by the exercises of practicing the dialogue and answering the detail question which identify the purpose, the language structure, the language element of the expression of congratulation. It was also represented by exercises in making a conversation using this expression and perform it in from of the class. However, the last indicator that demand students to write the congratulation card was not covered in this textbook because there was no exercise or materials in this textbook that represent this indicator. Only one indicator among six indicators that was not covered by this textbook.

The sixth main material of 2013 curriculum is *the past simple/present perfect tense*. This material was not covered in this textbook because only one indicator among six indicator covered in this textbook. The materials only stated in once in the extra information, which is not include as one of the exercises, about grammar which is called grammar box which was represented the indicator which was to conclude the past simple/present perfect tense. This textbook failed in providing the students with the exercises to make a sentence using *the past simple/present perfect tense,* to make the paragraph about this tense, to identify the language structure of the sentences that is used *the past simple/present perfect tense,* to present the language of *the past simple/present perfect tense* in the form conversation, etc.

The seventh main material of 2013 curriculum is *descriptive text* in term describing person, historical place, and famous place. This material was covered in this textbook. In term to represent the first indicator of this material which is identify the text structure of descriptive text, this textbook provided the table of descriptive text with its text structure accompany with some questions about the structure of the text. The second indicator, which is to conclude the text function, was represented by read the text exercises about Merdeka Building which function is to introduce the historical place to the students. The third indicator, which is to find out the language element in the text, was represented by completing the gaps exercises with adjectives which describe the characteristics of person as a language element. For the fourth indicator, there was no exercises that represented that implicit information. All the exercises represented only the explicit information, which is the demand of the fifth indictor, so it failed to cover the fourth indicator and succeed to cover the fifth indicator. For the sixth until tenth indicator were represented by the exercises of answering particular question, filling the gap of suitable word, choosing true or false, and matching the topic sentences and supporting detail. For the last four indicators, this textbook provided the rearrangement paragraph exercises and making the text of descriptive.

The eighth material of 2013 curriculum is *the announcement text.* This material was not covered in this textbook because it was even not stated in this textbook. There were also no exercises and materials that represent this kinds of text. There were no materials to identify the language function, language structure, and language utterance about this text. All the indicator and KD that represent this material were not covered in this textbook.

The ninth material of 2013 curriculum is *the recount text.* This material was covered in this textbook because almost all the KD and indicators in this material was covered in this textbook. The first KD was represented with the table of recount text with its text structure accompany with some questions about the structure of the text, with the exercises of reading the moral value text and answering its question as the description of the language function of recount text. The second KD was represented with the exercises of answering particular question, filling the gap of suitable word, choosing true or false, and matching the topic sentences and supporting detail. For the last KD was represented by exercises of making written recount text.

The tenth material of 2013 curriculum is *the narrative text.* In the term telling legend story, fable, and fairy tale. This material was covered in this textbook. In term to represent the first indicator of this material which is identify the text structure of narrative text, this textbook provided the table of narrative text with its text structure accompany with some questions about the structure of the text. The second indicator, which is to find out the language element in the text, was represented by completing the gaps exercises with pronouns which replace person as a language element. The third indicator, which is to conclude the text function, was represented by read the text exercises about *The Blind Men and The Elephant* which function is to give the students the moral value of the text. For the fourth until eighth indicator were represented by the exercises of answering particular question, filling the gap of suitable word, choosing true or false, and matching the topic sentences and supporting detail.

The eleventh material of 2013 curriculum is *the simple song*. There were only two song which become representative of this material. There were only simple question accompany the songs. However, the question has already covered the three indicators among six indicator which are to identify the meaning of the song, the detail information of the song, the explicit information of the song. It means that this textbook has already covered this material.

F.   CONCLUSION

This study is aimed at to find out the relevancies of the textbook materials' on the new curriculum which is 2013 curriculum. The methodology used in this study is qualitative method with the design is descriptive study. The instruments of this study were written document consist of the English textbook and the syllabus based on 2013 curriculum. The result found that this English textbook covers seven of the main materials from the eleven main materials in 2013 curriculum. This textbook also covers 60% of materials represent by the indicators. It means that this English textbook materials' are relevant on the 2103 curriculum.

In conclusion, this textbook have succeed covered the materials in the 2013 curriculum. The textbook materials' which are relevant to the 2013 curriculum consist of expression of compliment, care expression, and congratulation, descriptive text, recount text, narrative text, and song text.

G. RECOMMENDATION

For teachers, although this textbook is relevant to the curriculum, some of the materials are not covered yet in this textbook. Because of that reason, the teacher should not depend on the one particular textbook only. The creativity of the teacher is needed to overcome the missing materials which are not covered in the textbook. The teacher need to seek out any other teaching resources in order to support the materials such as through internet, video, or any other textbook that will become the back up for the main textbook.

For the publisher, because the textbook plays important role in the curriculum as one of support for the teacher, all the materials in curriculum should be covered in the textbook. When making the textbook, the publisher should put all the materials in the curriculum in their textbook in order to support the teacher in the teaching and learning process.

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SNAKE AND LADDER GAME AS AN ALTERNATIVE ASSESSMENT FOR YOUNG LEARNERS

Rahmi Safitri and Wida Mulyani

Abstract

This study centered on the issues of snake and ladder game as an alternative assessment for young learner. It is aimed to discover the implementation of snake and ladder game as assessment tool. Moreover, it examines the advantages and disadvantages of snake and ladder as an assessment technique. This study was conducted in an English course in south Bandung. The participants are ten students from junior class and two teachers from two classes. A case study design was used in this study. The data were collected through observation, interview and document analysis to gain relevant data. The data from these three instruments were analyzed qualitatively. The results showed that snake and ladder game can be used as an assessment tool because of some reasons. The first one is because this game involves physical movement, students learn to appreciate their friend and this game is increasing students' motivation since they have to compete with their friend and they want to be the winner. Teachers also said that snake and ladder game is effective to be used in classroom because children didn't know that they are being assessed which decrease the stress rate for them. The disadvantage of playing the game is more on the classroom condition that became hectic and noisy and some students are difficult to accept discomfiture.

A. INTRODUCTION

Assessing young learner by using traditional assessment can be problematic (Pinter, 2006). It is due to the mismatch between the way young learners learn and the way teacher assesses them. Young learners' knowledge of English is often based on their capability to sing a song or their participation in stories and games which is not easy and straightforward to assess objectively (Pinter, 2006: 132).

Teacher's knowledge in deciding appropriate assessment for young learner plays important role to learners' success. So far, many assessment methods have been applied by teachers to measure young learners' ability but not many teachers are familiar with the form of modern assessment to assess the ability of young learners. Modern assessment is used in the form of untimed-free response and focusing on process oriented.

Rea-Dickins and Rixons (1999) stated that there is a need for teacher who teaches young learners to go beyond paper and pencil test and explore alternative approaches which engage learners more appropriately, such as by using language beyond the sentence level through listening. It is very essential for teacher to use assessment techniques that are child friendly and compatible with the activities used in classroom (Pinter, 2006). The example of alternative assessment can be formed as portfolio, self-assessment, project work and games, in this case is snake and ladder game.

Snake and ladder game is a board game. It is a popular board game around the world. Snake and Ladder facilitates the students to learn about counting, life, interaction and socialization. Through this game the learners can learn about up and down in life or about joys and troubles. Ladders represent "the up life and joy", while the existence of the snakes represent "the down in life or trouble". In addition, the young learners also learn about fair play, patience, and how to take turn. Thus, games should be used not only for fun but also to bring the target language to life, to review language lessons and to facilitate the reluctant students to speak and communicate actively.

There is previous research about snake and ladder game as media to teach vocabulary to young learner and this study tries to find out whether snake and ladder game is suitable to be used as an assessment method for young learners since game is one way to assessment children in a fun way without threatening them and what the advantages and disadvantages of this game to young learners are.

B. THEORETICAL FOUNDATION
1. The Definition of Young Learners

Young learner is categorized as students from ages three to eight years old (Wilson, 2003; Alianello, 2004). Nunan (2011) defines young learner as a large chronological age span, started from around three years to fifteen. Some writers and researchers try to segment learners strictly according to age 3 to 5 years old, 6 to 8 years old and so on. Meanwhile, Pinter (2006) limits the age groups of young learners from five to fourteen years old. However, she offers an idea that age of categorization is not a big deal in teaching language to young learners. The main issues in teaching language to young learners should begin with the consideration that every child is unique and they have substantial differences within, such as the differences of culture (Pinter, 2006). Moreover, Paul (2000) adds that all children deserve the chance to achieve their potential both as learners and as whole people and become broad-minded members of a truly international society.

Finding the best approach to teach young learner is not the only important aspect in analyzing students' progress in learning process. The other aspect which is important is assessment. Teachers need to find the suitable assessment method which match with their learning process. The inappropriate assessment methods would discourage children and cause them to lose their motivation to learn English.

2. Assessment

Assessment can be described as the process of data analysis that teacher use to get evidence about their learners' performance and progress in English (Pinter, 2006). Assessment also refers to the tools, techniques, and procedure to find out what learners can do (Nunan, 2011). In other word, it can be said that assessment is about determining what learners can and can't do.

Assessment is aimed not only to give evidence of learning to parents and school community but also to let children know how they are doing. With assessment teachers will be able to see where the gaps are, what seems easier or harder for the learners, what objective

every learner has been achieved (Pinter, 2006) and how well the learners have done (Nunan, 2011).

In addition, assessment has several roles, such as: to examine, monitor and aid children's progress (Hudelson, 1989; Ioannou-Georgiou & Pavlou, 2003), to build an accurate and effective communication between teacher and parents (Hudelson, 1989; Ioannou-Georgiou & Pavlou, 2003) and to provide feedback on pupils' learning (Cameron, 2001).

It is very essential for teacher to use assessment techniques that are child-friendly and compatible with the activities used every day in the classroom. In deciding which kind of assessment needed by teacher can be analyzed through the approaches of assessment. There are two main approaches of assessment:

1. Norm referencing

Norm referencing means that teachers compare their leaners' achievement with the norm, example the class average. If someone is below average, he/she will get a low mark. The problem of this approach is that this approach cannot measure a little progress and achievement of students and it encourages competition among students.

2. Criterion referencing

Criterion referencing means that learners have to meet certain set criteria. Teachers make a note and track students' progress. All children can progress at their own paces. This approach is focus on individual achievement. Children's results and achievements are compared with their starting point. In this approach, children carry out the tasks in familiar learning context that encourages their confidence and self-esteem therefore as the result they are not worried about being assessed.

In assessment, there are two types of assessments. What discussed in this study is limited in modern or informal assessment.

3. Modern or Informal Assessment

Informal assessment is involved in all incidental, unplanned evaluative learning and feedback on tasks designed to elicit performance but not for the purpose of recording results and making fixed judgments about a student's competence. Most informal assessment is what testing experts call formative evaluation. Formative assessment often implies the observation of the process of learning, as opposed to the product.

Formative Assessment is used to gain an understanding of what students know by accessing prior knowledge, new knowledge, and learning gained via instruction. Formative assessment can also help identify what students are missing in order to inform instructional methods, strategies, and learning opportunities. Formative assessment can also be guide for teacher to make decision about future instruction, provide feedback to students so they can improve their performance (Dodge, 2009). Some people have opinion that informal assessment same with alternative assessment. In alternative assessment students can work individually or cooperatively to accomplish the tasks of each alternative assessment assignment.

The Examples of Formative Assessment are: classroom discussion in both large and small group settings, teacher observation of student work, student reflection and journaling,

vocabulary building and rubrics. The product of alternative assessment can be observation, journal, self-assessment, portfolios, project-based tasks and also games.

4. Board Games

According to Talak (2010:11), games are fun activities that promote interaction, thinking, learning, and problem solving strategies. The young learners can learn about healthy competition or fair play, since they must follow the instruction and the rule of the game. Nevertheless, it is necessary to have a game which is meaningful. It means that games are used not only for fun, but to bring the target language to life, to review language lessons, and to facilitate the reluctant children to speak and communicate actively. Games such as board games can be offered as an instruction media to teach English for young learners, especially the elementary school (Sari & Muniroh, 2011).

A board game is a game that involves counters or pieces moved or placed on a pre-marked surface or "board", according to a set of rules. Games can be based on pure strategy, chance (e.g. rolling dice) or a mixture of the two, and usually have a goal that a player aims to achieve. Early board games represented a battle between two armies, and most current board games are still based on defeating opposing players in terms of counters, winning position or accrual of points (often expressed as in-game currency).

There are many different types and styles of board games. Their representation of real-life situations can range from having no inherent theme, as with checkers, to having a specific theme and narrative, as with Cluedo. The amount of time required to learn to play or master a game varies greatly from game to game. One of board game which is discussed in this study is snake and ladder game.

5. Snake and Ladder Game

Snakes and Ladders also known as chutes and ladders is a children's game that is played by two or more on a square board with 100 numbered squares that ascend in rows and often contain pictures. On some squares, there are ladders that connect a square on a higher row on the board; other squares contain snakes that similarly connect squares on different rows. The goal of this game is to become the first player who reaches square 100. It is a game that requires few skills other than the ability to count, making it an ideal game for very young children (Godwin, 2013). Snake and ladders is a fun and imaginative game where participants reflect on what helps them learn and what might inhibit their learning therefore this game can be used as assessment to assess the progress of learners.

Snake and ladder game is useful since it helps learners to learn about how they learn. Also, it's for individuals to reflect on what inhibitors and enablers of learning may be for themselves, and to compare this with the experiences and perspectives of others. For groups that are working together, the activity can increase awareness of the needs and strengths of others, and help priorities what the group needs to address (Hatswell). Board games like Snakes and ladders have been used in the classroom because they add the element of fun to the English classroom and are certainly a very useful way to develop more effective classroom dynamics (Sweeting).

Snakes and Ladders can be used as a language arts activity. Key place concepts can be incorporated into the fabric of the game while the player is engaged in the mechanics of the game. Concepts such as behind/in front of, up/down, under/over, and time/math concepts such as before/after, first second third, etc. can be targeted during the game.

For instance, clinician: 'Wow you have got 6. That puts you in front of me, but you're still behind Paul. Paul is in front, you're second and I'm third. I'm also last. I need to roll a six to go up the ladder. I hope I don't roll a 3 because I will land on a snake's head and go down the ladder.'

In this study, snake and ladder is used to assess students' speaking ability since the aim of the English course is to improve student's speaking ability and to increase their confidence in speaking. Therefore the guides in the card dominantly start with the word say, tell and talk which all of them related with materials students have had in the classroom.

C. METHOD OF THE REASEARCH

1. Research Design

A case study was employed in this study to gain in-depth understanding of the use of snake and ladder game as an alternative assessment. As stated by Merriam (1998) case study is an examination of a specific phenomenon such as program, an event, a person, a process, an institution or a social group. In addition, Shuttleworth (2008) states that case-study focuses on specific and interesting case.

An explanatory case study used when little is known about the case being investigated. It can also be considered as a case study dealing with a single case or a small case (Merriam, 1998), and typically emphasizing features that make one person or organization different from others (Thomas, 2003).

2. Site and Participants

This study was undertaken in one of English course in south Bandung in two junior classes. The total participants were ten students and two teachers. This site was chosen because of the easy access to get the data there and the snake and ladder game was quite familiar for both teachers and students there therefore researcher didn't need to explain how the play it.

3. Data Collection

The data collection techniques in this study were observation, interview and document analysis. Each data collection technique will be described below.

a. Observation

The type of this study was participant observation (Merriam, 1991, Sugiyono, 2009) because researcher also took a part as teacher assistant even didn't get involved in the whole activity in the classroom. The observation list was provided below.

Table 1.1

	Activities	Yes	No
Before playing the game	Teacher tell the activity to students		
	Teacher explains the rules		
	Teacher shows the reward given to students		

	Activities	Yes	No
	Teacher sets the board game before students come to the class		
During playing the game	Students understand the rule		
	Teacher keeps telling the rules all the time		
	Students play the token by turn		
	Students try to answer their friend's question		
After playing the game	Students compare their stars with their friend		
	Teacher gives feedback to students' performance		
	Teacher reviews the lesson in the game		
	Students seem enthusiastic with the revision		

After the class session end, all the activities happened in the classroom during the observation was taken note. It is in line with Frankel and Wallen (2007) who state that events were then reconstructed into field notes.

b. Interview

To acquire further information related to research questions and observation, the interview was applied to all teachers and 4 students because only those students who willing to do interview while the rest, they need to go home straight away after the class finish. The interview was done based on the interview guideline which consists of 10 questions to students and 9 questions for teachers. The complete guideline will be presented in appendix.

c. Document analysis

The written document is in the form of note taking from teacher during the learning process and after the game finished. Documentary data were collected after the class ended. Teachers' notes consist of the progress of each student, which question students able to answer in first turn and which question is quite hard for them. Teacher also leaves comment for each of student about what are his/her strength and weaknesses and how to improve his/her skills. The field notes are very useful on qualitative research (Patton, 1990) to comprehend the content analysis from the English for young learners field work.

4. Data Analysis

After assembling the data, the researcher analyzed the data which were collected from observation, interview and document analysis. Therefore, the analysis of each research instrument will be presented in a form of descriptive explanation. Data analysis in this research was conducted during and after data collection. It was carried out simultaneously with ongoing activities related with the use of snake and ladder game as an alternative assessment. Maxwell (1996) states that the data analysis is done as soon as the observation

carried out otherwise it will lose visual details that might be important and might be forgotten if it is postponed to be analyzed.

The data of observation were transcribed, classified, and interpreted in information which had been summarized (Alwasilah, 2002) and finally concluded. Data analysis and interpretation were also based on documentary data consisting of teacher's note. The data were also classified, interpreted and concluded.

The data gained from the three instruments were cross-checked by using triangulation to enhance research reliability and validity. This argument is supported by Denzin (1970) in Patton (1990) that triangulation is useful to overcome the intrinsic bias that comes from single method, single observer or single theory studies.

D. FINDINGS AND DISCUSSION
1. Finding and Discussion from Observation

The source of data from observation were observation sheet and researcher field notes. The observation sheets and field notes consist of activities conducted by researcher during the class. The result of observation was provided in the table below.

Table 1.2

	Activities	Yes	No
Before playing the game	Teacher tell the activity to students	V	
	Teacher explains the rules	V	
	Teacher shows the reward given to students	V	
	Teacher sets the board game before students come to the class		V
During playing the game	Students understand the rule	V	
	Teacher keeps telling the rules all the time	V	
	Students play the token by turn	V	
	Students try to answer their friend's question	V	
After playing the game	Students compare their stars with their friend	V	
	Teacher gives feedback to students' performance	V	
	Teacher reviews the lesson in the game	V	
	Students seem enthusiastic with the revision	V	

From the observation, before starting the game, teacher told the students their activity for that day. When knowing that they were going to play snake and ladder game, students seemed so excited and enthusiastic. Teacher then set the board, placed it on the floor. Next, the rules of the game were explained. Students paid attention to teacher's explanation. Researcher could see smile in their faces. The board hadn't set before students come to class because teacher wanted to show it before it will be played by students.

The steps to play the game are: teacher told students that they must throw the dice and move their token to the appropriate number of squares. If the token lands on an Ask square, the learner must pick up the Ask card and make the question sentence based on the clue in the

card. It also happened with the Tell square. If students put their token in a Tell square, they should answer the question in Tell card. The game goes on in this manner until someone reaches the Finish square.

If a token, however, lands at a snake's mouth, the student must move his/her counter over the snake's body to its tail and follow the new instruction, which will be either Ask or Tell. While students were playing the game, teacher took notes of their answer to see the progression of the students. At the end of the activity, teacher review all the 'ask and tell' questions in order to create same assumption and make students know the correct answer for each of the question.

During the activity students got engage with the activity, give respond to the exercise or to the questions with interest. They looked so eager and wanted to answer every question in the card even they didn't allow to give a clue to their friend. They have to be waited until their turn to answer the question. Teacher during the activity constantly told students the rules of the game since a few students kept breaking the rules. When students able to answer the question, they will get a star and at the end of activity, the stars will be counted to decide who is the winner. If a student cannot answer the question, other students can take the chance to answer that question.

At the end of activity, teacher gave feedback to each of student in which part they did good and at which part they did not really good. Teacher also did the review to all the questions in the card. Teacher said that review is used to provide the correct answer. After finish playing snake and ladder game, students compared their starts among their friends. Student who gets the most starts smile and student who loses in the game look sad, upset even angry. Some students looked difficult to accept discomfiture.

2. Finding and Discussion of Interview
a. Students' interview

The interview was conducted to four students and two teachers. The question items were delivered in bahasa Indonesia to avoid misconception and misunderstanding by young learners. The data from interview was transcribed, categorized and analyze. From their responses to ten questions it can be seen that students felt enjoy with snake and ladder game. They like to play the game because they can do body movement. Something that is really important for young learners. According to Talak (2010:11), games are fun activities that promote interaction, thinking, learning, and problem solving strategies.

Students said that by playing game they can compete with their friend, they also usually compare the total starts they've got with their friends. Getting stars increase students' motivation to study harder because they want to be winner. They want to be better than their friend.

b. Teachers' interview

From the interview to two teachers it was found that both teachers think snake and ladder assessment is good to be applied since it involves physical movement. Game is a fun way to learn and also to assess students' progress therefore playing snake and ladder game is fun for students and students won't get easily bored.

Playing snake and ladder game can increase students' motivation since they have to compete with their friends to get many stars and to be the winner. Because of that reason, students tended to study harder and other point is students didn't know that they were being assessed.

3. Finding and Discussion of Document Analysis

The document analysis was from teacher's note during the teaching and learning process. Teacher wrote student's progress before the assessment and after assessment. From teacher's notes researcher found that students showed a progression of each chapter in the booklet. The first time they came to the English course, they had lack of anxiety and lack of confident but the assessment result showed improvement of it. Teacher wrote that most of students can speak English but they just don't really confident speak in front of people. When doing the assessment, students looked so excited and they wanted to get involve with the activity even some students brave to answer the questions that their friends couldn't answer them.

E. CONCLUSION

Assessment through snake and ladder game shows a useful and time-efficient vessel for personal reflection and also for sharing experiences. The advantages from this method are learners have positive thinking of what they have done during learning process, the increasing of their self-awareness and through this method young learners gain kinesthetic experiences which is good for their development.

The game also helps children develop social language skills in learning that bad things can happen suddenly and without warning. This type of reversal of fortune can be a rude shock to a young child and can be a valuable and safe early life lesson. It helps to prepare the child for life's little reversals. Snakes and Ladders can be an effective learning tool and also as an assessment tool because games instantly show where understanding and knowledge exist and is missing. The structure of the game both stresses and reinforces important points. The activities built into game provide such review

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APPENDIXES

Interview Guideline for Students

1. Menurut pendapat mu bagaimana pembelajaran bahasa inggris sejauh ini?
2. Bagian apa saat belajar bahasa inggris yang paling kamu senangi? Kenapa?
3. Kamu bisa menjawab semua pertanyaan saat bermain ular tangga tadi?
4. Pertanyaan apa yang tidak kamu mengerti?
5. Apa yang kamu suka dari bermain ular tangga ?
6. Apa yang tidak kamu suka saat bermain ular tangga?
7. Apa kamu suka membantu teman saat mereka tidak bisa menjawab pertanyaan tadi?
8. Apakah guru memberikan penjelasan setelah permainan selesai?
9. Tadi menang tidak?
10. Biar bisa jadi pemenang harus gimana?

Guideline Interview for Teachers

1. Bagaimana respon siswa terhadap permainan ini?
2. Apa kesulitan saat menggunakan ular tangga sebagai alat penilaian?
3. Apakah siswa mengerti aturan permainannya?
4. Bagaimana caranya mengatasi siswa yang selalu ingin menjawab?
5. Apa manfaat yang di dapat dari permainan ini?
6. Apa kerugian dari bermain ular tangga sebagai alat untuk penilaian ?
7. Lebih suka tes yang traditional (pencil and paper test) atau tes seperti ini? Mengapa?
8. Mengapa melakukan review setelah selesai bermain?
9. Apa alasan di balik pemberian bintang kepada siswa yang berhasil menjawab?

AN INVESTIGATION OF EFL TEACHERS' TESTING PRACTICE: A CASE STUDY OF TWO TEACHERS FROM SENIOR HIGH SCHOOL AND VOCATIONAL SCHOOL

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Abstract

Test, assessment and evaluation can't be separated from competencies that teachers must have. As stated in Teacher and Lecturer Law No.14 of 2005, besides planning lesson and teaching, teachers have roles and responsibilities to test, assess and evaluate the students in appropriate ways. The teachers are expected to evaluate the students' communicative competence. The competence can be assessed by using various assessments. However, the fact unveils that most of teachers still used paper-and-pencil tests to assess students' ability and progress although there are many alternative assessments that can be applied. Another fact also shows that some teachers did not know the characteristics of good language tests and how to prepare and administer language tests. For these reasons, it is very necessary to find out what the testing practice of EFL teachers in developing, administering, and correcting the test. The data were collected through a semi structured interview. The participants were two teachers from different institutions-one senior high school teacher and one vocational school teacher. The result uncovers that the senior high school teacher and vocational school teacher had different testing practice. Furthermore, both of them still did not practice the principles of language assessment and did not include all the communicative competence in their tests. To sum up, it is really expected that the result of this research will give contribution to the testing system in educational field and become guidance for the further research.

Keywords: *Test, Assessment*

A.   INTRODUCTION

Testing, assessment and evaluation are parts of teachers' responsibilities in teaching process. It has been mandated in Teacher and Lecturer Law No. 14 of 2005, article 20, verse 1, which says teacher has the responsibilities to plan the lesson, conduct teaching process and evaluate the learning process. Therefore, teachers are also expected to evaluate and assess the students' communicative competence. They must understand the principles of language testing and assessment in order to be able to assess the competence appropriately.

Test and assessment are defined differently by experts. As reported by Hughes (2003), test is a part of assessment which means test is one of measurement tools of assessment. In

addition, Brown (2004) states test is an instrument used to measure ability, knowledge, or performance in a certain place. Test is important for students to take in order to continue to higher level and for teachers to show the success and progress of their teaching (Ahmad & Rao, 2012). Meanwhile, assessment is said as continuous process which covers wider area than what tests cover and collects information related to students' knowledge, ability, understanding, behavior, and motivation (Brown, 2004). Assessment plays a crucial role in teaching and learning process. Through assessment, the teacher can reveal whether or not she has achieved her planned objectives. Then, she can find out the progress and measure the students' comprehension. Assessment can also help teacher decide whether to continue the instructional process or change teaching techniques in order to gain what is not achieved before.

Teachers need to understand the nature and the principles of test and assessment. Viewed from its approach, test is differentiated to be discrete-point and integrative testing (Brown, 2004). Discrete point tests are formed with the belief that language can be tested separately, like skills of listening, speaking, reading, and writing, phonology and pronunciation. Integrative test is a test for unified set of abilities that cannot be tested separately. It means that teacher provides a test that can measure some abilities in one test taking. Then, there are also some principles of language testing and assessment that teacher must conceive before conducting test (Buck, 2001; Hughes; 2003; Brown 2004). They are practicality, reliability, validity, and washback effects. In order to write and conduct a good test, teacher must have good comprehension on these principles and understand how to administer them.

However, Köksal (2004) states that many graduates of ELT did not know the characteristics of a good language test and how to prepare and administer it. He even found that many teachers of English preferred to use ready-made tests constructed by other testers or use tests offered in the textbook. He found that the same classroom tests had been used without any revision and editing. Then, based on the interview to some teachers in Bandung, it was found that the teachers commonly conducted traditional test. This was in line with Aprillah (2013) that states teachers are accustomed to testing students by using traditional ways or paper-and-pencil test. Some teachers only tested students' linguistic competence and neglected students' other communicative competences. From these cases, it is clear that for certain condition, teachers did not apply the principles of language testing and assessment in carrying out a test.

The present study was aimed at exploring the teachers' testing practice in preparing, conducting, correcting the test. Theoretically, this study is expected to provide more detailed explanation about good testing practice, and practically, it reveals the teachers' testing practice and can become the references for further research.

B. METHOD

This research was conducted by using qualitative method because it described and investigated teachers' testing practice in the classroom. It is in line with Cresswell (1998), Snape & Spencer (2003), McMillan & Schumacher (2006) and Cohen, Manion & Morrison

(2007) that mention qualitative research is an investigation process of comprehension based on discrete methodological traditions of inquiry that examine people's problems, actions, belief, thought and perception in individual and social life.

The participants were two English teachers from different schools in Bandung; the first one was a vocational school teacher and the second one was a senior high school teacher. Besides accessibility reason, they were chosen by using purposive sampling. This is in line with the statement of Maxwell (1996) and Alwasilah (2011), the teachers could give the important and appropriate information that the other people could not give. After that, selecting two teachers from two different kinds of schools were expected to give a clear explanation about the testing practice in same level but different kinds of school.

The data were collected by using interview because this research was set to get more information as clearly as possible about teachers' testing practice and problems (Cohen et al., 2007; Gay, 2009). This research used semi structured interview where researcher only used the important points as a guide to interview the teachers (Wallace, 2001; Emilia, 2011). Therefore, the data were analyzed directly after data collection to avoid delay and decrease memories (Krueger (1998) in Murni (2011)) and analyzed by following three steps (Maxwell, 1996). First, the researcher wrote memo contains important thing about the data. Then, the researcher did categorizing and coding. The last one was contextualizing.

C. FINDINGS AND DISCUSSION

There were four points that were developed to find out the teachers' testing practice in this research. They were general questions about testing and assessment, questions about test preparation, questions about test administration and questions about test correction. The explanation below contains data about teachers' testing and assessment practice. T1 stands for vocational teacher and T2 stands for senior high school teacher.

1. **General Knowledge of Testing and Assessment**

Related to general knowledge about testing and assessment, ten questions were developed in this research.

Table 1. General Knowledge of Testing and Assessment

Questions about:
1. teachers' view about test and assessment (Q1.1)
2. reasons to conduct test and assessment (Q1.2)
3. materials for test (Q1.3)
4. testing the four skills (Q1.4)
5. types of testing for the four skills (Q1.5)
6. communicative competence in teachers' test (Q1.6)
7. test administration in a semester(Q1.7)
8. feedback after test (Q1.8)
9. washback effect and its influence to students (Q1.9)
10. principles of language testing and assessment and the application in test construction (Q1.10)

Teachers' view about test and assessment (Q1.1) is important to know because it will determine how they conduct the test and assessment. T1 believed that test and assessment must refer to the instructional objectives in lesson plan, teaching material and learning process. The connection between test and these components must be under the policy of standards in education. Meanwhile T2 argued that test is the tool for measuring the students' understanding of a lesson and assessment is the information used to assess the students. The data below show the evidence.

T1: *Test and assessment should be based on lesson plan, instructional objectives, material and learning process (Q1.1). I conducted the test to find out whether the students understood the lesson or not. Then I also want to measure their ability (Q1.2).*

T2: *Test is a tool for measuring students' comprehension of lesson that has been taught and assessment is all information that can be used to assess the students' ability (Q1.1). Test is done in order to see the progress and measure the process (Q1.2).*

T1's view of test was in line with Teacher and Lecturer Law No. 14 about teachers' competences that include constructing and developing test. On the other hand, T2's view of test was in line with the statement of Brown (2001) and Brown (2004) that mentions test is the method to measure students' ability, knowledge and performance. Both of these teachers had the same opinion that test was aimed to measure the students' progress and check whether the instructional objectives have been achieved or not (Q1.2). Their opinion was in line with Heaton (1988) and Al-Shara'h (2011) that say test enables teachers to evaluate the effectiveness of the syllabus, methods and materials.

Therefore, T1 preferred using material from textbook, lesson plan and students' material as material used for test (Q1.3). In contrast, T2 constructed and revised the old questions from old tests. The data are below.

T1: *I took the material from textbook and lesson plan. I also had the students to find the material (Q1.3).*

T2: *I constructed the test and revised the old questions. Since I had questions collection, I could revise; I could make the questions simpler or more complicated. It depended on the students' condition (Q1.3).*

Data indicate that the teachers had different ways in determining material for test. Then, compared to Brown (1996) that says the test material can be adopted from sources outside the class or pulled out from the textbook, the data show that the teachers did not vary the material and mostly only used certain material. Carey (1994) in Zhang and Burry-stock (2003) also states teachers should have ability to revise and improve the old test.

Moreover, discrete-point test and integrative test can be used to test the students' ability. Discrete-point tests are those that measure the small bits and pieces of language like test of listening, speaking, reading, writing, pronunciation, grammar and others and integrative tests are those designed to use several skills at one time to employ different channels, like involving two skills in the same test (Brown, 1996; Buck, 2001; Hughes, 2003; Brown, 2004).

T1: *I used integrated test to test speaking and reading, sometimes also writing. I asked the students to work in a group, like preparing presentation. I thought their ability to write*

presentation report was part of writing and their ability to present the material was part of speaking. And for listening, there would be students acted as audience that asked questions and gave response and comment. Then, I also asked the students to do gap-filling tasks in order to test their listening ability (Q1.4).

T2: *Listening was tested in separated way. Reading was usually integrated with vocabulary and grammar. Sometimes, if it was a little bit difficult, grammar was tested separately. Speaking was also separated because it had its own test form. But, for efficiency reason, writing was sometimes integrated with speaking. The students discussed, practiced and performed (Q1.4).*

Based on the data above, unlike T1 that used integrated testing, T2 assessed the students' skills by using both of separated test and integrated test (Q1.4). T1 asked students to do presentation and assessed the four skills in the presentation like listening, speaking, reading and writing, whereas T2 used separated testing to test students' ability in listening, speaking, reading, vocabulary, and grammar. However, for efficiency reasons, T2 integrated speaking and writing. So, both of the teachers actually already implemented integrative testing although they still applied discrete-point test for some certain conditions.

Therefore, while T1 believed that students' participation in presentation discussion could be said as listening activity and presentation could cover the skills of speaking, reading and writing, T2 kept using multiple choice test, gap-filling tasks and picture cued selection for testing listening, asking students to do presentation to assess speaking ability, using multiple choice for testing reading, and asking students to write for testing writing. In addition, both of the teachers used multiple choice in midterm test and semester final test. The data are below.

T1: *I used performance test for checking comprehension in learning process and I used multiple choice for midterm and semester final test (Q1.5).*

T2: *Multiple choice, gap-filling tasks and picture cued selection were usually used for listening test. Speaking was tested through presentation, reading was tested through multiple choice and writing was tested through performance based test. I saw the process (Q1.5).*

Viewed from the data, the teachers did not elaborate the types of tests that they used and they just employed some particular tests for assessing the students' ability although there are many options of test types. As mentioned by Hughes (2003) and Brown (2004), there are various types of tests that can be used to assess the students' ability. For listening, teacher can design paraphrase recognition, listening cloze, picture-cued selection, dictation, retelling, and dialogue and multiple-choice comprehension tests. Speaking can be tested through directed response task, read aloud task, sentence/dialogue completion task, oral questionnaires, picture-cued task, question and answer, interview, role play, oral presentations, story-telling, and retelling a story. Reading, on the other hand, can be assessed by using reading aloud, written response, multiple choice, gap-filling task, short answer task, skimming tasks and outlining. And writing ability can be seen from dictation, picture cued task, short answer and sentence completion task and paraphrasing. Stiggins (1994) also suggests assessment can be done through performance and personal communication.

Furthermore, since communicative competence is included in Indonesian educational curriculum (Agustien, 2006), teachers need to construct tests that cover all the competences. As stated by Savignon, communicative competence refers to "the ability of classroom language learners to interact with other speakers, to make meaning, as distinct from their ability to recite dialogues or perform on discrete-point tests of grammatical knowledge" (Savignon, 2002). From her opinion, it is clear that communicative competence is necessary for students in order to be able to interact in communicative ways with others. As it is a part of teaching process, test made by teacher is also required to examine communicative competence (Q3.1.6). The competence must be included in the test and required in the test takers' actual performance (Canale & Swain, 1980; Brown, 2004). The data about teachers' view of communicative competence on their tests are below.

T1: *I thought presentation and discussion were part of communicative competence. My tests covered communicative competence, for instance discourse competence, strategic competence and grammatical competence. I just saw their competence through their relevance to the topic, accuracy and fluency. I concerned the competence in my test. And for sociocultural, I didn't make it explicit, but I just told the students how to communicate appropriately. I didn't include it in the criteria (Q1.6).*

T2: *Honestly, I still focused on testing students' linguistic competence because it was easy to administer. If the students' grammar was still bad, the students could not communicate effectively and communicatively (Q1.6).*

From the data above, T1 assumed that the assessment that she gave in the form of presentation had already examined students' communicative competence and her questions on summative test had tested grammatical competence. She observed the students' communicative competence in presentation from the students' relevancy, accuracy and fluency. Conversely, T2 admitted that she just focused on testing students' linguistic competence because she believed if students still had problems in grammar, they could not communicate effectively. It can be said that T2's test was not communicative because communicative tests concern how language is used in communication (Heaton, 1988). Then, compared to the theory of communicative competence proposed by Celce-Murcia, Dörnyei & Thurrel (1995) which informs there are five models of communicative competence; linguistic competence, strategic competence, sociocultural competence, actional competence and discourse competence, the teachers still did not fully include and implement communicative competence in their test. T1 has tried to include communicative competence in her test but it still focused on linguistic competence.

Moreover, related to test administration in a semester (Q1.7), both teachers conducted midterm test and semester final test. However, T2 also conducted *Ulangan Harian* or Daily Test for checking students' comprehension and checking whether or not the indicator for some topics was achieved. Besides giving summative assessment-midterm and final tests, T1 focused on assessing students' ability through presentation. She believed the presentation was part of performance or process based tests. Meanwhile, T2 argued that she provided five formative and two summative tests in a semester. The forms of tests were pencil and paper test, writing report, field observation, direct question and answer, quiz and project.

T1: *Besides midterm and semester final tests, I assessed the students through the process and presentation. At least, the students must have one or two scores for each KD or basic competence (Q1.7).*

T2: *For cognitive domain, it could be pencil and paper test, 'Ulangan Harian' (Daily Test), writing report and field observation. At least, there were five formative tests and two summative tests (Q1.7).*

The teachers' administration of test and assessment in a semester was in line with the theory proposed by Brown (2004) and Harlen (2007) about formative and summative assessment. Formative assessment is conducted during learning process and interpreted in term of lesson goals while summative assessment is conducted under teachers' control and school's policy to check the students' progress after learning over period of time. Irons (2008) adds that summative assessment usually provides mark and grade, but formative assessment usually gives feedback.

Then, both teachers provided feedback to students by giving back the test results to the students and discussing the questions together (Q1.8). For performance test and certain cases, T1 gave indirectly feedback to the students whereas T2 gave the directly feedback because she believed it can make the students remember the mistakes. The data can be seen as follow.

T1: *I discussed the questions with the students after conducting test to check the students' difficulties. I also gave feedback indirectly in the end of their performances (Q1.8).*

T2: *I gave back the students' work. If there were only a few students had problems, I directly wrote the feedback on their worksheet and I explained it to them. For speaking or performance test, I gave feedback during the process (Q1.8).*

All the feedbacks that the teachers gave to the students were in line with theory proposed by Brown (2004). T1 gave comments after performance and conducted a whole-class discussion of results of the test, whereas T2 provided marginal and end-of-essay comments and suggestions and managed individual conferences with each student to review the test. Teacher's feedback to students is aimed to improve their performance (Gilbert, 1978 in Campbell & Norton, 2007).

In term of washback effect and its influence to the students (Q1.9), T1 tried not to make students spend money in doing the assessment. T2 said that she did not pay attention to washback effect of her test, but she believed her way in approaching the students and making them feel motivated was part of washback effect.

T1: *While giving test to the students, I tried not to burden the students financially. Some students were happy, but some were not. They did not even attend the class (Q1.9).*

T2: *I did not pay attention to washback effect but I thought the students felt motivated if the teacher cared. There was always progress even though it was small (Q1.9).*

As argued by Hughes, washback is "the effect that tests have on learning and teaching" (Hughes, 2003). It can be achieved when students can recognize the success and challenge of the test. When test develops into a learning experience, it accomplishes washback. Viewed from the data, the teachers understood washback effect and tried to give beneficial washback to the students. It can be said that the teachers' tests had washback effect to the students.

Moreover, when the teachers were asked about the principles of language testing and assessment and the application in test construction (Q1.10), both of them responded that they did not concern the principles. As long as the test was practical and related to the material that they taught, they assumed it has fulfilled the principles of the language testing and assessment. The data can be seen below.

T1: *Test principles? They are accuracy, reliable, visibility, flexible? The test must test what it is supposed to test and give the same result although it is tested in different place and time. I didn't conduct try out to check the validity or reliability since it was time consuming (Q1.10).*

T2: *Principles of test are practicality, reliability and validity. I never analyzed whether the test had the principles or not, the most important thing was that test was practical. The validity and reliability of midterm and final test were analyzed for the administration purposes only (Q1.10).*

As mentioned by Buck (2001) and Brown (2004), there are some principles of the test and assessment: practicality, validity, reliability and washback effects. Teacher needs to find out whether their tests have these principles or not by conducting try out. In fact, both teachers did not apply the principles in the testing process and did not test and analyze whether their tests have these principles or not. For a certain case, they analyzed the principles for fulfilling the administration requirement only. They did not revise or reconstruct the test if it was not practical, valid, or reliable. They said it would be time consuming for conducting such an analysis.

2. Teachers' Preparation for Testing

Besides teachers' knowledge about test and assessment, it is also very significant to find out the teachers' preparation for testing. Some questions were developed to identify teachers' strategies in preparing a test.

Table 2.Test Preparation

Questions about:
1. steps in preparing test (Q2.1)
2. test specification (Q2.2)

In preparing test (Q2.1), T1 followed three steps: (1) she taught all material necessary for the tests; (2) she wrote and showed test specifications to the students; (3) and she checked students' understanding by letting them ask questions about the lessons. Conversely, T2 admitted that she checked the indicator of the lessons and matched it with the old questions from old tests. She mentioned that she commonly recycled and revised the old tests and constructed new questions for certain test.

T1: *I checked whether the material has been explained. Then, I showed the test specification to the students and gave them chance to ask questions (Q2.1).*

T2: *Since I had questions collection, I matched it with the indicator to decide whether to construct or to revise the old questions (Q2.1).*

Compared to theories proposed by experts, the teachers still did not apply the stages in constructing test completely. Brown (2001) and Brown (2004) argue there are some stages:

(1) Test toward clear, unambiguous objectives; (2) draw up test specification; (3) draft your test; (4) revise your test; (5) final-edit and type the test; (6) utilize your feedback after administering the test; and (7) work for your washback. Another expert, Alderson (2005) reports some stages in constructing test: (1) identifying test purpose; (2) developing test specifications; (3) guidelines for and training of item/task writers and moderation of their products; (4) pre-testing, analysis of results and revision of test; (5) training and examiners and administrators; (6) monitoring examiner reliability; (7) reporting scores and setting pass marks; (8) test validation; (9) post-test reports; and (10) developing and improving tests.

Furthermore, both teachers admitted that they prepared test specification before conducting test (Q2.2). However, both of them only used test specifications for midterm and final test. The data are below.

T1: *Indicator, material to test and the direction (Q2.2).*

T2: *It was only for midterm test and final test. It contained competence standard, basic competence, indicator, items number, test type and level of cognition (Q2.2).*

T1 told that her test specifications contained indicator, material to test and the direction about test. Her specifications were in line with test specifications proposed by Buck (2001) and Brown (2004) that consists of broad outline of the test, what skills to test and what item looks like. Meanwhile, T2 informed that the test specifications were prepared by the school and it comprised competence standard and basic competence, indicator, items number, test type and level of cognition. Some points of her test specifications were in line with specification proposed by Hughes (2003) that contains content, test structure, timing, medium/channel, techniques to be used, criteria, levels of performance, and scoring procedure although she did not include timing, medium and scoring procedure. Overall, both of them had followed experts' specifications.

3. **Testing Administration**

Table 3.Testing Administration

Questions about:
testing administration (Q3.1)

In administering midterm and final tests, firstly, T1 and T2 checked the students' comprehension to find whether the students had understood all materials or not. Then, she informed the students that the test will be conducted in the certain days and she anticipated all the possibilities that will make students cheat. Instead of showing test specifications to students just like what T1 did, T2 tended to explain the test to the students and remind them what the test would be like. She believed that way would motivate the students to prepare themselves in facing the test. During the semester, T1 informed that she also asked the students to do presentation in a group and then she assessed the students' ability through their performance and participation in discussion. On the other hand, T2 conducted test based on the materials that she had taught to the students. She provided the test in the forms of multiple choice, paper and pencil test, performance test, direct questions and answer, quiz, and task.

T1: *I checked the students' comprehension and prevented them from cheating (Q3.1).*

T2: *I informed the students what to test, the time and also the scoring system (Q3.1).*

As informed by Hughes (2003), in administering test, teachers need to pay attention to the preparation of materials and equipment, examiners, invigilators (proctors), candidates, rooms and administration. From the data, it is clear that the teachers tended to pay attention to the students' preparation in facing the test only. In fact, there are also other influential aspects for test that the teachers should concern.

4. Test Correction

Table 4.Test Correction

Questions about:
1. analysis the test results (Q4.1)
2. the scoring system (Q4.2)

The teachers did not have any consideration in analyzing the result of multiple choice because it was checked by using scanner that was available in their school. However, for performance based test, T1 concerned the students hand writing, relevance of the answer with the instruction, accuracy and students' reasoning. She informed that she had rubric for correcting the test. Then, T2 told that she considered the students' aptitude, work, diligence, effort and team work when she assessed the performance test result. She added that these criteria were categorized into affective assessment. She also mentioned that there was a range that was available in the curriculum for assessing these criteria.

T1: *I did not consider anything in correcting multiple choice because it was checked by school with scanner. But, for performance test, I concerned the students' handwriting, relevance of the answer, accuracy and reasoning (Q4.1).*

T2: *I didn't consider anything in correcting multiple choice but I concerned the students' aptitude, work, effort, diligence and team work in performance test (Q4.1).*

T1 reported that she did not provide short answer test and open answer test to the students, so she did not consider anything in correcting those kinds of test. Conversely, T2 stated that she concerned the students' condition, knowledge, and background. She admitted that she wondered how the students could answer in certain way. T1 added that she never analyzed the test. In contrast, T2 declared that she analyzed the test result although it was only to find out why the students had wrong answers for some questions. She did not analyze the test for the validity and reliability purpose. Hence, the teachers did not apply and test the principles of test and assessment like what proposed by Brown (1996), Hughes (2003) and Brown (2004).

In addition, both teachers used norm referenced test for assessing midterm and final semester test and used criterion-referenced test for assessing performance based test.

T1: *Multiple choice used norm referenced test and performance test used criterion-referenced test (Q4.2).*

T2: *Norm reference test and criterion-referenced test were used (Q4.2).*

As informed by Brown (1996) and Hughes (2003), norm referenced test is constructed to measure global language ability such as overall English language proficiency and reading

comprehension and the scores will be interpreted relative to the scores of all students who took the test. Meanwhile, criterion-referenced test is conducted to evaluate specific objectives and the scores will be interpreted by considering that each student's score is meaningful without reference to other students' scores.

D. CONCLUSION

This paper reported the results of an investigation of EFL teachers' testing practice. The purpose of the research was to discover the testing practice of two EFL teachers from different school; vocational school and senior high school. Data were collected by using semi structured interview. The data show the teachers' testing knowledge and practice. Based on the data, it can be said that the teachers had some similarities and differences in testing practice.

Both of them had the same view about test and assessment and their view was in line with the experts' view. They had different ways to get materials for the test. Then, both of them also implemented discrete-point test and integrative test although they did not vary the test types to use. The data also indicate that the teachers' tests do not include communicative competence yet and still focused on testing linguistic competence. Related to feedback and washback effect, both teachers gave feedback to the students and concerned washback effect of their test. The teachers recognized principles of test and assessment; however, they did not apply the principles in their testing practice. Furthermore, the teachers have followed the stages in preparing test even though it was still only for some stages. They also prepared test specifications before conducting test. Nevertheless, both of them did not analyze the test result.

This research is expected to give contribution to the testing system in education field in Indonesia, especially in English teaching because this research uncovers the teachers' common testing practice in the school. The limitation of this research was the small number of participants and data collection. It is expected that the further research can investigate more participants and triangulate the data collection.

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EFL TEACHERS' PERCEPTIONS ON THE IMPLEMENTATION OF THE 2013 CURRICULUM IN SENIOR HIGH SCHOOL

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Abstract

This is a report of a research which was aimed to respond the implementation of the 2013 curriculum in English teaching. In relation to this, there is a consensus that teachers' perceptions on a new curriculum affect the implementation of it in the teaching and learning process. Dealing with this notion, teachers may give variation reactions, ranging from giving a warm welcome to active resistance as a response to curriculum innovation (Suherdi, 2012). Therefore, it is considered necessary to seek teachers' judgments on the implementation of the 2013 in English classrooms (Posner, 1992). In relation to this, with two teachers from different schools, the present study aims to investigate teachers' perceptions on the implementation the 2013 curriculum in English teaching and learning process. The present study utilized descriptive qualitative method, and the data were obtained through open-ended questionnaire and interview in order to collect relevant data. The results of the present study were in accordance with the statement proposed by Posner (1992); Richards, 2002; Suherdi (2012); Mulyasa (2013); Syahmadi (2013); and others. The research findings of the study revealed that there were three problems encountered by the teachers in implementing the 2013 curriculum in EFL classes; namely, (1) Limitation of suitable textbooks, (2) The limitation of teachers' training, and (3) time allocation. Besides, generally, the teachers' perceptions on the implementation of the 2013 curriculum in EFL teaching were positive.

Keywords: english teaching, the 2013 curriculum, teachers' perceptions.

A. INTRODUCTION

Curriculum is considered as an essential part for all level of formal education. In curriculum development, it is logical to say that curriculum implementation, where the curriculum is placed into practice, is an essential phase of a curriculum development since the success of a curriculum can be determined from its implementation in teaching and learning process. In relation to this, Posner (1992) asserts that there are some components that should be taken into consideration in analyzing a curriculum. Furthermore, he (1992) affirms that one of them is about teachers' judgment on the present curriculum. It is as stated by Kennedy (1997, cited in Ivone, 2005) that teachers' perception play a crucial role in influencing their teaching practice.

Seeing the 2013 curriculum that has just been implemented by some schools, in fact, teachers may give variation reactions, ranging from giving a warm welcome to active resistance as a response to curriculum innovation (Suherdi, 2012). Considering this fact, it is probably safe to say that some teachers may have different perceptions on the implementation of 2013 curriculum. Due to that reason, it is important to investigate teachers' perceptions on the implementation of new curriculum, particularly in EFL teaching.

Regarding the implementation of new curriculum, teachers' role is utmost important. It is in line with the statement proposed by Richards (2002) that teachers play the key role as people who interpret curriculum and give life to it in the classes, particularly in EFL classroom by means of their instructional strategies. Besides, it is noted that teachers' perceptions and knowledge of the orientation of a curriculum provide a chance for them to exploit their best in implementing it in their classrooms (Kautsar & Akhtar, 2012).

In EFL curriculum implementation, a study conducted by Yanik (2007) at secondary public school teachers in Turkey, particularly seventh and eighth grade EFL teachers who implement language curriculum in EFL context reveals teachers' different perceptions on implementing the language curriculum and problems encountered by them in the implementation process. In the study, the result shows that there are some problems encountered by the teachers in the implementation process as the results of the lack of materials and resources, the course-book, the learners, the classroom environment, and the curriculum.

In terms of English in 2013 curriculum, Suherdi (2013) argues that there are some radical alterations in the new curriculum compare to the previous one. The change can be seen particularly in the way English teachers conduct teaching and learning process since it does not only focus on language competences but also focuses on moral education, both religious values and attitudes (Suherdi, 2013; Hapsari, 2013). In other words, the demand of new curriculum is integrating religious values in English language teaching.

Considering the new designed curriculum, 2013 curriculum which has been tried out in some school in each province in Indonesia, it is clearly stated that English is one of compulsory subjects to be taught in secondary school. In relation to tis, it is noted that in secondary school, the curriculum has been currently started to be used in seventh grade of junior high school and tenth grade of senior and vocational school. Carrying the issue stated above, different from Yanik's study which focused on seventh and eighth grade teachers, the present study tries to focus on senior high school teacher's perception. A teacher in one of public senior high schools who implement 2013 curriculum in EFL classes was taken as participant in this study. The scope of the present study tries to reveal the senior high school teacher's perception on the implementation of 2013 curriculum in EFL teaching and learning process. Regarding the issue mentioned above, the present study tries to seek the following question:
a. What understandings do teachers' have about the 2013 curriculum in EFL classes?
b. What are the problems encountered by the teacher in implementing the 2013 curriculum in EFL classes?

B. LITERATURE REVIEW
Teachers' Perceptions on EFL Teaching in the 2013 Curriculum

It is totally true that the implementation of new curriculum requires some supporting factors such as teachers (Lengkanawati, 2011). It is due to the fact that each teacher is a key factor that may influence the success of the implementation of curriculum revision (Richards, 2002). Additionally, Posner (1992: 186) affirms that "an official curriculum is meaningless unless it is translated by teachers into an operational curriculum."

Typically, in responding the implementation of new curriculum, the 2013 curriculum, into the teaching, especially English teaching in Indonesia, teachers show various reactions (Suherdi, 2012). It may cause by the fact that each teacher has different views on teaching. It is as stated by Brown (1995:183) that "teachers may differ in their individual teaching skills, in how they teach, in the demands that can be made on them, and so forth."

In facing the new curriculum, it can be said that some English teachers may find some factors that hinder them in implementing the curriculum. Meanwhile, others may easy to implement the new curriculum. Moreover, since the new philosophy underlying the new curriculum is commonly new to the teachers, this phenomenon of reaction is not surprising (Suherdi, 2012). In relation to this, Posner (1992) points out that there are many factors which are considered as frame factors that may influence the teachers' success in implementing the new curriculum; namely, temporal frames, physical frames, physical frames, political-legal frames, organizational frames, personal frames, economic frames, and cultural frames.

C. METHODOLOGY

The present study was conducted to investigate teacher's perception on the implementation of 2013 curriculum in English language teaching and learning process at two public senior high schools in Bandung. This is a descriptive study. The study was conducted at two public senior high schools in Bandung. The participants in the present study were two EFL teachers from two different schools. Before undertaking the study, it was investigated that both of them have been experienced in implementing the English 2013 curriculum for almost a year. Therefore, it is possible to conduct the present study in the schools. In the present study, two data collection techniques applied; namely, open-ended questionnaire and semi-structured interview. Considering the instruments used in the study, the researcher used triangulation. After all the data were collected, they were analyzed by using descriptive qualitative analysis. The data were analyzed, described, and interpreted analytically based on the information gathered from the questionnaire and the interview. They were analyzed to explore patterns that were revealing and interesting. This process involved coding, analyzing and interpreting the data.

D. FINDINGS
1. Teachers Understanding about the 2013 Curriculum in EFL Teaching

To start with, there are two teachers who participated in the present study which comprised T1 and T2. Through the questionnaire, it was found that the senior high school teachers in this study have been implementing the English 2013 curriculum for almost a year.

Both of them admitted that they have been implementing the new curriculum in EFL classes only for X grade students. Actually, only T1's school which get involve as one of schools where the tryout project is taking place, meanwhile the other not. Despite the T2's school is not belong to the tryout project, the 2013 English curriculum has been started to be implemented in this school. It is due to the consideration for preparing the students to face final exam which will be fit to the teaching materials by using the 2013 curriculum. In relation to this, through the interview T2 said:

> "……*walaupun sekolah kami tidak termasuk yang ikut pilot project tetapi karena disarankan mengikuti kurikulum 2013 kami menggunakannya untuk mempersiapkan siswa tiga tahun ke depan menghadapi UN, karena materinya kan sesuai kurikulum sekarang. Kalau tidak nanti sekolah kami dipisahkan tidak sama dengan sekolah lain yang pakai kurikulum 2013.*"

By considering that condition, the T2's school decides to start using the 2013 curriculum in English teaching especially for X grade students.

In implementing the 2013 curriculum in English teaching and learning process, the teachers said that there are some differences in conducting EFL teaching, such as in terms of teaching materials, time allocation, teaching methods and techniques, and assessment criteria. In terms of teaching materials, the teachers uttered that there are some topics which are omitted from English teaching materials for ten grade learners. To take an example, T1 said: "….*untuk teks itu ada beberapa materi yang tidak ada, seperti untuk prosedur teks pada kelas X dalam kurikulum 2013 tidak ada ya…*" Besides, T1 and T2 also admitted that there is a new teaching material which had never taught before, that is analyzing particular songs, as uttered by the teachers:

> T1: "...*Jadi ada belajar menganalisis lagunya kalau di KTSP 2006 itu tidak ada…*"

And,

> T2: "..*ada juga menganalisis lagu, seperti lagu nasional misalnya..*"

Additionally, they admitted that grammar points should be discussed more in EFL teaching and learning process according to the new curriculum compared to the previous one. Moreover, the teachers explain that the reduction in English teaching materials as mentioned above due to the reason that recently the time allocation for English teaching is reduced from four hour per week to two hour per week.

Meanwhile, in terms of teaching approach and method applied in the English 2013 curriculum, the teachers said that they have followed teachers' training for applying the 2013 curriculum in English teaching last year precisely before implementing it in the classrooms. Through the training, they admitted that they were introduced to the scientific approach which demands the teachers to become more creative. As uttered by T1 in response to the interview, *"...pada kurikulum 2013 kita ditintut lebih kreatif lagi dan kita menggunakan scientific approach ya."* Similarly, T2 also said that in implementing the 2013 curriculum in English teaching, teachers should be creative since the activities the classroom more varied than by implementing previous curriculum. To clarify, T2 stated that actually in school based curriculum there was also demand for teachers to be creative, but in the new curriculum

teachers should develop their creativity more in order to engage the students in the learning process.

Additionally, both of the teachers said that the teaching activities conducted by the teachers have changed along the curriculum revision, that is, from three step, called, eliciting, exploration, and elaboration, become five steps of teaching activities, called, observing, questioning, associating, experimenting, and networking which promote creative learning. To do those teaching activities, the teachers believe that they need to be creative.

Regarding the English teaching methods in the 2013 curriculum, T1 also admitted that there are teaching methods introduced in teachers' training for English in the 2013 curriculum which never been used before by her; namely, project based learning, problem based learning, collaborative learning, and discovery learning. Meanwhile, T2 had slightly different statement toward the methods. T2 said that actually those methods have ever used by her with the school based curriculum, so she had already familiar to the methods. Seeing the explanation above, it can be said that the teachers apparently have known the teaching methods suggested by the 2013 curriculum.

Dealing with integrating moral values, the participants showed their agreement that they should integrate character education in the learning process. To do this, the teachers believed that they need to pay attention of students' attitude during the learning process as stated in core competence, such as sense of tolerance, sense of honest, respect, confidence, and discipline. As uttered by T2, "…*misalkan dia datang tepat waktu, kemudian dia aktif atau enggak. Kalau disini budi pekertinya juga dinilai sopan santun dan kejujuran. Atau, mengintegrasikan pada materi pembelajaran seperti pada teks...*" In relation to this, the participants seem to be aware of integrating moral education in EFL teaching.

Regarding the types of assessment utilized in the English 2013 curriculum, the teachers admitted that actually the assessment forms for assessing students' skills almost similar to the previous curriculum, but now they also focus on affective factors. It is as T2 pointed out: "…*kalau dulu lebih focus ke penilaian ulangan yang menilai cognitive dan psikomotor, sekarang menilai juga pengetahuan, kemampuan, juga sikap.*" Thus, the teachers said that there are several types of assessment forms were introduced in teachers' training for the implementation of the 2013 curriculum; namely, portfolio, self-assessment, and peer-feedback. In relation to this, interestingly, both of the participants admitted that they had already applied only two of them, which were portfolio and peer-feedback. Additionally, through questionnaire, T2 also argue that the 2013 curriculum still utilized the same types of authentic assessments, such as formative and summative assessment and portfolios.

2. Problems Encountered by the Teachers in Implementing the 2013 Curriculum

Regarding the problems faced by the teachers in the implementation of the English 2013 curriculum, there were three problems encountered by the teachers in implementing the 2013 curriculum in EFL classes for senior high school students, which are: (1) Limitation of suitable textbooks, (2) The limitation of teachers' training, and (3) time allocation.

a. Limitation of Suitable Textbooks

To begin with, as discussed above, there are several changes in terms of English teaching materials in the 2013 curriculum in Indonesia. Thus, obviously, the ministry of education demands to prepare textbook as one of learning materials in order to support teaching and learning process, particularly for ten grade senior high school students. However, both of the participants said that the ministry of education has not launched the textbook yet. It is discernible in the T2's statement: "*...termasuk dalam pembagian buku juga kami harus mengusahakan sendiri...*"

To make it worse, considering the availability of commercial textbooks, actually, there are a number of commercial English textbooks with the 2013 curriculum that we can find easily to be used in conducting teaching and learning process. In relation to this, unfortunately, T1 said that there was no textbook which appropriate to the 2013 curriculum for EFL teaching, as admitted by her: "*…pertama-tama, sebenarnya buku teks untuk kurikulum 2013 memang sudah ada tapi pas dicek itu belum sesuai jadi saya tidak menggunakan.*" Similarly, T2 also stated that none of the commercial English textbooks which fully appropriate with the English 2013 curriculum.

b. The Limitation of Initial Teachers' Training

It can be said that, limited teachers' training at initial stage may hamper the teachers to implement the new curriculum in the classroom. It is as experienced by T1. In relation to this, another challenged faced by one of the teachers in implementing the 2013 curriculum in EFL teaching was the limitation of English teachers' training for English in the 2013 curriculum caused the lateness of updating new information related to the implementation of the new curriculum, especially about assessment criteria utilized in the English 2013 curriculum. It was due to the fact that T2's school was not included in the pilot project, hence, some late information hampered her to implement the curriculum in English teaching and learning process. Additionally, the T2 also admitted that the lateness of information about assessment criteria inhibited her to not implement the rule based on the new curriculum appropriately. It is as can be seen clearly in her further statement. The T2 uttered:

"*…dalam masalah penilaian dalam I tengah semester sekarang itu terjadi perubahan. Kalau misalkan dulu kami standar kelas X itu 70. Kemudian berubah harus ada 2.66 kalau kita lihat 2.66 itu kan sekitar 6.8 kan. Terus kemudian berubah lagi, jadi tengah semester 1, semester1, lalu semester 2 itu penilaiannya sudah berbeda-beda. Dan ketika ada pemberitahuan kami dapat belakangannya ya karena kami tidak termasuk pilot projek…*"

Considering this problem, since the 2013 curriculum has been implemented recently, it is probably fair to say that the ministry of education and school need to ensure that all of teachers who are suggested to implement the curriculum get detail information for every update criterion.

c. Time Allocation

According to the data, unfortunately, both of the teachers through the questionnaire admitted that the time allocation provided for English in the 2013 constituted inadequate. It is as uttered by T1: "*…Jam pelajaran juga sebenarnya kurang ya sebenarnya butuh waktu lebih*

dari 2 jam." In line with the statement above, the data from interview also reveal that the teachers said that one of the challenges in implementing the new curriculum in EFL teaching was time allocation. In this respect, the limitation of time for English teaching per week was considered insufficient. Dealing with this case, it is clear to say the teachers felt more comfortable with the previous policy.

E. DISCUSSION

Based on the findings, the data indicate that the teachers are knowledgeable about the 2013 curriculum for English language teaching. Besides, it is safe to say that the teachers' perceptions on the implementation of the 2013 curriculum in EFL teaching were positive since they perceived that the curriculum revision was designed to enhance the quality of education in Indonesia. It can also be seen from the data through questionnaire and interview that they have revealed that they wanted to make innovation, such as to be more creative in conducting the learning process in order to lead their students to attain the learning goals. It is in accordance with the statement proposed by Kurniasih & Sani (2014) that English teaching and learning in the 2013 curriculum requires teachers' creativity in order to assist the students to gain high quality of the learning process. Overall, the findings of the study in accordance with the statements proposed by Yanik (2007); Pinwell (2008); Suherdi (2012); Kemendikbud (2012); TEFLIN (2012); Suherdi (2013); Syahmadi (2013); Mulyasa (2013); and Kurniasih & Sani (2014).

Moreover, the data show that the teachers show positive attitudes that they should integrate moral values in EFL teaching. It is in line with Suherdi (2013) that English language teaching should focus on the development of students' high quality of language competence as well as the development of students' moral values. Besides, In terms of assessment that should be used by the teachers, it reveals that the teachers support importance of assessments in the 2013 curriculum which not only focuses on assessing students' cognitive and psychomotor aspects but also affective factors in English language teaching is in accordance with Education law no. 20 year 2003 (Syahmadi, 2013). Additionally, it is as stated by Pinwell (2008) that in order to make the language teaching develop well, the language teachers have to focus on the affective factors in the learning activities. Supporting this statement, Suherdi (2012) affirms that affective factors play important role of the students' success in achieving the learning goals.

Besides, it was discovered that the limitation of teachers' training at initial stage prevent the teachers to implement the new curriculum in the classroom. But actually, it is a must for English teachers to comprehend and implement the new curriculum, so that each school should facilitate them to get training in how to implement it well (Mulyasa, 2013). By doing this, it can help English teachers to implement the new curriculum competently.

In terms of the limitation of suitable textbooks, it can be said that this kind of problem sometimes occur in the implementation of a new curriculum (Yanik, 2007). However, since textbook is one of the teaching materials which is necessary in most EFL program (Richard, 2002), it is logical to say that the ministry of education should launch the English textbook

immediately in order to help the teachers to implement the 2013 curriculum in English teaching and learning process.

Another problem faced by the teachers was the limitation of time allocation. In relation to this, logically, time is considered as the most precious resource of the teacher (Posner, 1992). In relation to this, as mentioned earlier, according to the English 2013 curriculum, the time allocation for English teaching in senior high school was reduced from four hours per week to two hours per week (Kemendikbud, 2012). Thus, the teachers said that the time allocation hindered them to conduct the learning process well. It is as stated by Posner (1992) that time can be the arch-enemy of the teachers in conducting the learning process. Seeing this obstacle, actually, it is as suggested by TEFLIN (2012) that the time allocation for EFL teaching in senior high school, which is only two hours, is considered contrary to the demand of this globalization era. Hence, it is fair to say that attempts to introduce a new curriculum, particularly in English teaching are not always flowing smoothly. Nevertheless, the data show that the teachers support the implementation of the 2013 curriculum in EFL teaching. To sum up, it has been outlined that the teachers reveal their positive perceptions on the new curriculum.

F. CONCLUSION

Referring to the findings and discussions that have been elaborated in the previous section, the present study demonstrates teachers' positive perceptions related to the implementation of the 2013 curriculum in English teaching and learning process. This can be seen from the results of the data from questionnaire and interview. Nevertheless, dealing with the problems faced by the teachers, it is logical to say that the ministry of education should facilitate the teachers to solve those problems in order to the betterment of the implementation of the 2013 curriculum in EFL teaching particularly for senior high school students.

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PORTRAYING THE IMPLEMENTATION OF 2013 ENGLISH CURRICULUM: THE INTEGRATION OF CHARACTER BUILDING IN EFL CLASSROOM PRACTICE

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Abstract

The introduction of new curriculum of 2013 recently demands the integration of character education in schooling system. However, the implementation of character education in classroom practice is still questionable since teachers have different ideas in relation to their understandings about the new curriculum. Therefore, the recent study sought to give comprehensive picture of teacher's effort in incorporating character building in EFL classroom, particularly junior high school which is piloting the new curriculum in Bandar Lampung. In this case study, an English teacher voluntarily participated and her teaching activity was observed by using video recorder. In addition, the lesson plan related to the observed teaching activity was also analyzed in order to ensure whether character integration is included in teacher's teaching plan as it is required by 2013 English curriculum. The findings suggest that character integration appears in each stage of learning activity: pre-activity, whilst activity, and post activity while lesson plan analysis demonstrates that character integration is also reflected in teacher's teaching plan.

Keywords: 2013 English curriculum, character building, EFL classroom practice

A. INTRODUCTION

As many studies illustrate and justify the importance of character education in the 21st century (Beninnga, Berkowitz, Kuehn, and Smith, 2003; Berkowitz and Bier, 2004; Adeyemi, Moumakwa, and Adeyemi, 2009), the effort of refining character education in schooling system introduced in the new curriculum of 2013 is worth our attention. In connection with teaching English as a foreign language (EFL), teachers are expected to concern communicative competence as well as building their characters (Syahmadi, 2014: 26). However, although the character integration was actually started since the implementation of previous curriculum, many questions remain about how to establish the practice of character building in EFL classroom is still questionable and needs to be explored further.

Given that most of the teachers (especially English teachers) do not have enough opportunity to learn about the new curriculum, further study is required to ensure that the classroom practice is interwoven with the curriculum. This study sought to portrayed teacher's effort in integrating character in EFL classroom context. Since the new curriculum was introduced in 2013, the recent study was conducted in junior high school which is piloting the new

curriculum. In order to make it clearer, the inquiry would be guided by the following general questions.

1. How does the teacher integrate character building into the classroom practice in the pilot school of new curriculum of 2013?
2. Is the integration of character education reflected on the lesson plan as it is required by the curriculum of 2013?

Since the new curriculum of 2013 had just initiated recently, the present study would be the first empirical study ever carried out in exploring the integration of character building in EFL context particularly in Indonesia. The report of the study would be very beneficial for teachers who are seeking new ways of teaching particularly under the implementation of the 2013 curriculum. In addition, it also adds to the literature of the similar research area in general.

B. LITERATURE REVIEW

1. Definition of Character in Educational Objectives

It is difficult to address the role of character education in schooling practice before we pay attention to the definition of character itself. Sometime this term is used interchangeably with *personality* and *attitude.* In this case, Berkowitz and Bier (2004) clearly define that character is psychological characteristics which is complex and related to moral functioning. It can be inferred that the purpose of building character is that to make individual behave appropriately. Narvaez and Rest (1995) as cited in Vessels and Suitt (2005) also add that the focus of character building should be on the internal processes and behavioral skills that are required for moral behavior and propose that sensitivity, judgment, and motivation emerge from the interaction of cognitive and affective processes.

The idea proposed by Narvaez and Rest (1995) is also similar to the educational objectives established by Krathwohl, *et al.* (1999). They pointed out that the process of acquiring character can be described through five major classifications: (1) *receiving* (e.g., state of being able to pay attention to someone or something); (2) *responding* (e.g., the state of being able to take action, to appreciate, and to obtain satisfaction); (3) *valuing* (e.g., the state of being able to have acceptance of value, preference for a value, and commitment to something due to its perceived worth or value); (4) conceptualizing (e.g., the condition of being able to add new values or beliefs to the existing value system); (5) characterizing (e.g., the condition of being able to integrate values to the life style, to have orientation towards it, and start to live with it naturally).

The classification of Krathwohl's taxonomy above has become a fundamental aspect in deciding the goal of schooling system including the new curriculum 2013 in Indonesia. Therefore, this classification would be the alternative of observable aspects of learner's affective domain considered in this study.

2. Character Education from 2013 English Curriculum Perspectives

2013 English curriculum views character education should be integrated in classroom practice along with cognitive and psychomotor domain. This requirement is stated into course

objective which is called *Standar Kompetensi Lulusan* (SKL) (Syahmadi, 2014: 25). Furthermore, the statement of the specific objective is included in basic competences (KD) which cover communicative competences and the observable behavioral characters of students that are divided into nine primary characters: *respect, responsive, responsibility, honesty, team work, compassion, courtesy, confidence, and nonviolence*. These characters are stated in every basic competences integrated in particular subject matter and students are expected to develop and integrate all primary characters into their daily activities. Concurrently, according to (Fitri, 2012: 52) Character learned inside the classroom can be also integrated into pre-activity, whilst activity, and post activity. Therefore, the procedure of analyzing the data is divided into those stages.

3. Character Education in Social Studies

In the recent decades, probably, one of the well-known studies conducted in the early 21st century in purpose of examining the relationship between character education and academic achievement was administered by Beninnga *et al.* (2003) in California, USA. Applications from the 681 elementary schools applying for the California Distinguished Schools Award in 2000 were randomly selected, evaluated, and scored for character education implementation. This study found that schools with higher total character education implementation tended to have higher academic scores on academic measures for the year prior to their application, the year of their application and the subsequent two years.

Moreover, Adeyemi *et al*. (2009) had done literature analysis regarding teaching character education across curriculum at the junior secondary level at Botswana. In this case, the paper justifies and illustrates the teaching of an aspect of character education across the subject boundaries, and in this case, with the use of a passage from English literature text to also teach a topic in social studies at the junior secondary school level in Botswana. It provides an illustration of how 'unity', as an aspect of character education can be taught in English literature and Social Studies in Botswana in an interdisciplinary manner.

In relation to the recent study presented above, even though the research carried out by Binnanga *et al*. (2003) and Adeyemi *et al*. (2009) had successfully justified that there is a positive effect of character education towards the schools' achievement. Little has been known how teachers integrate character building into the classroom practice. Therefore, the present study would seek the actual practice of character integration in classroom practice under the implementation of the new curriculum of 2013 which had just been introduced by the policy maker last year.

C. METHODOLOGY

On this section, several points related to the methodology of the research will be elaborated. It covers research site and participant, design, data collection techniques, procedure of collecting the data, and data analysis.

1. Site and Participant

One of the junior high school in Kemiling, Bandar Lampung had been chosen as the research site since it is piloting the new curriculum of 2013. On the basis of mutual trust that

has been established since the last research carried out by the researcher as the requirement of bachelor program two years ago, the permission of exploring classroom activity in a class of seventh grade was granted. In addition, one of the English teachers in that school voluntarily participated in this research since the report of the findings would also contribute to the school development, particularly the teacher's pedagogical skill in integrating character education in EFL classroom.

2. Design

Since this research only focuses on particular case which is associated with the integration of character education in a classroom practice, the single case study was employed as the design of the research. Therefore, the principles of qualitative approach that puts forward naturalistic and interpretive ways of understanding the phenomena were considered. In this case, the picture of single classroom activity was required to get teacher's effort in teaching character and how she integrates it into the classroom and her teaching plan.

3. Data Collecting Techniques

Given that the purpose of the study is to gain the portrait of character integration in a classroom practice and lesson plan, the techniques used in collecting the data can be presented as follows.

a. Classroom Observation

Since this study requires the natural process of classroom practice, observation is regarded as the best technique in gaining the picture of teacher's effort in integrating character building. In this case, a class of seventh grades had been observed for 90 minutes by using video recorder. The use of video recorder was employed as an effort to keep the condition of the classroom as natural as possible. This classroom observation was done only one time since the data collected had been enough to answer the research question formulated initially in this study.

b. Document Analysis

In order to ensure whether the character integration is also reflected in teacher's effort in designing lesson plan for teaching, document analysis was utilized in the present study. In this case, the lesson plans of the meeting being observed were also collected from the teacher. In addition, considering the principle of qualitative research which is a naturalistic approach and interpretive ways of inquiry, researcher is regarded as the main instrument in this study. The researcher interpreted and analyzed the data based on the appropriate theoretical construct of understanding the phenomena.

4. Procedure of Collecting the Data

In this study, the role of the researcher is a pure observer. It means that the researcher played as an outsider who collected the data as it is situated in natural context without talking, interrupting, and suggesting. To make it clear, the procedure of collecting the data can be illustrated in the following order.

a. Getting Access

After deciding to choose the research site through numeral reasons stated previously, the first step of collecting the data is getting an access to the research site by asking permission from the school principal. Given that the school would also get benefit from the present study, the access was granted. One of the English teachers participated voluntarily after being informed by the principal regarding the upcoming study. The schedule of the research was settled then on the Wednesday 30th, 2014.

b. Observing Classroom Activity

In this step, video tape recorder was utilized to observe the classroom activity. As has been stated earlier, one meeting observation is divided into three phases: pre-activity, whilst activity, and post activity. On each stage, teacher's effort in teaching character was observed. The duration of the recording was one time meeting which is around 80 minutes. Since one meeting of classroom session provided sufficient amount of data, the observation was stopped.

c. Collecting Related Document

In order to ensure that the practice of character education required by the new curriculum of 2013 is also reflected in the teacher's teaching plan. The lesson plan of the meeting being observed was also collected.

All of the steps above were conducted chronologically in relation to the purpose of the study. The data then were analyzed by following certain procedures that can be seen in the next section.

5. Data Analysis

After having data collected through the videotaping, the process of analysis was started with transcribing related activities which were expected in this study into the words. Then, data were reviewed line by line, labeled, and categorized. In transcribing the data, the researcher used some abbreviations such as (**T**: Teacher; **Ss**: Students, **S$_1$**, **S$_2$**, etc.). In addition, related document is analyzed by identifying in which parts of lesson plan the teacher includes character integration. The combination of two data being analyzed was sufficient in order to provide the comprehensive information related to teacher's effort in integrating character building as it is required by new curriculum of 2013.

D. FINDINGS

In this section, the findings are presented in relation to the initial research questions. Since it was found that the teachers used much first language (Indonesian language) in teaching, the transcriptions were translated into English to facilitate the ease of reading. The findings of the study are presented into three stages of teaching activity: pre-activity, whilst activity, and post activity.

Research Question 1: How does the teacher integrate character building into the classroom practice in the pilot school of new curriculum of 2013?

Pre-activity: (Teacher's effort in showing courtesy)

Since the very beginning of time, the class was opened by saying greeting. This activity has been, no doubt, the regular activity done by the most schooling activity in Indonesia. The character that has been generated by the teacher was that showing greeting with courtesy was that the first thing that everyone should do when they meet the teacher or the other members of classroom.

However, in this phase there were several missing parts of activity such as explaining the learning objective that should be attained by the students in the end of the meeting and asking some questions related to the previous topic and what are going to be learnt in the present meeting. Those are actually some important parts of pre-activity that should be done by the teacher in relation to the guideline of classroom practice provided by the curriculum of 2013 but since it is not the concern of this study, this would not be discussed further.

1. **Whilst Activity: (Teacher's effort in developing responsibility, team work, and respect)**

In this part, the teacher explained the topic being learnt in relation to *public sign*s or short functional text. The teacher used some multimedia teaching aids such as LCD projector and laptop computer to give a model of public signs and their functions. The students were asked to observe the pictures presented on the LCD screen. While students were observing the pictures, the teacher asked some questions related to them. In case of asking related questions, the students seem to be very passive. The teacher then attempted to encourage students to be responsive and proactive by saying, "please, raise your hand", and some students were finally able to respond teacher's question.

After giving some explanations related to public signs, the students were asked to make a group of four. Each group was asked to discuss one public sign in terms of meaning and function. Here, the character of *team work* was seen within groups. Even though it was not clear enough to catch students' interaction within groups due to classroom "buzz", it can be seen that the tasks were shared to all members within the group. There is a member whose task was writing the report, some others were consulting dictionary, and some others gave their opinions related to the task being asked. These activities reflect students' character of responsibility.

Furthermore, the evidence of students' character development happened when a member of group was pointed to be the presenter and she still did not feel confident about herself. This can be seen through the following transcriptions.

S$_1$: Who wants to be the presenter?

S$_2$: How about you?

S$_1$: But… How to do that?

S$_2$: Well, start it with "Hello.. Good morning friends"

"I want to present…"

When we look at glance, this happens commonly in a group discussion but very crucial in building team work and compassion. When it came to the presentation activity, another evidence of character that can be seen is that applause was given to each presenter who had finished presenting their group's work. This reflects a sense of appreciating the

others' work and performance. The presentation activity seems to be the end of the main activity in this meeting.

2. **Post Activity: (Teacher's effort in teaching characters explicitly)**

In this phase, the teacher gave summary and concluded what has been learnt by the students from the meeting they have been through. In this case, the role of teacher in teaching character is clearly seen as she summarize the lesson and pointed out some values that students must keep in mind. The teacher said:

> What have we learnt from the lesson today? We have learnt that we should be responsible for the cleanliness of our environment. Do not litter and put the garbage in the dust bin. Moreover, 'Keep Silent' means that we should keep quiet and turn off our mobile phone when we come to the mosque or library. 'Don't Smoking' means that we are prohibited to smoke around that area because it can pollute the air and endanger our health.

From this point of view, the last activity appears to be the biggest opportunity for teacher to explain the values behind the use of public signs. The transcription above suggests that the teacher put forward responsibility, compassion, and discipline as the characters that should be developed by her students. Therefore, teacher's role in integrating character was explicitly seen in this stage.

Research Question 2: Is the integration of character education reflected on the lesson plan as it is required by the curriculum of 2013?

In reference to the analysis of the lesson plan being used to teach in the classroom, the integration of character building can be seen in the statement of basic competence. It is stated that 'Students are able to show their responsibility, compassion, team work, and nonviolence'. However, this objective was not explicitly written on the procedure of learning activity. In addition, the integration of character building is stated in the way the assessment is conducted. Characters evaluation is included in individual assessment which was done by the teacher during the process of discussion and presentation.

E. DISCUSSION

Based on the findings presented above, the result suggests that the character integration was captured on the each stage of learning activity: pre-activity, whilst activity, and post activity. In the stage of pre-activity, the teacher demonstrated how to show courtesy by saying greetings to the some members of the class. This activity is likely to occur regularly and becomes the culture which exists in schooling practice in Indonesia. The role of the teacher here is modeling the character as it is in line with the idea established by Lumpkin (2008).

On the contrary, in the stage of whilst activity, the teacher did not directly model the character. Instead, she created the condition or situation which enables students to develop the character of team work, responsibility, and compassion through discussion and presentation. This finding is somewhat related to the educational philosophy of social constructivism. This idea suggests that all learning (including character learning) occurs when students are doing collaborative work group or group discussion (Smith and Ragan, 1999: 16).

In the last stage, the teacher summarized the lessons that had been learned by the students. In this case, the teacher attempted to give conclusions and to teach explicitly the values behind the use of public signs and warnings. Teaching character explicitly is likely to be the process of "value transfer" which is the part of teacher's pedagogical knowledge that is importantly required in character education (Veugelers, 2011: 22).

Finally, it appears that in one meeting the students' development of character building could be seen and teacher's effort in transferring character was obvious. However, it should be realized that not all characters required by 2013 curriculum were captured in this process. It might be difficult to teach all characters in one time meeting but the whole process of classroom practices in a year should cover and develop all characters expected.

F. CONCLUSIONS

Based on the findings and discussion stated earlier on this paper, this study generates two conclusions drawn in relation to the initial research questions. First, this study illustrates that the teacher attempted to integrate character building into three stages of learning activity: showing courtesy by greeting to the students in the pre-activity; creating conditions that enable students to develop team work, responsibility, and compassion in whilst activity; and explaining moral values behind the use of short functional text such as warnings and public signs in the post-activity. Second, character integration is also reflected in teacher's teaching plan by analyzing the lesson plan of observed meeting. The integration is pointed out in two aspects of lesson plan: the statement of basic competence and the assessment of students' competence. In this case it appears that the design of lesson plan is in line with the guideline of composing lesson plan adopted from 2013 English Curriculum.

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TEACHERS' UNDERSTANDING AND PRACTICE OF REFLECTIVE TEACHING
(A Case Study of Four English Teachers of High Schools in Bandung)

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Abstract

Teacher education does not stop after the teachers finish their formal pre-service training and education at the university. The teachers who practice the real teaching need to develop themselves by engaging in reflective teaching practice since it is believed as one way to improve the teaching practice. The central goal of reflective teaching is to develop teachers' reasoning about why they employ certain instructional strategies and how they can improve their teaching to have positive effects on students (Lee, 2005). In accordance to the significance of being a reflective teacher, there is a need to know whether the teachers of English in Indonesian context have acknowledged reflective teaching and practice it in their daily teaching practice. This study aimed at investigating the teachers' understanding and practice of reflective teaching. Four teachers of English in four different high schools in Bandung were involved. This qualitative study used case study method to figure out the understanding and practice of reflective teaching of each teacher. Open-ended questionnaire, semi-structured interview, and observation were used as the instruments for collecting the data. The result of the study showed that the four teachers acknowledge the notion of reflective teaching and had practiced the reflective teaching. Their understanding of RT were related to how they defined and recognized the term of RT, the characters of reflective teachers, and the importance of being reflective in their teaching practice. The teachers also had practiced some reflective teaching tools suggested by Richard and Lockhart, 1996. The teachers had already used teaching journal, peer observation, action research, students' feedback, video recording, and action research to learn about their teaching. Although in practice, the teachers still faced some difficulties that impede their practice. They claimed that in their pre-service education program, they did not get any training and courses about RT. As all teachers in this study had had more than five year-teaching experiences, they finally realized the importance of being a reflective teacher after attending workshops, seminar, and reading the literature related to teacher development.

Keywords: *teacher development, teaching practice, reflective teaching,*

A. INTRODUCTION

Teaching is normally recognized as a profession (Wallace, 1991). He explains the term profession as a positive term that means "a kind of occupation which can only be

practiced after long and rigorous academic study, which should be rewarded because of difficulty of attaining it and the public good it brings" (Wallace, 1991 p.2). As a professional, teachers are suggested to continually reshape his/her understanding about his/her knowledge about teaching and learning (Brookfield, 1995; Ellias and Merriam, 2005; Farrel, 2007, 2009). The knowledge of teaching and learning accoding to Meijer et.al (2001) includes the knowledge about subject, learners, curriculum, pedagogic, teaching performance, context, and self-recognition as a teacher.

Actually, the teachers in their education program are well informed of that knowledge related to teaching and learning. However, after entering the real world of teaching, teachers still need to refresh and update their knowledge and skills in teaching because they sometimes work in a complex, ambiguous, and dilemmatic classrooms (Cimer, 2001).

Several attempts can be done by teachers to improve and develop their competences to be a professional teacher. The efforts are either by joining training and education program or by engaging in teacher development (Wallace, 1991). The distinction between the teacher education/training and the teacher development is on the initiative assumed. Where other parties may be assumed to manage teacher training or education, the teacher development is something that can only be done by the teacher himself (Edge, 1988 in Wallace, 1991). Moreover, Richards (2005) explains that teacher training just focuses on the short-termed goal of learning and emphasized on specific skills and responsibilities meanwhile the teacher development refers to the long-termed teacher learning to improve their teaching abilities and skills. In order to engage in teacher development, the teacher needs to have a systematic and objective collection of his own teaching behavior and all information about his teaching practice in order to have necessary changes in the future teaching (Rani, 2012).

In this case, most of the teachers lack of information about what they have done in the classroom (Richards and Lockhart, 1996). These two experts complain that the teachers rarely examine their own teaching practices. Many teachers do not use their time to think about their actions in the classroom. They just wait until they are supervised by the principal or the the supervisor. Many researches evoke that the experienced teachers apply classroom routines and strategies almost automatically without involving a great deal of conscious thought (Parker, 1984 in Richards and Lockhart, 1996). In accordance to this, there have been many experts talking about the teacher development. Richard and Farrel (2005) explain that the teachers' competences could be developed by joining teacher workshop and training, keeping teaching journal and portfolios, having teacher support group, peer observation, and self monitoring. Furthermore, Zeichner and Liston (1996) suggest that teacher should think and question about their goals and values in teaching and examine his/her teaching assumption.

The teacher development in this way is actually based on the concept of reflective practice in teaching. Reflective practice itself has a lot of given definitions. In this study, reflective practice in teaching is defined by Farrel (2004 p. 27) as "a systematic and structured process in which the teacher looks at a concrete aspects of teaching and learning with the overall goal of personal change and more effective practice." Moreover, Zeichner and Liston (1996) earlier explain that reflective teaching is a teacher's attempt to solve the problems he/she faces related to his work as a teacher.

In fact, there have been many researches worldwide talking about reflective practice in teaching. The recent study conducted by Fatemipour (2009) investigated about the effectiveness of reflective teaching tools in English language teaching in Islamic Azad University. He found that there were four tools that teachers could obtain data effectively about their teaching practice. The tools were teacher diary and journals, peer observation, audio and video recording. In addition, Attamturk (2011) investigated the reflective practice and its role in stimulating personal and professional growth of teachers in Turkey. The result of this study showed that gender, experience, and level of education did not play a role in teachers' reflection.

In Indonesian context, the study about reflective English teaching is still very limited. The most recent study in Indonesia University of Education related to reflective practice in English teaching was an action research conducted by Martina (2013). She studied about the use of reflective teaching to improve novice teachers' performance. The result of the study showed that reflective teaching improved the following teaching domains; teacher preparation, classroom management, and teacher-student interaction. There is still very limited study in attempting to know the Indonesian teachers understanding and recognition about reflective teaching, and their practice of reflective in their teaching. In order to fill the gap of the research related to reflective teaching in Indonesian context, this study attempted to find out the teachers' understanding and practice of reflective teaching and the impediments that prevent teachers from being reflective in their teaching.

In line with the background above, in the context of teaching English in Indonesia, this study attempts to address the following research questions:
1. What is the teachers' understanding and practice of reflective practice in teaching?
2. What are the impediments that prevent teachers' reflection?

B. LITERATURE REVIEW

There are numerous philosophers, theorists, teacher educators and researchers that have contributed to the establishment of reflective teaching. Few theorists with their varied concepts of reflection have had an important influence on much of the writing on reflection in teacher education (Montie, 2006). One of these theorists is John Dewey (1933) who is recognized as the founding father of twentieth century influence on reflection in education. Much of his discussion about reflection, which is found in his book help to promote thoughtful action by teachers.

Dewey in Calderhead (1989) distinguishes between human action that is reflective and that is routine. According to Dewey, routine action is behavior that is guided by impulse, tradition, and authority and it can also be defined as the random "stream of consciousness" of everyday experience (Dewey in Calderhead, 1989, p.44). Dewey states that in every school, there are routine definitions or reality or a collective code in which problems, goals, and the means for their accomplishment become defined in particular ways. Teachers, who are less reflective, according to Dewey, often accept everyday reality in schools uncritically and concentrate their efforts on finding the most effective means to solve problems in general. This means that teachers who are less reflective teach in routine fashion and follow what is

recommended in the designated textbooks or in the guideline of teaching. They also teach in the same way the lesson was taught in the past without questioning or adjusting their teaching methods.

Dewey (1933, p. 9) defines reflective action as "active, persistent, and careful consideration of any belief or supposed form of knowledge in light of the grounds that support it and further conclusions to which it ends." Dewey also views action based on reflection as intelligent action, in which its justification and consequences have been considered, as opposed to appetitive, blind, or impulsive action (Calderhead, 1989). Dewey argues that reflective action is a process that involves more than a logical and rational problem-solving process. Instead, it involves intuition, emotion, and passion and it is not something that can be neatly packaged as a set of techniques for teachers to use (Green, cited in Zeichner and Liston, 1996). This indicates that in reflective action, in contrast to routine action, reason and emotion are integrated.

Dewey cited in Calderhead, 1989) argues that open-mindedness, responsibility, and wholeheartedness are dispositions that push a more reflective teacher toward a critical and supportive examination of his/her teaching. Zeichner and Liston (1996) show that open-mindedness is an active desire to listen to different sources, to give full attention to alternative possibilities and to accept strength and weaknesses of the one's and others' perspectives. The second precondition of reflective action, according to Dewey (1933), is the attitude of responsibility, which involves careful consideration of the consequences to which an action leads. The third attitude necessary for reflection, according to Dewey (1933) is wholeheartedness. Dewey indicates that teachers who become wholehearted regularly examine their own assumptions, beliefs, and results of their actions.

Next, the American sociologist Donald A. Schon in various writing (1983, 1987) has also influenced teacher education with his concepts of reflection-in-action and reflection-on-action. In his book, *The Reflective Practitioner*, Zeichner and Liston (1996) argue that Schon (1983) presents critique of the technical rationality that has dominated professional practice throughout most of the twentieth century. Schon's concept of reflection-in-action and reflection-on-action are extended views of Dewey's notion of reflection by emphasizing the context and the moment in which reflection takes place (Freese, 1999).

Reflection on action refers to the thinking about the lesson before as well as after the lesson. Reflection-on action as stated by Schon (1983; 1987), professionals will look back in their teaching practice after the completion of the task. It means that in the teaching practice, the reflection of the teaching practice will be conducted at the end of the class or school period. Reflection-in-action, on the other hand, refers to the thinking that occurs during the act of teaching and this form of reflection is claimed to be often tacit by Schon (1983). Schon (1987) defines reflection-in-action as "a reflective conversation with the materials of a situation".

According to Schon (1983), more reflective teachers reflect both i*n* and *on* action. He also shows that both relection-in-action and reflection-on action are based on a view of knowledge and an understanding of theory and practice that are very different from the traditional ones that have dominated educational discourse. Expanding on Schon's ideas about

reflection-in-action and reflection-on-action, Killion and Todnem (1991) add one more kind of reflection, which is reflection-for-action

Calderhead (1989) argues that the concept of reflective teaching has been defined in various ways based on the context of the writer and researcher education or beliefs about teaching and teacher education. Even the term *reflective teaching*, *reflective thinking*, *reflective inquiry, reflection,* and *reflective practice* are often used interchangeably.

Although the researchers define the term reflective teaching differently (Barlett, 1990; Calderhead, 1989; Jay and Johnson, 2002), these various definitions can be classified into five perspectives (Al Kalbani, 2007): that is, reflective teaching can be seen from a technical perspective, a contextual perspective, a social perspective, an experiential or deliberative perspective, and a critical perspective.

Shulman (1987; 1998) identified six aspects to be noticed when the teachers conduct the reflective teaching practice:

a. Subject knowledge
b. Curriculum knowledge
c. Pedagogic knowledge
d. Acknowledgement of educational issues
e. Personal constructs and identity
f. Pedagogic enactment (performance)

Brookfield (1995 p. 29) says that there four lenses that teacher can use to reflect on, "they are (1) our autobiographies as learners and teachers, (2) our students' eyes, (3) our colleagues' experiences, and (4) theoretical literature.

In accordance to these lenses, Richard and Lockhart (1996, p. 6) identify several procedures or tools of gaining the information about what to reflect on the teaching practice:

a. *Teaching journals* (the written or recorded accounts of teaching experiences)
b. *Lesson reports* (written description of the main features of the lesson)
c. *Surveys and questionnaires* (administering questionnaire on particular aspects of the teaching and learning
d. *Audio and video recordings* (Recording a lesson or part of a lesson)
e. *Observation* (observing or being observed by other teachers)
f. *Action research* (changing particular aspects of teaching and learning through well-planned actions

C. RESEARCH METHODOLOGY

This study employed purposive sampling, which is described as selecting a sample from which one can learn the most to discover, understand, and obtain insight (Merriam, 1998). To collect the data the researcher relied on qualitative research method since she was engaged to go deeply to generate rich data embedded in the context. Questionnaires, in-depth interview, classroom observation, and weekly teaching journal are the main sources of data collection and each of which are described below. To ensure the internal validity of this research, several methods of data collection were used for triangulation purposes (Yin, 2003).

D. FINDINGS AND DISCUSSIONS

As stated in chapter three, there were four teachers got involved in this study. The teachers taught English subject in four different high schools in the region of Bandung. These respondent teachers had varieties in gender and in their teaching experiences. The table below summarizes biographic information of the respondent teachers in this study.

Table 4.1 Teachers' Characteristics

No.	Initials	Gender	Year of Teaching
1.	T1	Female	5
2.	T2	Male	7
3.	T3	Female	20
4.	T4	Female	25

There are several definitions of reflective teaching as the theoretical background of the study as stated in chapter two. There are five classification of the definition of reflective teaching according to Al-Kalbani (2007). The definition can be seen from the five perspectives that are technical, contextual, social, experiential, or deliberative, and critical perspectives. In this study, the definitions of reflective teaching from the teachers' point of view were collected using open-ended questionnaire.

The teachers' definition of reflective teaching can be listed as follow,

Table 4.2 Teachers' Definition of Reflective Teaching

No.	Initial	Perspectives of Reflective Teaching
1.	T1	Technical
2.	T2	Contextual
3.	T3	Deliberative
4.	T4	Social

Related to the teachers' practice of reflective teaching, those four teachers indicated that they have practiced the reflective teaching in their daily teaching practice. All of them engaged in the reflective teaching by using the reflective tools suggested by Richard and Lockhart (1996).

Table 4.3 Teachers' Practice of Reflective Teaching

No.	Intitials	AC	PO	SF	TJ	W&T	VR
1.	T1	✓	✓	✓	✓	✓	✓
2.	T2	✓	✓	✓		✓	
3.	T3	✓	✓	✓	✓	✓	
4.	T4	✓	✓	✓	✓	✓	✓

1. AC (Action Research)
2. PO (Peer Observation)
3. SF (Students' Feedback)
4. TJ (Teaching Journal)
5. W&R (Workshop & Training)
6. VR (Video Recording)

Related to the impediments that prevent teachers from being reflective, the teachers claimed that they faced difficulties as follow,

Table 4.4 The Impediments that Prevent Teachers from Being Reflective

No.	Initials	Impediments that prevent reflective teaching
1.	T1	lack of time, lack of training
2.	T2	lack of time, lack of support
3.	T3	lack of time, lack of focus
4.	T4	lack of readiness and open-mindedness, lack of training

E. CONCLUSION

To sum up, this study found out that the four teachers involved had acknowledged the concept of reflective teaching, and they had practiced the notion of reflective teaching. In their practice, they also faced several impediments related to the lack of time, lack of training in their pre-service education training at the university.

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AN ANALYSIS OF ENGLISH TEXTBOOK RELEVANCE TO THE 2013 ENGLISH CURRICULUM
(A Qualitative Study Of Textbook Materials Used At The Tenth Grade In An SMA In Bandung)

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Abstract

Textbook is the heart of teaching and is also a crucial part in the curriculum. However, it is often found that the materials of a textbook do not represent well the goal targeted in the curriculum. Given this thinking, then this study is aimed at finding out the relevance of the materials found in an English textbook used at the tenth grade of an SMA in Bandung with the 2013 English curriculum materials. Utilizing qualitative research through interview with the teacher done on April 4[th], 2013 to find teacher's rationale using the textbook and the document checklist to find the relevance of the textbook to the 2013 curriculum, this study found out that the English textbook used had been relatively relevant to the 2013 curriculum with few lack of relevance to the 2013 curriculum. Therefore, it is expected that the teacher can complete such few lack with other materials to achieve the goal targeted in the 2013 curriculum as well.

Keywords: Textbook, 2013 curriculum

A. INTRODUCTION

Textbook unquestionably plays a major contribution in supporting the existing curriculum being implemented. However, it is often found out that the materials are not always representative and comprehensive enough to support the demand of the curriculum itself in this case the 2013 curriculum that has become the newest curriculum applied in Indonesia. In other words, it can be said that there might still exist the irrelevance between the textbook materials with the demand of the curriculum materials as the basis for teaching and learning. Hence, to know well the relevance of the materials of the English textbook itself with the 2013 curriculum materials, then it is crucial to conduct a research on analyzing the English textbook materials.

Departing from the above thinking, basically, analyzing textbook is therefore important to be done. Of course, textbook is of greatly necessary in English Language Teaching. It is a fundamental component of instructional activity and is often considered as a determinant aspect in enhancing the quality of classroom communication and language practice (Richards and Rodgers, 1996). Similarly, Richards (2002) adduces that textbook underlies most of language input obtained by the learners as well as provide the practice

guideline for being conducted in the classroom. In other words, it can be said that textbook serves as "a crucial substance to most language programs".

In line with the above thinking, Hutchinson and Torres (1994) also contends that textbook lends itself as a pivotal element in innovation. It can support teachers to demonstrate new or untried methodologies, present alteration step by step, and contrive scaffolding through which teachers can construct a more innovative technique for students. While for students, O'Neill (1982) points out that textbook provides students with matter to learn and practice directly. Also, they can spend their time optimally for attaining the knowledge from the textbook. Seeing this benefit, it is important to use the textbook as effective as possible. This is confirmed by Harmer (1996) in which he reminds the teacher to supervise their utilization of materials to be appropriately used. In this case, textbook should be accustomed with the existing curriculum materials demand. Hence, the relevance of English textbook to the current curriculum become the indispensable requirement in the teaching and learning process at school.

For this to be clearer, there have been some researches related closely with the textbook and curriculum materials demand. Firstly, in 2006, under his research "*Course book selection process ad some of the most important criteria to be taken into consideration in foreign language teaching*" Inal (2006) found out that the most crucial concept is that textbook should be suitable with institutions' aim for the language program. Owing to the fact that there have been differences of objectives within every school, there might be significant divergences in need. Such divergences then should be noticed well and hence the textbook should be adapted.

Furthermore, Jahangard (2007) analyzed four EFL textbooks having been determined to be utilized in Iranian high schools by the Ministry of Education. He found out that one of the ways to amend and improve a curriculum is by improving the textbooks and the materials employed in the program.

Given the above thinking that English textbook played an important role in succeeding the implementation of the recent curriculum (in this case the 2013 curriculum) then it leads us to the problem whether the textbook used by the teacher has been relevant with the 2013 curriculum materials or not as well as the rationale from the teacher herself concerning her choice for using such kind of textbook. Accordingly, referring to all of the above explanations, this study is carried out to see the relevance between the English textbook used by the teacher in an SMA in Bandung with the 2013 curriculum materials as well as the teacher's rationale in using the textbook.

1. Objective of the Research

With respect to the aforesaid reason, this research then is aimed at analyzing the relevance of English textbook used at the tenth Grade in an SMA in Bandung to the 2013 English curriculum materials demand and finding out teacher's rationale in using the textbook itself.

2. Research Questions

For the objectives to be clearly seen, then it is considered important to propose the problem that are going to be searched. Thus, the research questions are:

1. Are the materials in the textbook used at the tenth Grade in an SMA in Bandung relevant to the 2013 English curriculum materials?
2. What is the teacher's rationale in using the textbook?

3. Significance of the Research

This research is expected to make the following contributions.

1) Theoretically, it will give a helpful information for maximizing the appropriate usage of English textbook used in English teaching and learning practices in Indonesia.

2) Practically, this will become the useful information for the teacher to make their teaching activities more effective through the appropriate textbook they use.

4) Professionally, this will become powerful information for the school party in selecting appropriate textbook in teaching English for the success of the teaching activity based on the demand of the 2013 curriculum nowadays.

4. The Scope of the Research

This study focuses on analyzing an English textbook namely "*Pathway to English for senior high school grade X*" used at the tenth grade in an SMA in Bandung to the 2013 English curriculum materials.

5. Clarification of Terms

To avoid misunderstanding of terms found in this study, there are two definitions given as follow.

a. Textbook is a book used for instructional purposes, especially in school and colleges (Harris and Hodges, 1995).
b. 2013 curriculum is the newest curriculum being implemented in Indonesia which centers on character- and competence-based (Mulyasa, 2013).

B. LITERATURE REVIEW

1. The Basic Concept of Textbook

According to Richards, textbook is one of teaching sources that is used to support learning through stimulating cognitive processes and providing structure and progression for learners to follow (2002: 252). Generally, textbooks convey two important pedagogic functions: a curricular aspect, creating a progression in a certain subject taught to students, and a conceptual aspect, embodying the development of cognitive structures in the learner (Van Dormolen, 1986). The former is reflected primarily in the selection of content and the sequencing of topics to be included in the textbook; the latter guides the presentation of this content, the tasks for students included in the book, and the guidance provided for teachers in teacher guides. Accordingly, textbooks embody conceptions of English and English learning that are communicated through the specific features and organization of a textbook. These

philosophical stances towards textbook content organization provide arguments in support of either an integrated approach to content organization or to a subject-specific one.

In favor of integrated curricula, proponents argue that textbook helps students make connections among English strands, develops problem-solving and modeling skills, and makes content more accessible through the use of realistic contexts (House, 2003; NCTM, 2000; Reys & Reys,2009). Modern textbooks basically have been affected by different curricular reforms. Therefore, many advocates of textbook designer have argued the importance of basic skills required in supporting certain curriculum should be integrated in the textbooks. Developers of innovative curriculum projects that have chosen a subject-specific approach to content organization have argued that certain curricula place a greater emphasis on all skills required in the curriculum itself and devote more time reviewing content previously taught instead of presenting new content (Usiskin, 2003), while subject specific curricula focuses students' attention on specific strands of content that provide support for structure and systematic features (Cuoco, Goldenberg & Mark, 2010).

2. The Importance of Textbook in the Curriculum

In the United States, the most important aspect in the curriculum material that determines teachers' practice is the textbook (Lloyd, 2002). Stein, Remillard & Smith (2007) note that, "the majority of teachers rely on curriculum materials as their primary tool for teaching"(p. 327). Curriculum materials here are defined as "the pharma-copeia from which the teacher draws those tools of teaching that present or exemplify particular content and remediate or evaluate the adequacy of student accomplishments"(Shulman, 1986: 10). Teachers often use textbooks for guidance when making instructional decisions because textbooks provide lists of topics to be covered, assignments to be completed, and class activities to be explored (Borko, Davinroy, Bliem & Cumbo,2000; Cohen, 2003), and teachers frequently use textbooks to plan their lessons (Remillard,2005). As Valverde (2002) puts it, textbooks "are intended as mediators between the intentions of the designers of curriculum policy and the teachers that provide instruction in the classrooms. Their precise mediating role may vary according to the specifics of different nations, educational systems, schools and class-rooms" (p. 2).

In summary, textbooks have played a significant role in curriculum reform and are often the key to the implementation of new curricula. Textbooks are routinely considered a way of making curriculum uniform in a given setting; simultaneously, textbooks determine the curriculum (Ball & Cohen, 1996; Howson, Keitel & Kilpatrick, 1981; Remillard, 2005).

3. The Role of Textbook in the 2013 Curriculum

In the 2013 curriculum that is recently applied in Indonesia, textbook is considered as one among thirteen aspects that determines the success of the implementation of the 2013 curriculum (Mulyasa, 2013: 44). The other key success are headmaster leadership, teacher creativity, students' creativity, socialization, conducive environment, and all parties' participation in the school (p.39). This is in line with what has been claimed by Syahmadi that

textbook is important enough in the 2013 curriculum to increase the efficiency and effectiveness of the curriculum itself (p.71).

Again, Mulyasa adds that textbook used in the 2013 curriculum is very important for the students (2013: 49). Therefore, he suggested that the selection of textbook be based on the accomplishment of certain competencies required in the 2013 curriculum. In this case, teacher should select the textbook use by referring to the guidance or recommendation having been formulated in the 2013 curriculum document.

4.   The Related Research Report

Many researchers believe that curriculum materials do have a significant impact on teacher learning, and the way that influence plays out depends on the nature of the textbook used. Remillard (2000) suggests "textbook most likely to foster teacher learning are those that engage teachers in these processes" (p. 331). A study by Edwards (1995) using The University of Chicago School Mathematics Project Materials with seventh and eighth grade students investigated the impact of curriculum materials on the change in teachers' practice. The results of that study found that teachers changed their instructional practice as a result of using the materials.

Furthermore, Cohen & Hill (2000) found that using appropriate materials in the textbook which is relevant to the new curriculum enhanced innovative practices of teachers. Similar observations were noted by Reys, Reys, Barnes, Beem & Papick (1997) who stated that curriculum materials represented through textbook foster professional development. Teachers grow professionally as they work with curriculum-based materials because the materials encourage teachers to share experiences and support each other in achieving the goal targeted in the curriculum (Bay, Reys & Reys, 1999).

Additionally, regarding the analysis of the textbook itself, there have been also some researchers who tried to analyze the textbook materials. Firstly, in 2006, under his research "*Course book selection process ad some of the most important criteria to be taken into consideration in foreign language teaching*" Inal (2006) found out that the most crucial concept is that textbook should be suitable with institutions' aim for the language program. Owing to the fact that there have been differences of objectives within every school, there might be significant divergences in need. Such divergences then should be noticed well and hence the textbook should be adapted.

Also, Jahangard (2007) analyzed four EFL textbooks used in Iranian high schools. He revealed that the textbooks and the materials improvement are the ones that are significant to reform and improve a curriculum.

5.   Synthesis

It has been elaborated from the result of a number of theories and related researches that textbook plays an important role in determining the success of the implementation of the curriculum especially the 2013 curriculum that is recently applied in Indonesia nowadays. Therefore, it is of great significant to conduct the study about the relevance of the textbook used by the teacher in accordance with the demand of the existing curriculum in Indonesia

nowadays. The result will be beneficial enough to improve teaching and learning practices so that students' learning outcome can be increased well.

C. METHODS

This part presents the research design, data collection techniques that consist of sample, instrumentation, and the procedure as well as data analysis.

1. Research Design

As it was indicated in the previous chapter, this study was addressed to analyze the textbook provided in the teaching and learning process, thus this research uses qualitative research design particularly document analysis method. This is supported by Alwasilah (2000: 111) who says that in qualitative paradigm, we can use document analysis method to analyze certain documents such as letter, autobiography, journal, textbook, government publication, and so on. Therefore, it is considered appropriate enough then to conduct this research under qualitative design through document analysis.

2. Data Collection Technique

a. Sample

As this research departs from the textbook analysis, then the sample is involving the documentary sample, in this case the textbook that are going to be analyzed. On the ground that there is also a need to investigate the textbook use then this study also employs additional sample that is the English teacher in an SMA in Bandung. In this study, the teacher acts as the main source for being interviewed about the usage of textbook used in the school related to the 2013 English curriculum. The involvement of the teacher in this research is for the benefit of strengthening and enriching the data obtained from the analysis.

b. Instrumentations

Exactly, there were two instruments utilized in this study namely the interview guideline (through semi-structured interview) and the document checklist. Interview guideline was used for enriching the data obtained from the document checklist and was used to answer the second research question namely the teacher's rationale in using the textbook. It comprised five questions. It was delivered using *Bahasa Indonesia* in order to make the teacher feel easy to answer the question and also to avoid misunderstanding between the teacher and the researcher. Meanwhile, the document checklist was used to answer the first research question namely to see the relevance between the English textbook used in the school with the 2013 curriculum.

In the document checklist, there are two main points that should be noticed. It consists of material that are found in the syllabus issued by the government that are required to be learned in the 2013 curriculum. Then, in checking the materials, there are four important criteria determined based on 2013 curriculum document. They are: a) the integration of four skills; b) the inclusion of grammar and vocabulary; c) the integration of scientific approach; and d) th e integration of character value. This is analyzed using 4 scales. For the materials that cover all these aspects will be scored 4 (meaning very relevant); scored 3 if it almost

covers all four aspects (quite relevant); scored 2 if it covers just few parts of these aspects (a bit relevant); and score 1 if it covers very few of these aspects (not relevant).

c. Procedure

The data collection in the concerned SMA that became the focus in this study was conducted on Friday, 4th April 2014. After getting the permission from the school, the first thing being done was interviewing the teacher about the textbook used in her class as well as her rationale for using it. Then, during the interviewing, all the answers were recorded as a way for analyzing the data. Besides, from the interviewing itself, it was also known which book was used. Then, the book being used was obtained by the researcher which then were analyzed.

d. Data analysis

The data for this study was analyzed using document checklist. It was done by continuously doing checklist analysis on the textbook against specific criteria having been. In analyzing the data, there were some steps done by the researcher.

1. Determining the criteria for analyzing the English materials: a) the integration of four skills; b) the integration of language components; c) scientific approach; d) character value and culture awareness
2. Identifying the material relevance through checklist
3. Interpreting and describing the result (Tok, 2010).

D. FINDINGS AND DISCUSSIONS

This part is intended to elaborate the findings and the discussions of the data obtained from the analysis. There are two research questions that are going to be elaborated in this section. These research questions are:

1. Are the materials in the textbook used at the tenth Grade in an SMA in Bandung relevant to the 2013 English curriculum materials demand?
2. What is the teacher's rationale in using the textbook?

The data for answering these two research questions are derived from the document checklist and teacher's interview. These obtained data are interpreted in this section.

1. The textbook relevance to 2013 English curriculum

This section focuses on the relevance of the English textbook used with the 2013 English curriculum. There are four criteria being used here. These are:

a. the integration of four skills in learning English (reading, listening, speaking and writing) (Syahmadi, 2013) and as is recommended in 2013 English curriculum document (p.14)
b. the inclusion of two main language components (grammar and vocabulary) (Syahmadi, 2013: 29)
c. the integration of scientific approach (observing, questioning, exploring, associating, and communicating) (Syahmadi, 2013: 37)
d. the integration of character value and cultural awareness (Kemendikbud, 2013: 1; Syhamadi. 2013)

a. *The Integration of Four Skills (Reading, Listening, Speaking and Writing)*

The integration of four skills is really important in the 2013 English curriculum material. These four skills are: reading, listening, speaking, and writing. In the state document of 2013 curriculum document (Kemendikbud, 2013), it is stated that the integration of required skills in learning a subject is of great important for the students in that the separation of these interrelated skills will not benefit students for their upcoming thinking (p.14).

Given the above thinking, the English textbook that has been analyzed using this criteria shown that in general all the materials had integrated all these four skills in each topic. Take for example, in chapter I about Self Introduction, these four skills were integrated as well. *In listening,* we can find some tasks regarding listening. They were asked to listen to identify the correct picture, to find specific information, to improve pronunciation, etc. *In reading*, there were also some tasks being asked to the students. They were: reading for specific information, reading for the main idea of the text, etc. Again, *in writing*, students were asked to write their personal information and to write a pen pal letter. Meanwhile *for speaking*, students were asked to express their personal information.

Another example, in chapter IV about Intentions, all these skills also appear integratedly. *As for listening*, the students were asked to listen for information to words related to expressions of intentions, to fill gaps, to improve pronunciation, etc. *Regarding speaking,* students were asked to express various plans or intentions through interpersonal conversations. Next, in *reading*, students were asked to find synonyms from contextual clues, to read for detailed information, to read for reference, etc. *While for writing*, students were demanded to write a message and to use correct spelling and punctuation.

To sum up, the results of the analysis concerning the integration of the four skills were positively relevant.

b. *The Inclusion of two Main Language Components*

The inclusion of two language components is also of a great importance in the 2013 English curriculum material. These two language components are: grammar and vocabulary. It is stated that the inclusion of grammar and vocabulary in the teaching of English is truly important since it is really required to construct a good text in English to be able to communicate in the three kinds of discourses: interpersonal, transactional, and functional (Syahmadi, 2013: 28).

Related to the above statement, the English textbook that has been analyzed using this criteria shown that most of the materials include these two components. Take for example, in chapter III about Care, there were some explanations about *grammar* such as *interrogative words and sentences, exclamatory words, phrases, and sentences, and modal.* Yet, there is not enough exemplification of vocabulary. Then, in chapter IV about Intentions, there is an explanation about *grammar* that is about *text structure* and enough exposure to the *vocabulary* being used related to intentions and asking about planning.

Furthermore, in chapter VII about descriptive text, grammar and vocabulary are quite enough provided. *Grammar* aspect included the explanation about how to build compound

adjectives, and how to describe people. Meanwhile, *regarding vocabulary*, there were many words related to the description such as human body, shape, people characters, size/quality, color, noun, etc. They were quite explicit, complete, and interesting. Yet, some chapters such as in chapter I and Chapter II, there were less vocabulary being provided.

In summary, most of the chapters include these two kinds of language components. Among eleven chapter, just around two chapters which did not include enough explanation about these two components. Therefore, it can be said that the textbook is quite relevant with the 2013 curriculum.

c.   *The Integration of Scientific Approach*

Scientific approach is the process which consists of five main steps namely: *observing, questioning, exploring, associating, and communicating* (Syahmadi, 2013: 35). The integration of this approach in the textbook materials is really required because it strongly underpins the process of making decision and choice in teaching the students about attitude, understanding, and communication competence in English (Syahmadi, 2013: 37).

Referring to the above description, then this textbook was one hundred percent using scientific approach. In chapter I about Introduction, for example, the scientific approach is completely described. In *observing,* the students should listen to a short dialogue to share students' experiences about personal information, to read and imitate transactional and interpersonal dialogue about personal information. *In questioning*, students were asked to compare the usage of English vocative and Indonesian vocative to increase students' awareness of cross-culture understanding. *In exploring*, students were asked find other forms of personal identification from other sources and to do a role-play based on transactional and interpersonal dialogues in pairs. In *associating,* students were asked to analyze some expressions of personal information according to their functions. Then, *in communicating*, students were asked to demonstrate monologue about personal identification and to write a pen pal letter involving personal information.

In addition, we can take another example. In chapter XI about Narrative Text, scientific approach is also applied completely. In *observing*, students were asked to listen to various spoken legends, to observe the social function, structure, and language features of spoken legends, and to observe some characters in the legends. Next, *in questioning*, students were asked to compare the usage of English legends and Indonesian legends to increase students' awareness of cross culture understanding. Afterwards*, in exploring*, students were asked to read various legends from various sources, to practice to find the main idea of text, and to fill gaps of various legends. Then, in *associating,* students were asked to analyze some legends. Finally, *in communicating*, students were asked to share information about the social function, text structure and language function after reading the legends.

To summarize, it was clearly found out that all the steps of scientific approach were applied in all the topics found in the textbook. Therefore, it can be said that throughout the scientific approach, the textbook being used in the school has been strongly relevant with the 2013 curriculum.

d. *The Integration of Cultural Awareness and Character Value*

Cultural awareness and character value are two important elements in the 2013 curriculum which aim at imparting and establishing good characters among students (Syahmadi, 2013: 21). These elements are very needed to be integrated in each textbook including English textbook since they are the most effective elements which are mainly addressed to maintain nation's identity in the middle of the world's communication (Mulyasa, 2013).

Departing from the above statement, then it is found that this textbook has mostly integrated the character value and the cultural awareness in the topics provided. For example, in chapter I about Introduction, there was an excerpt about *the cultural awareness* introduced to the students. It can be seen below.

> Most countries have the rule that foreign citizens need to have their passport or occasionally a national identity card from their country available at any time if they do not have residence permit in the country. (Pathway to English, 2013: 7)

In addition, related to *character value*, in chapter II about Compliments, we can see the excerpt expressing the character value about the importance of giving compliments.

> There are many reasons we often forget to express compliment, but a few good reasons we should. A simple thanks can build trust and respect, strengthen relationships, reward and encourage good deeds, promote a positive attitude and feels great to give or receive (2013: 49)

Afterwards, in chapter V about Congratulations, there was an excerpt telling about the *cultural awareness*. It can be seen below.

> Expressing congratulations is universal, although it might differ from culture to culture…

> However, the way in Indonesian people to congratulation is somewhat different. Indonesian people tend to refuse the gesture. Responding as such is considered polite because agreeing to the other person might be considered bragging. People in English speaking countries may also respond to congratulations by refusing it, but they mostly do it by expressing thanks. (2013: 97)

In summary, there were enough exposure to the character value and the cultural awareness in the textbook used in that school. Therefore, it can be said that from the point of integrating the character value and cultural awareness, this English textbook had been quite relevant to the 2013 curriculum.

2. Teacher's rationale in using the assumed English textbook

From teacher's point of view, the textbook mentioned was chosen because it had been considered relevant to the 2013 curriculum. But, from her explanation regarding the relevance of the textbook, the answer was not really substantive and conclusive. She said that she considered it relevant because the publisher they subscribed were the one that had been considered skilled in providing good materials based on the recommendation of the curriculum for the students. Besides, when the teacher was asked about how she knew that

textbook had been relevant to the 2013 curriculum, she said: "*yah, kita kan punya silabus ya. Dan silabus itu kan dibuat langsung di pusat. Jadi kit tinggal sesuaikan saja dengan yang ada disitu.*"

From the above statement, it can be inferred that there was strong correlation between what the teacher had said with the result of the document analysis. Even though, the teacher's rationale in using the textbook is not quite strong regarding the relevance of the English textbook with the existing curriculum materials, but the reason she said was also quite supportive since she grounded it from the syllabus aspect. Actually, syllabus issued by the government was truly the one being distributed to all the teacher and it became the standard to see how other materials elements deal with it. Thus, from the result of the interview, it can be inferred that the textbook used was based on the 2013 English curriculum material. Even though, there was not any deep analysis from the teacher towards the textbook being used, but at least, the teachers herself had also regarded that such textbook had been relatively relevant to the 2013 curriculum.

E. CONCLUSIONS AND RECOMMENDATIONS

1. Conclusions

Based on the elaboration from the previous findings and discussions, it is concluded that the English textbook used at the tenth grade in an SMA in Bandung has been relevant to the 2013 English curriculum applied nowadays. It has fulfilled the criteria that are suggested by Kemendikbud (2013) namely it has integrated all the four skill in English as well, integrated two main language components required in English, integrated the process of scientific approach, and inserted character values and cultural awareness to the students. In addition, the teacher's reason for using the textbook was also grounded from the relevance aspect of the English textbook to the 2013 English curriculum in which it was said that the textbook had actually covered the materials found in the syllabus issued by the government. Therefore, it can be said that both the teacher interview's result and the document checklist had shown the strong relevance of the textbook toward the 2013 English curriculum materials.

2. Recommendations

Based on the result of the current analysis of the English textbook, it is recommended to the teacher to be critical enough in using English textbook recommended by the school. Not all the aspects in the textbook support or related to the existing curriculum. Therefore, they are expected to understand well the demand of the curriculum materials so that they can use the textbook as well as possible to achieve the educational goal.

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THREE, FOUR, AND FIVE OPTION OF MULTIPLE-CHOICE FORMAT IN TESTING READING COMPREHENSION

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Abstract

This study discusses about the effectiveness of three, four, and five option in multiple-choice format in testing reading comprehension of EFL students. The study participant was 86 high school students in class XI in Padang. The study employs quantitative method and gather data by reading comprehension test. The data form each test will be calculated and compared to reveal the effect of option due to the students' score. The data analysis of students' score in reading test describes that three option of multiple-choice items have higher means rather than the two other. The students' mean score of three option of multiple-choice item score is 67.1. meanwhile the mean score for four and five options of mutiple-choice are 66.0 and 67.0. From the data, eventhough the mean of three option of multiple choice question is higher than the other, however, there were no significant differences between the other options. The students averagely have similar score between those three, four, and five options in multiple-choice in reading test.

Keyword: multiple choice, testing reading

A. INTRODUCTION

Multiple-choice items are a popular test format in testing because they are objective, reliable, easy to score and efficient to administer. Multiple-choice items are typically composed of questions that require candidates to select one clearly correct or best option from those provided (Brown, 2010). They consist of a stem that "asks the question or sets up the situation for response", followed by a series of one correct and several incorrect options (distractors).

Distractors are the multiple choice response options that are not the correct answer (Hughes, 2003). They are plausible but incorrect options that are often developed based upon students' common misconceptions or miscalculations. Writing plausible distractors is one of the most difficult aspects in composing questions (Brown, 2010). Theoretically, distractors should not be selected by students who have a good understanding of the material.

The term functional distracters to refer to the non-correct options the frequency of which shows that they were adequately chosen by examinees; from this point of view, very infrequently selected options would be called nonfunctional distracters (Haladyna and

Downing, 1988). A good distractor should be selected by low achievers and ignored by the rest of the examinees, which presupposes that it must be selected by at least some subjects that it is minimally plausible.

On the other hand, writing multiple choice should has as many plausible distracters as possible (Haladyna, Downing, and Rodriguez, 2002). In spite of the widespread use of four or five options per item advocated by many authors and test developers, most of the studies carried out to investigate the optimal number of options have ended with recommending the use of three-choice items (Aamodt & McShane, 1992; Crehan, Haladyna & Brewer, 1993; Delgado & Prieto, 1998; Haladyna & Downing, 1993; Landrum, Cashin & Theis, 1993; Rodriguez, 2005; Shizuka, Takeuchi, Yashima, & Yoshizawa, 2006; Straton & Catts, 1980).

Therefore, the present study aims to point out and investigate another variation associated within a multiple-choice test item, namely the number of options. The number of options as a feature affecting the characteristics of the test method is used to elicit test performance which in turn is an indicator of the students' ability. The research question is formulated as followed:

"Does students' performance vary depending on the variation of multiple-choice option?"

Based on the research questions that was formulated, the result of study is purposed to give several description on the affect of multiple-choice items due to the students' score in reading test ability. It is expected that teachers can consider the result of study in formulating the multiple-choice items.

B. THEORETICAL REVIEW

1. Testing

Test is a subset of assessment. A test is prepared administrative procedures that occur at identifiable times in a curriculum (Brown, 2010). Testing is the practice of making objective judgments regarding the extent to which the system (device) meets, exceeds or fails to meet stated objectives (Haladyna and Downing, 1988). There are two fundamental purposes of testing: verifying procurement specifications and managing risk. First, testing is about verifying that what was specified is what was delivered: it verifies that the product (system) meets the functional, performance, design, and implementation requirements identified in the procurement specifications. Second, testing is about managing risk for both the acquiring agency and the system's vendor/developer/integrator. The testing program is used to identify when the work has been "completed" so that the contract can be closed, the vendor paid, and the system shifted by the agency into the warranty and maintenance phase of the project.

2. Validity and Reliability in Testing

A test's validity is determined by how well it samples the range of knowledge, skills, and abilities that students were supposed to acquire in the period covered by the exam. Meanwhile, reliability is defined as the correlation between the results of one test administration T and another test administration T under the same circumstances (Denny & Remmers, 1940).

In language testing, validating a test means being able to establish a reasonable link between a test-taker's performance and her actual language ability. So, the question in validating a test is: "Does the test measure what it is intended to measure?" (Lado, 1965). Validity, then, can be seen as a concept allowing us to endow test scores with meaning. This unitary notion of validity has traditionally been subdivided according to the kind of evidence on which the interpretations are based. Usually, one will come across the terms 'construct validity', 'content validity', 'criterion-oriented validity', 'concurrent validity', 'face validity' and 'consequential validity'. It should, however, be understood "that these 'types' are in reality different 'methods' of assessing validity" and "that it is best to validate a test in as many ways as possible" (Alderson, Clapham, Wall 2005). The validity of multiple choice tests, therefore, depends upon systematic selection of items with regard to both content and level of learning.

3. Multiple Choice

Multiple-choice tests are of considerably widespread use as a means of objective measurement. The main reason behind such popularity is the many dominant advantages associated with multiple-choice tests (Brown, 2004). Thus, improving the quality of multiple-choice test items appears to be of a lot of importance. The fact that a good number of guidelines have dealt with the issue of option development is an indicator of the importance of this last concern (Haladyna and Downing, 1989).

A standard multiple-choice test item consists of two basic parts: a problem (*stem*) and a list of suggested solutions (*alternatives*) (Catts, 1978; Rees, 1996; Haladyna, 2004). The stem may be in the form of either a question or an incomplete statement, and the list of alternatives contains one correct or best alternative (*answer*) and a number of incorrect or inferior alternatives (*distractors*).

The purpose of the distractors is to appear as plausible solutions to the problem for those students who have not achieved the objective being measured by the test item (Heaton, 1988). The number of choices may vary, but the decision on how many choices to provide is a serious one.

Most classroom achievement tests and international standardized tests (e.g. TOEFL) usually follow the rule of four options per item. In spite of the widespread use of four or five options per item advocated by many authors and test developers, most of the studies carried out to investigate the optimal number of options have ended with recommending the use of three-choice items (Aamodt & McShane, 1992; Haladyna & Downing, 1993; Rodriguez, 2005; Shizuka, Takeuchi, Yashima, & Yoshizawa, 2006; Straton & Catts, 1980).

C. METHODOLOGY

The study evaluated the effect of varying the number of options in reading test items. The study then reported the number of items in each format, the number of participants, and test score reliabilities, or validity evidence. The study participants were 86 high school students in XI-grade. The participants were taught English by Indonesian English teachers.

The multiple choice test was distributed to the participants which were divided into three group. The first group was given five-option of multiple choice questions. The second group was given four-option of multiple choice questions. The third group was given three-option of multiple choice questions. Each of group has similar ability in english skills. It was proven by the data from previous test which was conducted by English teacher in the school.

There were 30 questions in the reading test. The test was developed in three version of multiple-choice options; three, four, and five. Each group was given same questions, but different types of distractors. The test was designed for normal distribution in a classroom. The test was conducted around 60 minutes in the classroom.

Validity and Reliability of the Reading Test

In order to make sure the reading test was valid, the test was designed to follow the syllabus of english subject in the participant's school. Since the participant was XI grade of senior high school, the test was composed to measure the students' reading ability in range of knowledge, skills, and abilities that students were supposed to acquire.

Furthermore, it is important to generate the reliability of the test before it is conducted to the participants. Therefore, before distributing the test to the participant, the reading test was distribute first to another students who did not involve as the participant. The sample test was in five items/options of multiple-choice questions. The sample test was conducted around 60 minutes. The result of the reliability test from students score on reading test was confirmed in the following table:

Case Processing Summary		N	%
Cases	Valid	30	75.0
	Excluded	10	25.0
	Total	40	100.0

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.923	.936	3

Item Statistics

	Mean	Std. Deviation	N
Five	66.9997	10.29601	30
Four	66.0007	8.90160	30
Three	67.1113	6.87820	30

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	66.704	66.001	67.111	1.111	1.017	.374	3

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
200.1117	604.976	24.59627	3

In reliability cooficient, if the score closes to 1.00, it means that the scale has high reliability, meanwhile when the score close to 0, it means the scale has low reliability. From the table above, it can be seen that the score of reliability of test around 0,923. The result showed that the reading test had high reliability.

D. FINDING

The data of multiple-choice test in reading ability was scored manually one by one. Then, the data of students' score in reading test was entered in SPSS software. SPSS was generally used to analyse the mean score and item distribution of the test. The calculation of students' mean score in answering the multiple-choice questions of reading test can be seen in the following table:

	N	Mean	Std. Deviation	Std. Error Mean
Five	29	66.9997	10.29601	1.87979
Four	30	66.0007	8.90160	1.62520
Three	27	67.1113	6.87820	1.25578

The calculation showed the first group consisted of 29 participants. This group answered the questions in five-options multiple-choice format. The second group consisted of 30 participants who answered four-options format of multiple-choice questions. The third group consisted of 27 participants who answered three-options of multiple-choice questions.

Comparing the mean of each group, students' mean score of three option of multiple-choice questions score was 67.1. Meanwhile the mean score for four and five options of mutiple-choice were 66.0 and 67.0. It means three-options of multiple-choice got the highest mean of others. Furthermore, the mean score of five-options group was 67.0. It was about 0.1 point lower than three-options group. The four-options of multiple-choice was 66.0 which came to the lowest mean among the groups. From the data calculation, furthermore, it can be concluded that students who answer three-options multiple-choice questions had better score rather than the other.

It was interesting that there were no significant differentiation between three and five-options mean scores. Evenmore, the lowest mean score among others was only 1.1 point lower than the highest. It seems that the options in the multiple-choice questions did not really

affect the students' score in reading ability. Most of the participant, therefore, had similar score with others, even if they were in three, four, or five-options group.

To make sure the effect of multiple choice options to the students score in reading test, the analysis of score variation was conducted. The result can be seen in the following table:

Statistics

		Five	Four	Three
N	Valid	29	30	27
	Missing	10	10	10
Mean		66.9997	66.0007	67.1113

Five

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	50.00	2	5.0	6.7	6.7
	53.33	1	2.5	3.3	73.3
	56.67	3	7.5	10.0	23.3
	60.00	2	5.0	6.7	30.0
	63.33	5	12.5	16.7	46.7
	66.67	4	10.0	13.3	60.0
	70.00	3	7.5	10.0	70.0
	73.33	1	2.5	3.3	73.3
	76.67	1	2.5	3.3	76.7
	80.00	4	10.0	13.3	90.0
	83.33	3	7.5	10.0	100.0
	Total	29	75.0	100.0	
Missing	System	10	25.0		
Total		40	100.0		

Four

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	50.00	2	5.0	6.7	6.7
	53.33	2	5.0	6.7	13.3
	56.67	2	5.0	6.7	20.0
	60.00	3	7.5	10.0	30.0
	63.33	3	7.5	10.0	40.0
	66.67	9	22.5	30.0	70.0
	70.00	1	2.5	3.3	73.3
	73.33	2	5.0	6.7	80.0
	76.67	3	7.5	10.0	90.0
	80.00	2	5.0	6.7	96.7

		Frequency	Percent	Valid Percent	Cumulative Percent
	83.33	1	2.5	3.3	100.0
	Total	30	75.0	100.0	
Missing	System	10	25.0		
Total		40	100.0		

Three

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	56.67	2	5.0	6.7	6.7
	60.00	2	5.0	6.7	16.7
	63.33	8	20.0	26.7	43.3
	66.67	8	20.0	26.7	43.3
	73.33	3	7.5	13.3	86.7
	76.67	2	5.0	6.7	93.3
	80.00	1	2.5	3.3	96.7
	86.67	1	2.5	3.3	100.0
	Total	27	75.0	100.0	
Missing	System	10	25.0		
Total		40	100.0		

The above table described from 86 answer sheets in the reading test, the highest score of the test was 86.67 and the lowest score was 50. The highest score of the test was in three-options group. Meanwhile, the lowest score came from four and five-options groups. There were about 4 students who got the lowest score in the reading test. Moreover, the frequency of students' score was mostly vary around 63 and 66.

Eventhough, the highest score was in the three-options group, but about 7 students got score more than 80 in five-options group. Meanwhile, 3 students got score more than 80 in four-options group, and 2 students got score more than 80 in three-options group. The calculation of data variation confirmed that there were high frequency of score variation happened among the three group in the reading test. The variation of multiple-choice option, therefore, did not significantly affect the students' score in the reading test.

E. DISCUSSION

It has been suggested that the multiple-choice test should use as many plausible distractors as feasible (Haladyna, Downing, & Rodriguez, 2002). This is based on a fair review of the literature. Many literature believes that using more options does little to improve item and test score statistics and typically results in implausible distractors.

Beyond the result of students' score in reading test in three, four, and five multiple-choice format, can describe several argumentation. First, the score in multiple-choice is not mainly affected by the items format/option. It is mostly affected by the quality of the distraction of the questions. In three option of multiple-choice, the test-maker can prepare

better two plausible distractors than three or four distractors. Therefore the three-options items are potentially improving content coverage.

However, more options result in exposing additional aspects of the domain to students, possibly increasing the provision of context clues to other questions. The threat of guessing and having a greater chance of a correct guess with 3-option items than with 4- or 5-option items has also not prevailed. (Costin, 1972, 1976; Kolstad, Briggs, & Kolstad, 1985).

In some contexts, distractors can provide diagnostic information where distractors are coded to map to common misconceptions. In such cases, more distractors may be needed. However, a constant tension remains between obtaining misconception-related diagnostic information from individual items with more options versus obtaining reliable content-related diagnostic information from smaller sets of items measuring a particular strand or content objective.

F. CONCLUSION

Comparing the mean of each group, students' mean score of three option of multiple-choice questions score was 67.1. Meanwhile the mean score for four and five options of mutiple-choice were 66.0 and 67.0. It means three-options of multiple-choice got the highest mean of others. Furthermore, the mean score of five-options group was 67.0. It was about 0.1 point lower than three-options group. The four-options of multiple-choice was 66.0 which came to the lowest mean among the groups. From the data calculation, furthermore, it can be concluded that students who answer three-options multiple-choice questions had better score rather than the other.

Eventhough, the highest score was in the three-options group, but about 7 students got score more than 80 in five-options group. Meanwhile, 3 students got score more than 80 in four-options group, and 2 students got score more thean 80 in three-options group. The calculation of data variation confirmed that there were high frequency of score variation happened among the three group in the reading test.

It was interesting that there were no significant differentiation between three and five-options mean scores. Evenmore, the lowest mean score among others was only 1.1 point lower than the highest. It seems that the options in the multiple-choice questions did not really affect the students' score in reading ability. Most of the participant, therefore, had similar score with others, even if they were in three, four, or five-options group. The variation of multiple-choice option, therefore, did not significantly affect the students' score in the reading test.

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WHAT ARE SOURCES OF SPEAKING ANXIETY AMONG EFL LEARNERS?

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Abstract

Feelings of anxiety, apprehension and nervousness are commonly expressed by second/foreign language learners in learning to speak a second/foreign language. These feelings are considered to exert a potentially negative and detrimental effect on communication in the target language. The use of modern communicative language teaching approaches in the language classrooms and the wide-spread use of English Language have increased the demand to learn good communication skills but existence of such feelings in the learners may prevent them from achieving the desired goal. Consideration of learners' anxiety reactions in learning to speak another language by a language teacher is deemed highly important in order to assist them to achieve the intended performance goals in the target language. This study mainly tried to explore the sources that cause language anxiety for Iranian EEL learners in learning speaking skills.This study used a qualitative semi-structured, focus-group interviews and the Foreign Language Speaking Anxiety Scale (FLSAS) to investigate the issue. Two groups of subjects participated in the present study. The first group of participants was 30 first and second year Iranian EFL students and the second group of participants was 7 EFL teachers. The findings suggested that language anxiety can originate from oral exams, self-comparison to others, self-assessment of speaking skills and fear of negative evaluation.The pedagogical implications ofthese findings for understanding second/foreign language anxiety for enhancing learners' communication abilities in the target language were discussed, as are suggestions for future research. Furthermore, considering the crucial role of teachers in second or foreign language pedagogy, a need was felt to investigate the beliefs and perceptions of language teachers about learning and teaching a second or a foreign language.

A. INTRODUCTION

"Foreign language learning anxiety has been the subject of a growing body of research that indicates anxiety routinely affects many language learners. Although in the past there were few studies of classroom anxiety of Asian learners, the number of such studies has been growing (Andrade and Williams, 2008)."A growing body of research stretching from the mid-1970s onward indicates that communication anxiety commonly affects many foreign language learners. Because anxiety can hinder performance and achievement, classroom

anxiety is a topic deserving of continuing investigation. Early research focused mainly on students studying foreign languages in the United States and Canada, but studies of Asian and other learners have been increasing in recent years"(Andrade and Williams, 2009). Since English language is considered as an international language in the twenty first century; and since it is regarded as the language of science and technology, everybody is involved in learning English as a second or foreign language in one way or another. As everybody knows Foreign Language Learning is a complicated procedure in which the elements of the affective domain are as important as the elements of the cognitive domain (Brown, 1994). "The affective domain, which is associated with the emotions or feelings of human beings, involves certain personality traits or qualities such as self esteem, empathy and introversion" (Brown, 1994 cited in Tanveer, 2007). In learning to speak a foreign language, these qualities may have either facilitating or debilitating impacts on the procedure of language learning (Lightbown & Spada, 2006). Anxiety is considered as one of these qualities, which is an important facet of the affective domain. Concerning the relationship between language learning and anxiety, the term foreign language anxiety has been identified by Horwitz, Horwitz and Cope, (1986). In learning to speak a foreign language we can observe anxiety in every stage of the learning process. In interactions that take place in the classroom, it gets specifically clear because risk taking is an important part of the foreign language classroom, and learners would like to avoid making mistakes, believing that this could do harm to their self-image, so they feel anxious and keep silent in the classroom (Aydın, 2001).

"Foreign language anxiety has been investigated in terms of its relationship with certain variables such as motivation, gender or class participation" (Zhanibek, 2001 cited in Tanveer, 2007). This study mainly tried to explore the sources that cause language anxiety for Iranian EEL learners in learning speaking skills.
In this connection, the following research questions were proposed:
1-What are the potential sources of foreign language speaking anxiety among Iranian EFL learners in learning speaking skills?

B. METHODOLOGY
1. Participants
The present study was carried out at Shiraz University in Iran, with two groups of participants. The participants in the first group (30 students) were chosen from an intact group in the School of Foreign Languages (13 males and 17 females) all majoring in ELT. They were from different proficiency levels. Their age ranged between nineteen to twenty seven. All participants took part voluntarily in the investigation. The second group of participant was seven EFL teachers (two male and five female teachers). The teaching experience of teachers ranged from three to fifteen years in various contexts.

2. Instrumentation
In this study, two different types of instruments were used in order to collect the required data. The first set of data was collected through interviews including semi-structured and focus-group interviews. The rationale behind the use of interview as a data collection

procedure was that it can provide access to things that cannot be directly observed, such as feelings, thoughts, intentions, or beliefs (Merriam, 1998: cited in Ohata, 2005: 140). Individual and group interviews according to Tanveer (2007) were conducted in this study. Accordingly, the second set of data was collected through the questionnaire – the Foreign Language Speaking Anxiety Scale (FLSAS) originally developed by Horwitz and Cope (1986) in order to measure the foreign language learners' anxiety level. A modified version of this questionnaire was used in the present study.

3. Procedure

The data collection procedure was conducted in two different stages, in the first stage, both individual and group discussion interviews were conducted and then, in the second stage questionnaire was administered.

The purpose of the current study was to explore the sources of foreign language anxiety present among Iranian EFL students and an attempt has been made to propose some useful strategies in order to cope with this phenomenon in the classroom. So in order to analyze the obtained data the following procedure was used.

In the first phase of this study, the interview data (transcripts), both individual and group, were analyzed and interpreted according to the Constant Comparative Method, which enables a researcher to classify the information derived from qualitative data (Aydın, 2001).At the end of this procedure a theory is grounded based on the data obtained through the interviews (individual and group). After the participants "comments were transcribed verbatim by the researcher, they were put into categories on the basis of common themes. These themes were further combined into more general categories. By means of these categories (the theory grounded based on the data), the sources of foreign language speaking anxiety were described in this EFL context. The grounded theory approach is used as a qualitative research method that "uses a systematic set of procedures to develop an inductively derived grounded theory about a phenomenon" (Davidson, 2002:1). Its primary aim is "to expand upon an explanation of a phenomenon (language anxiety) by identifying the key elements of that phenomenon, and then categorizing the relationships of those elements to the context and process of the experiment" (2002: 1).The participants' opinions and comments were written down in two different but relevant sections in order to be identified (EFL Learners and EFL Teachers).Then these differently identified units of responses by the participants were codified by giving them appropriate headings such as "beliefs about language learning", "fear of making mistakes", "fear of being negatively evaluated by their teachers", and presentation in the classroom. Therefore, in order to explain the phenomenon under exploration (language anxiety), these categories were used.

In the second phase of the present study, based upon the participants' most frequently given answers to the open ended questions during the interviews, both individual and group, a modified version of a Likert- Scale questionnaire, consisting of 18 statements, was designed which was associated with psychological and linguistics factors that are considered as the most important factors cause language anxiety in the target language. In this survey study, the researcher used the last version of version SPSS to analyze the data quantitatively.

In order to analyze the mean, percentage, and frequency distribution of the participants'' answers for each item of the foreign language speaking anxiety scale (FLSAS), descriptive statistics were computed for each item.

C. RESULT AND DISCUSSION

A large number of studies have dealt with the debilitating effects of anxiety among ESL/EFL learners on learning and specifically speaking a second or foreign language; and the students ought to overcome this phenomenon if they want to benefit fully from their L2/FL instructions (Horwitz et al., 1986). The description, offered by Horwitz (1986), of communication apprehension, test anxiety and fear of negative evaluation as useful conceptual building blocks in defining the construct of second/foreign language anxiety have been replicated in this investigation as many participants expressed them as potential sources of language anxiety. These perceptions and the mostly negative responses of the research participants, particularly of EFL/ESL learners who had their previous degrees in the fields other than language study, seem to support the past research that anxiety is intrinsic to language learning (Horwitz et al: 1986 cited in Tanveer, 2007). The findings of the present study based upon the results obtained through interviews and the questionnaire seem to be mostly confirming the findings of the previous studies carried out on this area(language anxiety)though not agreeing in every detail.

In the present study some differences and discrepancies were also found, despite the correspondence to the findings of existing research. The results obtained through questionnaire will be reported below in brief. Then the participants' responses to the interview questions will be discussed in more details.

The questionnaire (FLSAS) had two sections. The six questions in the first section aimed to obtain background information about the participants. The second section had 18 statements about foreign language speaking anxiety. The questionnaire was in the form of a five point Likert scale, ranging from one "YES" to two" NO" Each participants' total score revealed their level of foreign language speaking anxiety.

Items 1, 2, 7, 13 represent the class presentation (category 1); items 3, 6, 10, 12, 14 show evaluation in class by the teacher or others (category 2); items 4, 15 are related to the role of language instructors (category 3).Items 5, 11 indicate the group discussion (category 4). A finally, Items 8, 9, 16, 17, 18, respectively represent strict formal classroom environment, self perceptions, pronunciation, vocabulary and grammar (categories 4 to 9). In order to investigate the possible role of some general factors in speaking anxiety, the responses of the participants to the items in the questionnaire were analyzed. The next table illustrates the descriptive statistics of the participants according to the categorization of these anxiety evoking factors which were obtained through the interviews (see Table 1).

Table 1.

Frequency, Mean, and Percentage of the Answers to the Items of the Questionnaire

Categories	Frequency		Mean		percentage	
	YES	NO	YES	NO	YES	NO
Category 1	97	23	.80	.20	80%	20%
Category 2	96	54	.64	.36	64%	36%
Category 3	54	6	.9	.1	90%	10%
Category 4	7	53	.11	.89	11%	89%
Category 5	4	26	.13	.87	13%	87%
Category 6	10	20	.33	.67	33%	67%
Category 7	27	3	.9	.1	90%	10%
Category 8	28	2	.93	.07	93%	7%
Category 9	28	2	.93	.07	93%	7%

According to the given data in Table 1, it can be concluded that all the categories mentioned above cause anxiety for EFL learners except categories number 4 and 6 which discuss group discussion and self perceptions as the sources of anxiety. Another result which is shown in the present Table is that the categories can be ranked in a decreasing order in producing anxiety to Iranian English language learners in the foreign language classroom. They can be ordered based upon their degree of importance in evoking anxiety as follows: vocabulary and grammar (93%), pronunciation and the instructors' role (90%), strict and formal classroom environment (87%), classroom presentation (80%), and evaluation in class by the teacher or the others (64%) from the highest to the lowest respectively. So the figures clearly express the different sources of anxiety from the most to the least important ones. Put it another way, the responses to the foreign language speaking anxiety scale (FLSAS) revealed that the participants had a high level of foreign language speaking anxiety with respect to the above mentioned categories. The results of the present study are almost consistent with those of other studies that investigated the level of overall language anxiety.

The level of foreign language speaking anxiety was also analyzed in terms of gender, which was not a matter of consideration in the present research. The results indicated that the female participants were slightly more anxious than the males. This result is consistent with some other studies such as Huang (2004) and Wilson (2006) who investigated the relationship between the anxiety and certain variables like age and gender.

What are the potential sources of foreign language anxiety among Iranian EFL learners?

Therefore, along with the responses of the participants to the foreign language speaking anxiety scale (FLSAS), the interview analysis revealed some similar results to what was found in the analysis of the responses that were given to the FLSAS. In the interviews, oral exams, self-assessment of speaking abilities, self-comparison to others,

and fear of negative evaluation were also identified as anxiety-provoking factors, which will be discussed below.

First, lack of grammar and vocabulary knowledge and also poor pronunciation, categorized as linguistic difficulties in this study, were found to be the main sources of producing anxiety.

Pronunciation was pointed out as a source of anxiety which was consistent with the findings of Tanveer(2007). Tanveer (2007) believes that improving pronunciation skills largely depends on the improvement of listening skills. An inadequate amount of time devoted to listening in the language class may cause lack of input. This lack of input may be a problem for EFL learners who do not have opportunities to hear the language outside the class, and it may result in poor pronunciation.

Regarding the lack of vocabulary and grammar knowledge, Tanveer (2007) found similar results to what was found in this study. The participants reported anxiety owing to difficulties in retrieving some vocabulary items, which was also mentioned by some of the participants in the present study. Tanveer (2007) makes a connection with the nature of speaking, which requires people to process a great deal of information at the same time.

Second, self-assessment of speaking abilities was found to be a source of anxiety by participants. This finding is consistent with some other studies (Aydın, 2001; Price, 1991), which revealed that anxious learners were not satisyied with their language abilities. The result of this study may be associated with the fact that self-assessment of ability becomes an anxiety-provoking factor when learners focus on their deficiencies in their language abilities. In other words, when learners underestimate their language skills or concentrate on the causes of failure, they feel more anxious (Aydın, 2001).

Third, oral tests were reported to be anxiety-evoking by participants, which is in line with the Dalkılıçs' (2001) findings who found oral tests as main source of provoking anxiety in the classroom. Huang (2004) found the similar results in a study conducted in a Taiwanese context in which participants reported anxiety in oral tests. Wilson (2006) maintains that oral tests are regarded to be anxiety-provoking because they are situations in which learners may feel the three components of language anxiety: communication apprehension, fear of negative evaluation and test anxiety, which were proposed by Horwitz et al. (1986).

Fourth, self comparison to others was found to be another anxiety-provoking factor by the participants. This result is consistent with that of some similar investigations (Aydın, 2001; Gregersen & Horwitz, 2002 ;), which also reported the learners‟ self comparison to others as a source of foreign language anxiety.

Fifth, consistent with the past research, almost all of the participants agreed that strict formal classroom environment, and specifically giving presentations in front of the whole class and in public was another anxiety causing factor. They believed that class is the place where mistakes and deficiencies are made clear. On the contrary, the participants asserted that the more friendly and informal the language classroom environment, the less it is likely to be anxiety provoking. These perceptions suggest that learners feel more anxious and under stress in the classroom environments that follow the traditional behaviourist theories of learning; for instance, the classrooms where the students as a whole class constantly drill or

repeat the learning tasks like machines (e.g. audio-lingual language teaching method) and thus the power or status differentials between students and teachers is upheld. Contrarily, students feel less anxious and stress in classroom environments that follow the constructivist theories of learning; these emphasize collaborative activities by forming learning communities including both teachers and students (Tanveer, 2007). (See appendix (4) & (5) for more detail about behaviorist and constructivist learning theories respectively). So consistent with the results of previously conducted studies, the present study also found that students' embarrassment may be aggravated by the role played by language instructors in the class (Horwitz et al., 1986; Price, 1991; Young, 1991; Young, 1990: cited in Onwuegbuzie et al., 1999: 220).So The teachers' negative manner, their reaction to the learners' errors, and the way they create stressful environment in the class were also found to be an anxiety provoking factor in several studies(Aydin,2001; Bekleyan,2004).

It emerged during focus group discussion that the authoritative, embarrassing and humiliating attitude of the teachers towards students, particularly when they make mistakes, can have severe consequences on learners' cognition and their willingness to communicate in the class (Tanveer, 2007).

Finally, fear of negative evaluation was also found to be a source of anxiety by participants. "Fear of negative evaluation refers to fear of giving a wrong impression to others, and it is aggravated by the foreign language classroom atmosphere where teachers and peers are usually critical of learners' performances" (Horwitz et al., 1991). So, anxious learners fear making mistakes or giving a wrong answer, which was reported by the present study. This finding is also in line with the findings of some other foreign language anxiety studies (Ohato, 2005a; Price, 1991).

D. CONCLUSION

The present study revealed different sources of foreign language speaking anxiety among Iranian EFL students. The main sources of speaking anxiety have been identified as oral exams, self-comparison to others, self-assessment of speaking skills and fear of negative evaluation. The self-reports of the students in the interviews indicated that certain linguistic difficulties (pronunciation and lack of vocabulary), the teachers' manner were considered as additional sources of speaking anxiety in this EFL context. In light of these findings and the pedagogical implications presented in this chapter, learners might be provided with assistance in reducing their foreign language speaking anxiety.

Every factor or situation that creates possibilities or enhances the chances of exposing their deficiencies and language imperfections in front of others is likely to cause language anxiety for EFL learners. What makes a foreign language classroom a highly anxiety-evoking place is its evaluative nature: evaluation by the teachers, peers, and by a learners' own 'self', accompanied by high expectations and beliefs about EFL learning. It was found that the feelings of anxiety become more threatening when the language instructors' manner of error correction is rigid and humiliating and when they consider language class a performance rather than a learning place. Lack of knowledge in terms of grammar, vocabulary, and pronunciation found to be another sources of provoking anxiety,

which were commonly thought to hinder learners' EFL fluency preventing learners to achieve their intended performance goals in English language.

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VOCATIONAL STUDENTS' NEEDS OF ENGLISH IN THE 2013 CURRICULUM

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Abstract

By July 2013, the try out of the 2013 Curriculum is started implemented by The Indonesian Ministry of Education to 6.325 schools which makes the generalization of English content in the syllabi of senior high school (SMA) and vocational school (SMK). Due to that generalization, this study is intent to investigate the sufficiency of the curriculum to the vocational students' needs of English. This study used mix-method to collect and analyze the data by means of interview and close-ended questionnaire from 29 students and one English teacher in one secondary vocational school in Bandung as respondents concerning the students' needs of English and the 2013 Curriculum. The study concludes that the goals of English prefer to learn by the respondent are in order to make the students able to master English related to their study program (office administration program) and make them able to master the use of grammar and use simple English to communicate orally in daily life. Besides, from the teacher's perspective, the 2013 Curriculum has not covered yet the students' needs of English particularly the learning contents related their background of knowledge that is office administration.

Key words : vocational students, needs, the 2013 curriculum

A. INTRODUCTION

In the Tujuan Umum and Tujuan Khusus Undang-Undang Nomor 20 Tahun 2003, it is stated that the main purpose of secondary vocational education is to prepare the students to face the field of work. The graduation of secondary vocational education should be able to work based on what they have learned in their studies. Therefore, the materials and learning processes at school have to be selected, arranged and applied in the line with the goals of the law. This is also bear to English as a compulsory subject in vocational secondary schools. In this globalization era, the needs of English in every field of academic and work are increasing, particularly to students of vocational secondary schools in which English is needed to learn in order to prepare them to not only in academic demands at school, but also make useful of English in their field of work.

Regarding this, the curriculum as a main foundation of teaching and learning process has to cover the mandate of the law as what Tanner and Tanner (in Sanjaya, 2008) say that curriculum is one of the important factors involved in learning process and intended learning outcomes which is formulated through the systematic reconstruction of knowledge and

experiences under the auspices of the school. Nunan (1988) defines curriculum as one of the crusial factors involved in teaching and learning process and its development relates to teachers as the principle agent. Taba (in Wiles and Bondi, 2011) states curriculum as *all of the learning of students which is planned by and directed by the school to attain its educational goals*.

The changing of curriculum from School-based Curriculum to the 2013 Curriculum in several schools in Indonesia by July 2013 effects to the changing of the structure of curriculum that one of it is the development of English syllabus used in secondary schools. Syahmadi (2013) states that the 2013 Curriculum is a curriculum-based competence involving aspect of attitude, knowledge and skills. In the similar thought, Nuh (2013) says that the goals of the 2013 Curriculum are grasped on students' spiritual competence, social, knowledge, and skills competence. The 2013 Curriculum is applied by stating the framework of Standar Kompetensi Lulusan (SKL) which is expanded to Kompetensi Inti (KI) and the specified to the Kompetensi Dasar (KD) for each subject being taught. In the 2013 Curriculum, senior high schools (SMA) and vocational schools (SMK) have the same SKL, KI and KD for English subject (Mulyasa, 2013).

In School-based Curriculum, English was learned based on the needs of the students and schools. English taught in senior high schools (SMA) was different with that was taught in vocational schools because it was referred to the different needs of students. English taught in vocational schools tend to provide the needs of students in facing field of work. The materials and instructions in the English syllabus are directed to how students deal with English in their work. However, in the 2013 Curriculum, the English syllabus of senior high school and vocational school is generalized. There is no English for specific purposes for vocational students as before in School-based curriculum, but it is General English that has no different with what is learned by senior high school students.

Regarding the use of General English syllabus to vocational students, it is important to provide such activity as a need analysis in order to know what are the needs of vocational students, whether the used syllabus represents their needs or not, both in academic purpose and later the work purpose as Richards (2002) argues that need analysis in language teaching may be used for finding out the language skills learners needs, determining the adequate course materials, and identifying a gap between what students are able to do and what they need to be able to do. The benefit of this might lead the teacher to the obvious sight so that he or she is able to select proper materials for the learning, not only to fit the students' needs but also to reach the goals of the curriculum (Nation & Macalister, 2010). To add, Brown (1995) defines need analysis as the acts of collecting information of what learners need to learn in which those will be a basis consideration in developing a curriculum used by a particular group of students.

According to Richards (2002), the purposes of doing need analysis are conceived to: (a) find out what language skills a learner needs in order to perform a particular role, such as sales manager, tour guide, or university students, (b) help determine if an existing course adequately addresses the needs of potential students, (c) determine which students from a group most in need of training in particular language skills, (d) identify a change of direction

that people in a reference group feels is important, and (e) identify a gap between what students are able to do and what they need to enable to do to collect information about particular problem learners are experiencing.

Many research have been conducted to the area of need analysis to figure out the students' needs. One of the research is a need analysis of students of Culinary Study Program needs' of English which aimed to find out the learners' needs and to design appropriate learning material for the eleventh grade students of the program. The result of study showed that the effective inputs of 4 skills and grammar are inputs which are comprehensible and suit the learners' background knowledge. Therefore, their needs of English concerning with their major in the vocational school as it was taught in the School-based Curriculum.

In the line with that, the overall goal of this study is to investigate the vocational students' needs of English, in this case students majoring office administration, and to see whether the their needs are covered by the 2013 Curriculum or not. Thus, in order to reach the goals, this study attempts to address the following research questions:
a. What are the vocational students' needs in learning English?
b. Are the students' needs of English covered by the Curriculum 2013?

B. METHOD

This research applied a descriptive mix-method. Creswell (1998) states that descriptive method explores a social or human problem in the natural setting. It is also a descriptive that describes and analyzes a phenomenon, event, social activity, attitude, and perception in a certain group (Sukmadinata, 2008). In this study, descriptive quantitative was used to describe and analyze the needs of English of vocational students, and then descriptive qualitative was used to analyze the relevance of the needs with the used curriculum that is the Curriculum 2013.

The respondents of this research were 29 students of one vocational school in Bandung majoring Office Administration and one English teacher. The researcher chose this vocational school as the research site due to the school is now applying the Curriculum 2013 in teaching and learning process. Students majoring Office Administration were chosen because, compared to other majors, there was available time of this class for participating the research so that the principal gave permission that the study can be conducted at that class. The teacher respondent is the English teacher at the class.

In order to answer the research questions, the researcher used two kinds of data collection, that were questionnaires (Nunan, 1992) to the students and interview to the teacher respondent. Questionnaires were distributed to students respondent which were students of Office Administration. Interview to teacher was conducted to find out relevance of students' needs with the used syllabus of the 2013 Curriculum. Furthermore, the researcher formulated and used semi-structured of open-ended questions for interview and close-ended questions for questionnaire (Cohen & Manion, 2004) to collect data in order get information of students' needs and how the learning was applied. In addition, the questionnaire and interview were carried out in *Bahasa Indonesia* to get more detail data and avoid the misunderstanding from the students and teacher respondents (Alwasilah, 2012).

The data gained from questionnaire were also analyzed by using the calculation of percentage technique as follows:

$$R = \frac{P \times 100\%}{F}$$

R : respondents' percentage
P : the number of respondents that choose each option
F : the number of all respondents

After the data were calculated by using percentage technique, the data were presented in terms of percentage numbers as well as analyzed into a coherent description.

Table 1
The Percentage and Criteria of Data Questionnaire (Mueller, 1986)

R (%)	Criteria
0	None
1 – 25	A Few of
26 – 49	Nearly Half of
50	A Half of
51 – 75	More than a half of
76 – 99	Nearly All of
100	All of

The data collection were analyzed through quantitative data analysis for answering the first research question by means of questionnaire result. The data were also analyzed through qualitative data analysis which can be done through analyzing the interview result (Alwasilah, 2012). The students' needs and their relevance to the Curriculum 2013 could be figured out depend on the students' answers in questionnaires and the teacher's answer in interview section.

C. FINDING AND DISCUSSION

Data from the questionnaires and interview were analyzed to answer problems in research statement.

1. Data from Questionnaire

a. The Goals

Data from questionnaires regarding the students needs are divided into four items that are learning goals, material inputs, learning activities and things about the study program. In reaching the goals, students expect the English teaching and learning process allow them to:

1) master English vocabulary related to students' study program (office administration program);
2) master the use of grammar;
3) express formal and informal expressions used in daily life;
4) differentiate formal and informal expressions;

5) differentiate formal and informal expressions in the spoken monologue and dialogue texts;
6) deliver speech such as greeting, ending conversation, introducing one self and others, and describing things or people;
7) and use simple English to communicate orally in daily life.

From all respondents, the highest percentage of students who expected that their English learning should make them enable to master English vocabulary related to students' study program (office administration program) and master the use of grammar and use simple English to communicate orally in daily life that was 89 %. Meanwhile, there were only 37 % of students who prefer that the most important thing in learning English is that they are able to express formal and informal expressions used in daily life. Nevertheless, the whole students thought that the seven goals stated in the questionnaire were important to learn. This can be seen in the questionnaire result that no statement of the goals was found not chosen. The percentages of this part can simply be seen in the a figure below:

Figure: 1.2
Students expectation in Learning English

Aspect	Students' Needs	N	Total Answer per Item	Agree	Criteria
Goals	**Students expect the English teaching and learning process that allow them to**				
	Master English vocabulary related to students' study program (office administration program)	29	26	89 %	Nearly all of students' choice
	Master the use of grammar	29	26	89 %	Nearly all of students' choice
	Express formal and informal expressions used in daily life	29	11	37 %	Nearly half of students' choice
	Differentiate formal and informal expressions	29	16	55 %	More than a half os students' choice
	Differentiate formal and informal expressions in the spoken monologue and dialogue texts	29	17	58 %	More than a half os students' choice
	To be able to make speech such as greeting, ending conversation, introducing one self and others, and describing things or people	29	22	75 %	More than a half os students' choice
	Communicate orally in daily life.	29	26	89 %	Nearly all of students' choice

b. The Input Materials

The input materials in secondary vocational school are generally as same as other English institution that are four skills language: listening, speaking, reading and writing, along with the vocabulary and the grammar. In inputs for listening cover simple dialogues, simple monologues, expressions and texts with pictures. There were 13 % students who expected to listening to simple monologues, meanwhile texts with pictures were mostly prefer that were 68 % of the students. The time allocation for the listening was also provided. There were 2-3 minutes, 3-4 minutes, and > 4 minutes which gained the high percentage that were 31 % compared to 6 % of students who expected < 2 minutes time allocation for listening.

In inputs for speaking cover simple dialogues, simple monologues, and expressions. There were 62 % students who expected to speak simple dialogue, meanwhile expressions and simple monologues were 44 % and 24 %.

Input for reading which gained highest percentage was similar to listening: texts with pictures, that were 58 % of the respondents. Following that, there were authentic texts (students often meet the texts in their daily life, such as magazine, brochure, memo etc), Simple reading text, the explanations of difficult vocabularies in the text, and the text related to Office Administration for about 51 %, 44 %, 41 %, and 34 %. In the mean time, the length of the texts mostly prefer were < 200 words for about 44 %.

Input for writing were about the kind of texts, vocabularies related to the text will be written, the structures of the sentences in the text that will be written, and formal letters related to the work field, such as application letter, memo, etc. Most students expected to learn the structures of the sentences in the text that will be written and formal letters related to the work field, such as application letter, memo, etc., that were 44 %. Meanwhile, the vocabularies related to the text will be written was only about 31 %.

c. Activities in Learning

Activities in learning were provided as well. This part attempted to figure out what activities students' expected to do. In listening activity, 48 % of students expected to know the way of identify places and characters in monologues or dialogues. In speaking ability activity, 62 % of students expected to be able to practice dialogues in pairs in front of the class. In reading activity, 37 % of students expected to analyze the meaning and the using of particular vocabularies based on the context. In writing activity, 55 % of students expected to be able to complete sentences to make correct sentences and followed by 51 % who expected to be able to arrange sentences to make a good paragraph. In vocabulary activity, 55 % of students expected to be able to match the English words or expressions with their provided meanings and to find the meanings of sentences or paragraphs by using words provided before. Meanwhile in grammar, the student respondents expected to do such activities as writing sentences based on the structures learnt before (62 %), correcting grammar error in a sentence (37 %) and identifying grammar error in a sentence (31 %).

From the percentages, it is obviously identified that students' have big expectations on the goals in learning English and they have such motivations and reasons for doing the learning. This is in line with Harmer (2007) who says that students' motivation in learning

English is varied both for the specific purposes or academic purposes. Even so, most of them wish to learn English in order to be able to speak, read, write and listen to the language effectively for whenever and wherever this might be useful for them. Therefore, the vocational students, particularly the respondents of this study, thought that they expected to learn English not only for the academic oriented but also as a preparation to the field work in which English related to their study program was prefer to learn.

Regarding this, the affectivity of the learning is highly impacted by the materials being taught. That is why, the need analysis is suggested to be conducted because it decides the kinds of input materials that students have to and need to learn, as stated by Richards (2002) that the purpose of need analysis is to find out what language skills the learners need to learn in order to perform a particular role. It is supported by Nation and Macalister (2010) who say that need analysis concerns with the necessities, the lacks, and the wants of what students need to learn. By doing this, teacher as the agent of the curriculum (Nunan, 1988) can teach English as what they have to learn and what they which to learn because it progress can reduce the existing gap in the classroom activities and interaction (Richards, 2002).

2. Data from Interview

In the result of interview, it was stated from the teacher that in the 2013 Curriculum, English subject taught in secondary vocational schools (SMK) is what is used by senior high school (SMA) in which general English. She said, the 2013 Curriculum is basically not different with School-based Curriculum, particularly the content of the materials and instruction. However, in the case English subject taught in secondary vocational schools, it was found that the 2013 Curriculum performs the different content and instruction compared to the School-based Curriculum. She said:

"... Actually, I cannot compare them ya.. All I know is that the curriculum in the vocational schools before the 2013 Curriculum was it which was agree with the study program.."

In a part with this, Mulyasa (2013) reveals that in the 2013 Curriculum, subjects in the senior high schools (SMA) and vocational schools (SMK) are the same broken down to compulsory and selected subjects which involve the knowledge, skills, and attitude. Regarding this, English as a compulsory subject is general senior high schools is arranged by the curriculum to be the same as it is in the vocational schools.

After this direction of the curriculum is changed in the same time with the changing of the curriculum itself, it is important for teachers to conduct an activity called need analysis to investigate what the vocational students' need to learn. By this, Richards (2002) says that need analysis is conducted to help teacher determining the adequate of existing courses with the needs of students which may take place prior to, during, or after the teaching and learning process. In the line with this, this study was conducted because as information arrived from the teacher that she has not conducted the need analysis in previous.

As a result of interview, the English teacher respondent gives information that since the first time she was teaching English by using the 2013 Curriculum, she never apply the need analysis because the materials and instructions for the learning have been decided by the

government in the syllabi. She also never teach English related to the study program where the students in due to the syllabus does not require it. For the question, is students needs of English not covered by the 2013 Curriculum, she answered:

> "Yes. In my opinion is yes. Students needs of English, particularly in related to their study program, are not covered by the curriculum. That is it."

In the similar vein, Syahmadi (2014) states that one of the aim of the 2013 Curriculum in English subject is emphasized to the language competencies as a tool of communication in delivering thoughts and knowledge. From the curriculum emphasis, it can be adduced that the orientation of English is not to prepare students for facing the fieldwork as has to be mastered by the vocational students, but to prepare students to communicate well.

D. CONCLUSION AND RECOMMENDATION

The findings revealed in previous section showed that English was prefer to learn in order to master English vocabulary related to students' study program (office administration program), master the use of grammar and use simple English to communicate orally in daily life. Four skills in language: listening, speaking, writing, and reading are needed by the student responded. However, their needs for each skill are broken down to such kind of materials and activities. The most input chosen for listening was texts with pictures, speaking was simple dialogues, reading was texts with pictures, and writing was kind of texts. The most activity chosen for listening was identifying places and characters in monologues or dialogues, speaking was practicing dialogues in pairs in front of the class, reading was reading texts loudly using correct pronunciation and intonation, writing was completing sentences to make correct sentences, vocabulary was matching the English words or expressions with their provided meanings and finding the meanings of sentences or paragraphs by using words provided before, and grammar was writing sentences based on the structures learnt before. The result also noticed that The 2013 Curriculum does not cover the vocational students' needs of English in order to face their field of work.

Therefore, the study suggests that it is better to teachers to conduct ongoing need analysis in order to find out the students' needs of English so that the materials being learnt are suitable with the needs of the students. Moreover, to the further researcher, it is better to conduct the research on need analysis for other study programs in secondary vocational school so that the whole needs of students can be identified.

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TEACHERS' PRACTICES IN GIVING FINAL GRADE

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Abstract

Final grade which accounts for 40 % in report book is one of important indicators indicating students' succes and graduation. Despite the fact, grading methods by classroom teachers are always questionable. Based on the researchers' experience as well as result of discussion in english teachers forums, it was found out that most of teachers have been facing dilemma of giving final grade-whether they grade students based on the students' real competence or they consider certain variables related to students' graduation. Thus this study was designed to investigate teachers' practices in giving final grade to their students in three differents schools in one sub disctrict in riau by involving 6 teachers of english, 5 students and 1 vice curriculum as key informants. The findings revelaeved that the participated teachers use criterion-reference assessment in combination with other grading practices in determining final grade.

Keyword: teachers' practices, final grade, report grade, determining final grade

A. INTRODUCTION

Grades are important in educational lives. Educational systems define honors students, marginal students, failing students and average students are not only by quality of students' performance or their demonstrated skills but also by grades (Brown, 2004). The grades are intended mainly to communicate students' learning achievement status (O'Connor, 2009) to students, their parents, school administrators, post secondary institutions and employers (Bailey and McTighe in Allen, 2009). Grades are the main signal of information for students' placement (Brookhart, 2004), students' ability and performance which can have long term consequences for students' achievement (Sprietsma, 2009). It is the symbol the extent to which a student has achieved the instructional goals of reporting period for which the grade is assigned (Frisbie and Waltman, 1992).

Further Frisbie and Waltman purpose the function of grades that are secondary to school-to-home communication role. Grade can encourage students to attain the highest grades by doing certain activities to achieve those grades and they are motivated to avoid the lowest grades by avoiding negative outcomes which associated with those grades. Grades also provide information to students for self-evaluation, for analyzing strengths and weaknesses which may relate to educational and career planning. In short, grades are used to communicate students' performance levels to others who want and need to know about

students past achievement or to know students future academic success or 'the intellectual development of students' (Krop, Meyer and Patel, 2003).

However, some teachers have dilemma in giving final grade since subjectivity may involve in grading (Sprietsma, 2009). The standard of assigning grades are influenced by certain variables including teachers, subject matter, courses, programs, institution systems and cultures (Brown, 2004). Mathematics, Science and Foreign languages courses sometimes gain the reputation for being strict in assigning grades as the courses are considered as 'difficult courses'. Certain institutions employ certain regulations regarding with grading systems for example, a qualified school should give 'good grades' for their students. Since the essential grade in communicating students' achievement, the research about grading is needed. There were many research deals with grading (Marin, 2009; Marzano & Heflebower, 2011; Tarini, Budiyono, & Astuti, 2012) however there are limited research on the teachers' practices in giving final grade. Therefore this mini research studied the English teachers' practices in giving final grade to students.

B. LITERATURE REVIEW
1. The Importance of Final Grade and Minimum Score Criteria

The final grades in report books are the primary means of students' measurement progress through school (Ellis, 2009). The grades determine whether students are allowed to continue their studies to the next level or to graduate at certain education level. The grades also may predict their achievements in the next education institution levels (Supriatna, 2009). Concerning with students graduation of Junior High School and Senior High School, students' grades in report books contribute 40% while grades of National Examination contribute 60% (BNSP, 2007). If a student gets 50 for his/her English subject at report book and 60 in his/her final examination so his/her final grade will be 54 and this is not certain he/ she can graduate from the school. Still it depends on other subjects whether all the grades of subjects have achieved 'certain level' which is what so-called *Kriteria ketuntasan minimal /* KKM (minimum score criteria). The minimum score criteria is determined by certain aspects; students' intake, facilities, complexity, and teacher's competence (BNSP, 2007) which refers to content standard, based competence and indicators of learning. As a result of mastery learning in Indonesia education system, KKM determines whether students may be allowed to continue to the next grade/ class. In KKM based-assessment, there is no student will fail as each students will have chance to get remedy. Shortly, every student can pass all the courses. At the end of sixth semester, students' grades of five semesters will be calculated and taken its average score. The average score later will be added with the result of national examination to determine whether the student graduates or not.

Considering the importance of grades in report book to determine students' graduation, the teachers are supposed to give students 'good grades' such as found in one Junior High school in Riau, there is a regulation of the school that minimum scores criteria of English subject, Mathematics and Science are 65 while other subjects are supposed to be 70 to 75. There is assumption that by deciding such those KKM, the students will get good grade.

In addition to the process of grading, to have fair and accurate grade the use of approaches also is beneficial (Piontek, 2008). Further, Piontek mentioned that in general, there are two approaches; *norm-referenced* and *criterion-referenced*. When using norm-referenced approach, a teacher compares a students' performance to norm of the class as the whole. This is based on assumption that skills and knowledge are distributed in norm group. Meanwhile criterion-reference grading focuses on the absolute performance against predetermined criteria.

2. Formative and Summative Assessment

Formative assessment provides feedback and information during the instructional process, while learning is taking place, and while learning is occurring (Northern Illinois University, Faculty Development and Instructional Design Center facdev@niu.edu, http://facdev.niu.edu, Zainal (2011). Formative assessment does not only measure student's progress (Brown, 2004; Zainal, 2011) but also assess teacher's own progress as an instructor, teacher's method and strategy of teaching, support of learning (KEMENDIKBUD, 2012) to improve students' learning (Piere, et al in Pinchok and Brandt, 2009).

Types of Formative Assessment
a. Observations during in-class activities; of students non-verbal feedback during lecture
b. Homework exercises as review for exams and class discussions)
c. Reflections journals that are reviewed periodically during the semester
d. Question and answer sessions, both formal—planned and informal—spontaneous
e. Conferences between the instructor and student at various points in the semester
f. In-class activities where students informally present their results
g. Student feedback collected by periodically answering specific question about the instruction and their self-evaluation of performance and progress

Summative assessment takes place after the learning has been completed and provides information and feedback that sums up the teaching and learning process (Brown, 2004; Pinchok & Brandt, 2009). Its aims to measure the student's achievement of standard competence and basic competence which are determined and used as the basic consideration in deciding the student passes a course or fail (KEMENDIKBUD, 2012)

Types of Summative Assessment
There are some types of summative assessment according to different experts but in this study, it is categorized into two major type of summative
a. Examinations (major, high-stakes exams) in this case it might be test after one genre is learned or integrated with transactional text, mid test
b. Final examination such as semester test

C. METHODOLOGY

This qualitative research design (Fraenkel, Wallen & Hyun, 2012) attempts to explore the teachers' practices in determining final grade. The research question of this study is formulated as follows: "What criteria are used by English teachers in giving final grade to their students?

This study included six English teachers of Junior High Schools, one vice curriculum and 6 students. The participated teachers consist of 3 female teachers and 3 male teachers who have worked as teachers for more than 5 years. 12 students were chosen as the sample but 6 students who responded to return the questionnaires and one was disposed to be interviewed.

Questionnaires, interview and document in form of 5 students' report books were taken as data collection techniques. The questionnaire adopted Brown's grading questionnaire and modifies it for clearer purpose. It contains 14 items of statements which represents how the teachers grade their students. The result were calculated and taken their total answers. For getting clearer data, an open-ended questionnaire was provided to know how the teachers give final grade. The interview was conducted to have clearer information which has not been covered in questionnaires. In addition, to have triangulation data, a questionnaire was given to a vice curriculum and dichotomous questionnaire (Cohen, Manion & Morisson, 2012) was employed to 12 students to know teachers' practices in giving final grade.

From interview, the data was collected by using mobile phone which was recorded and by chatting room in face book. The data which was recorded then transcribed and interpreted to answer research questions refers to theories. Both data from open-ended questionnaires and interview were coded to identify the category relate to the topic studied.

D. FINDINGS AND DISCUSSION

This section elaborates data analysis based on one research question as stated previously which is how teachers' practices in giving final grade to students. The detail explanation is elaborated as follow:

1. The Diversity of Teachers' Practices in Giving Final Grade

Based on questionnaires the six teachers give final grade based on two types of assessment which are formative and summative. However there were differences in the category with regard to formative assessment which can be seen in this following table.

Table 2. Criteria for Determining a Final Grade in English Course

Category	T1	T2	T3	T4	T5	T6	Total Yes	Total No
1. Formative								
a. Quiz	Y	Y	Y	Y	Y	Y	6	0
b. Homework	Y	N	Y	Y	Y	N	4	2
c. Project	Y	Y	Y	Y	Y	Y	6	0
d. Performance	Y	Y	Y	Y	Y	Y	6	0
e. Informal observation	Y	N	N	N	N	N	1	6
f. Oral participation	Y	Y	Y	Y	Y	Y	6	0
g. Improvement	N	N	N	N	N	N	0	6
h. Behavior	Y	Y	Y	Y	Y	Y	6	0
i. Effort	Y	Y	Y	N	N	N	3	3
j. Motivation	Y	Y	Y	Y	N	N	4	2
k. Punctuality & attendance	Y	Y	Y	Y	Y	Y	6	0
l. Closeness to the student	N	N	Y	Y	Y	N	3	3

2. Summative								
a. Test (UH)	Y	Y	Y	Y	Y	Y	6	0
b. Mid test	Y	Y	Y	Y	Y	Y	6	0
c. Semester test	Y	Y	Y	Y	Y	Y	6	0

Adapted from Brown (2004) Suharsimi (2013)

Y= Yes

N= No

Since 3 out 6 did not give complete information which is needed in this research then in this study focuses on the data taken from 3 teachers from three different schools who were also interviewed.

As mentioned previously, the three teachers include formative and summative assessment but they have difference percentage of both assessments and also difference criteria in determining final grade. For further explanation will be shown in this following description.

2. Teacher 1 at 3 schools; SMPN A, B, and C

This teacher graduated from English Study Program in One State University in Riau. He has been teaching for 12 years at Junior High School. Now he teaches at three Junior High Schools. From questionnaire and interview, in giving final grade he includes quiz, project, performance, oral participation, behavior, punctuality & attendance, test (UH), mid test, semester test.

However, he said that he has different consideration of using these criteria in assessing effort, behavior, oral participation, motivation, and improvement. In two schools where he teaches he put behavior as the main component of formative assessment with reason most of the students of these schools are low achievers. Meanwhile in the other school where he teaches, he includes them as additional points for those whose average grade of formative and summative is below KKM.

Teacher 1 did not include closeness to his students in giving final grade. The reason is he tried to be fair in grading .

To validate the data, vice curriculum and two students in one of schools where he teaches approved his practices by saying the same criteria as mentioned by the teacher in his questionnaire and interview. These two students know the criteria which include in final grade as the teacher explain it at the very beginning semester. They said that the teacher also explained percentage of each components but when the students asked to mention it they could not review all exactly. In giving final grade, no one complain with his practices. Although, initially some other teachers thinks that he gives good or bad grades to some students but as he could give clear information and supported by data all sides could understand his practices include the head masters.

3. Teacher 2 at SMPN D

This teacher graduated from English Study Program in One state of University in Riau. He has been teaching for 12 years at Junior High School. Now she teaches at SMPN X in Riau. From questionnaire and interview, she includes quiz, project, performance, oral participation, behavior, punctuality & attendance, test (UH), mid test, semester test.

This is also supported by one student in the interview who said that final grade is taken from all aspects that students do in their class like test, post test, writing a text, demonstrating a dialogue, oral participation, mid test and semester test.

Regarding with punctuality and attendance this is also mentioned by one student in the questionnaire who wrote that her teacher has explained punctuality and attendance become additional points in students; final grade.

Further, in term of oral participation, behavior, punctuality & attendance, behavior, motivation, effort, teacher 2 mentioned that these criteria only adds the result of calculation between formative and summative score yet it does not become the main component of assessment. However, Teacher 2 did not include homework, intuitive (informal observation), improvement and closeness in giving final grade.

From interviewing one student to validate the data, the student had good understanding of criteria which are included in final grade as the teacher often explained them not only at the beginning of semester but at the middle of semester for some times. In giving final grade, only classroom teachers who complain with her practice as the teachers think she gives too high grade for certain students. Teacher 2 stated that she could give good grade as she determines KKM 75 which is high enough. By determining this score the students must reach grade at least 75 and when they did not reach it they must have remedy. Teacher 2 also stated that she has all evidence for giving final grade in form of compilation of students' grade book, students' Porto folio, a journal in which she notes students' behavior in the class.

4. Teacher 3 at Mts E

She graduated from PAI in One State Islamic University in Yogyakarta. She has been teaching for about 5 years. Now she takes Post graduate degree in English Study program in one State University in Riau.

Based on interview she includes quiz, test, homework, mid semester test, semester test, assignments, participation, attendance, discipline and politeness as like teacher 1 and teacher 2. Differs from the two teachers who discussed previously, teacher 3 determines final grade from 70 % cognitive domain and 30% affective domain. Performance and project grade are reported in separate column in students' report books. So they have cognitive and a psychomotor grade in which cognitive grade was taken from both cognitive and affective grades in formative and summative. This is regulated by the school considering the fairness of grading and the importance of affective domain.

Regarding assessing students' behavior in which she uses the term 'adab', she does it in general. She sometimes notes students' behavior in the class, sometimes she does not. In giving final grade, no one complain her practices neither the headmaster, other teachers, students nor students' parents. This teacher also explains to her students the components included in final grade but not the percentage as a result her students have good understanding of how they are graded. This is shown in the students' answer in the questionnaires.

From above description of findings, it reveals that all teachers in their practices give final grade under the criterion-reference approach. The teachers grade students for their effort and show that students can achieve good result if they meet the standards (Piontek, 2008 . As a result, it will be appropriate as collaboration among students to get good grade rather than

competition. This practice can also support mastery learning (Sviniki, 1998). Including both formative and summative assessment as the criteria of giving final grade is considered as good practice as based on KEMENDIKBUD (2012) final grade in report book must be based on formative and summative.

In line with the differences of percentage of each assessment, it might happen as every education institution has different regulation in determining final grade. However it does not influence the reliability of the final grade as far as the formative grade is not less than summative grade (Pinchok and Brandt, 2009). The main point is the teachers have good understanding how to grade and have appropriate documentation how they give final grade that provide accurate portrait of student performance and competence (Guskey, T, R, 2001; Vegan, 2012).

Regarding the three teachers have various criteria or components of formative assessment; it is also found out by Pinchok and Brandt, in their research (2009). Specifically in assessing oral participation, effort, motivation, punctuality, attendance, closeness, as components of formative assessment the three teachers have different practices in using it. Two teachers include behavior as additional point which means after getting the average score of formative and summative then the result is added by students' behavior to be the final grade.

On the other hand the same teacher in different school where the students he teaches is considered as low achievers, behavior grade becomes the main point of formative assessment. This was also employed by one teacher who teaches in Islamic school. This might happen considering (1) the school setting, which is Islamic school in which affective domain (adab) is considered much rather than cognitive domain, (2) the students' competence background. The way three teachers assess behavior also differ among others, two teachers have a kind of journal to note students' affective and did it gradually while another did it holistically. According to Brown (2004) holistically assessment is an assessment which is done in general not in specific or gradual occasion. Relate to considering behavior, attendance as extra credit is supported by Scriffiny (2008), she argues that this practice can "actually help students grapple with the idea of quality". Further Scriffiny refered to O'Connor, Tomlison & McTighe mentioned that teacher can report information about student like effort and attendance separately from academic achievement.

On the contrary, Close (2009) argues that moral virtues should not be included as the basis of grading. He said that a teacher should be careful not to increase nor decrease students' grade on the basis on moral virtues unless it has relevancy to the course.

Based on the findings which mentioned above, it shows that all teachers explains at the beginning of semester of determining final grade. This practice gives positive effect as by understanding the criteria in advance so that they can direct their studying accordingly (Svinicki, 1998). This might make no students complain with the teachers' practices, they have same perception of how they are graded. The transparency of grading is needed as stated Pinchok & Brandt, 2009). Another reason might be as the teachers have good confidence with their practices as they grade what they have to grade as mentioned in this following

T1: Tidak pernah ada yang complain karena penjelasan dan alasan yang saya berikan bisa di mengerti oleh semua pihak termasuk kepala sekolah. (*So far, no one complain for my practice in giving final grade as I have evidence*)

However, from above statement it seems that the schools in this case head master and other teachers a bit doubt of the teachers' practices as it is also mentioned by another teacher in this following:

49. R: selama ini ada yang pernah complain ga dengan nilai yang ibu berikan? (*Is there anyone complain of your practice in giving final grade?*)
50. T2: ada sih (tertawa) para wali kelas.. hahahaha.. katanya saya baik banget ngasih nilai. Padahal kan saya ngasih nilai bagus karena emang segitu (laugh, *yes, some class teachers did… they said I am too kind giving grade but I gave grade as the students deserved to get it*)

This shows that the schools themselves which dissatisfy with the teachers' practices in giving final grades whether the grade is too good or too bad. This might happen as among the teachers themselves have difference background knowledge and 'cultural practices' (Hagen, 2009) 'own assessment personality" and 'belief' (Learning and Teaching Center, 2011) in determining grade.

Regarding the importance of final grade in determining students' graduation, the three teachers have different practices in giving final grade. One teacher determines minimum score criteria (KKM) as the standard of grading more than its real calculation so that the students will try to reach KKM. This is supported by Dynamic theory system (DTS) of Second Language Acquisition that in teaching, a teacher may determine the standard competence higher than the real students' competence (Krashen in De Bot, 2005) to maximize the learning potential. Further by determining high KKM the students will get high grade even though they need to be remedied. The other teachers determine KKM based on their calculation and interpretation. This practice might be influenced by teachers' experiences, as stated in this following:

T3: nah itu dia kak, rahasia sebenarnya… we have two kinds of raport…rapor asli dan rapor kelulusan. (*the secret is we have two kinds of report books, 'the real' report book and 'the adapted' report book*)

This also shows that the teachers practices in reporting the final grade yet which is not the focus of this study.

E. CONCLUSION

As the conclusion of this study, the teachers grade their students based on criterion-referenced. In addition, there are various practices done by English teachers in giving final grade to their students. The similarities are (1) they include both formative and summative assessment (2) they explain the criteria of giving final grade to the students as well as they are welcome to explain to anyone about their practices (3) they have enough evidence of determining the final grade (4) they consider the importance of final grade in students'

graduation. Meanwhile the differences are (1) they have different components of formative and summative assessment, (2) they have different percentage of both formative and summative (3) they have different practices in using 'affective domain' assessment. In addition to those, it seems that the teachers have not had clearer information about what formative and summative assessment is. They seem confuse to put certain components whether they belongs to formative or summative for instance whether test (ulangan harian) which is conducted after studying one standard competence and mid test refer to which assessment.

Therefore, the training is needed to give more explanation about assessment and the process of final grade. For further research, here are the recommended studies:

1. Students, headmaster, parents' responses toward teacher's practices in giving final grade.
2. Teacher's practices in reporting final grade.
3. Teacher's knowledge and practices in formative and summative assessment.

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EFL TEACHERS' PEDAGOGICAL COMPETENCE IN THE CONTEXT OF ENGLISH CURRICULUM 2013

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Abstract

Indonesia's newest curriculum, curriculum 2013, applies four competences for teachers such as pedagogical, social, personal and professional competence. This study is concerned with the teachers' pedagogical competence in curriculum 2013. It is aimed to figure out the teachers' perception on pedagogical competence in curriculum 2013, the implementation of pedagogical competence in EFL learning process and the problem faced by teachers in implementing pedagogical competence in applying 2013 curriculum. The study used case study research design involving two English teachers of a senior high at Bandar Lampung. Using descriptive method, the study investigated the perception, the implementation and the problem faced by teachers. The data for the study were collected through interviews and class observation. The data were analyzed, described and interpreted analytically. It was found that these teachers have good perception of pedagogical competence and good implementation, yet teachers still finds problems regarding to the implementation of curriculum 2013.

Keywords: english curriculum, pedagogical competence, teachers' competences, and 2013 curriculum

A. INTRODUCTION

1. Background

Teacher is an important job in educating people. As the main aspect in the process of learning, teacher has a big role in the class. As Gibran stated,'If (the teacher) is indeed wise, he does not bid you enter the house of his wisdom but rather leads you to the threshold of your own mind'. In doing his job, teacher should realize that teaching is a highly-demanding profession due to not only the complexity of the rigorous triangular relationships among teachers, learners, and the subject matter but also due to the society high expectation and pressure upon teachers (Prihantoro, 2007). From this explanation, we can assume that teachers' job is more than only as a knowledge transferor. Teachers can be defined as the main person who is responsible in the students' success.

Due to the profession of teachers, Referring to its National Education Standard (Standar Nasional Pendidikan), Indonesia developed its educational system including curriculum (Content Standard) which is aimed to ensure the equivalence of educational

opportunity in suburban and urban areas, to increase the quality of education and the significance and the effectiveness of educational management to cope with the global challenges. Alwasilah et.al (2008) states:

"Sistem Pendidikan Nasional diharapkan mampu menjamin pemerataan kesempatan pendidikan, peningkatan mutu serta relevansi dan efisiensi manajemen pendidikan untuk menghadapi tantangan sesuai dengan tuntutan perubahan kehidupan lokal, nasional, dan global sehingga perlu dilakukan pembaharuan pendidikan secara terencana, terarah, dan berkesinambungan. Prinsip-prinsip dasar inilah yang telah melahirkan Undang-Undang (UU) Nomor 20 Tahun 2003 tentang Sistem Pendidikan Nasional."

As stated above, the objective of National Education Standard is the education system in Indonesia will be able to cope with the global challenge so that the students will be ready to face the global exchange. Related to this point, there comes the newest curriculum named curriculum 2013 which hopefully can cover and maintain the need of National Education Standard. Later, from this new curriculum which the standard is the changing of educational system from students-centered to teachers-centered, teachers can participate in gaining the objective of National Education Standard. Moreover, Government, themselves, have made Government Regulation 19 Year 2005 which is about National Education Standard that contains of minimal standard should be fulfilled by educational stakeholders in every level. Regarding to teacher's professionalism, there, based on the Government Regulation above, are four competences to gain their professionalism such as pedagogical, social, personal and professional competence. Focus to this study, pedagogical competence is stated as the crucial item in developing the goal of 2013 curriculum. Suherdi (2013) stated that this competence can be shortly explained as the ability to transfer of knowledge. In addition, a teacher who has pedagogical competence will be able to do the learning activities in every existing condition. (Harmer, 2007)

Thus, this study is concerned with the investigation of teachers' perception on the characteristic of pedagogical competence in implementing 2013 curriculum. It will further look at what aspects constitute pedagogical competence, how pedagogical competence can be implemented in 2013 curriculum and what problems are faced by teachers in implementing pedagogical competence in 2013 curriculum.

2. Review of Related Literature

This point will describe some theoretical foundations adopted for the study. The discussion will cover the following aspect: English Curriculum, Pedagogical Competence, Teachers' Competences, and 2013 Curriculum.

a. English Curriculum

Kirkpatrick (2012) states "Even though Indonesia is the only ASEAN country which does not make English a compulsory part of the primary curriculum, parental demand for English in effect means that almost primary schools teach English as a subject."

In relation with curriculum development particularly in the form of English language learning (English as a foreign language), Indonesia as one of developing countries has its own historical background in developing its national curriculum. English is not a compulsory

subject in primary curriculum, it is more developed as a local content. English as a compulsory subject is only developed in secondary curriculum. Thus, many primary schools developed their own English as "local content" curriculum to answer parents' willingness that their children will be able to use English as a means of communication to compete in global era.

b. Pedagogical Competence

Pedagogical competence can be stated as the way how teachers create a creative teaching technique so that students will feel eager to learn. In here, teachers are asked to make a good preparation, a good process and also a good evaluation.

Next is social competence. In social competence, teachers need to have some good interactions. The need to have a cooperative work with colleagues of English teachers, with colleagues of teachers in other subjects, with the students, with the parents and with the society should be seen as the ingredients to accomplish the target of the curriculum successfully.

The third competence is personal competence. As this global era, the quality of people's personality is getting decrease. It can be seen from many problems happened in so many places. Therefore, the need to gain a better personality of the students can be accomplish by giving a good example in the school which is teacher as the main role.

The last one is professional competence. Professional competence can be categorized as the ability of teachers in mastering the material. Such English teachers, teachers are asked to master the material perfectly. Because, teachers as the model of the students' progress, then, the importance in mastering 4 skills, as English teacher, can not be denied anymore.
Pedagogical Competence

As it is mentioned before, pedagogical competence is the competence which related to the ability of teacher in choosing and designing the material so that there would not be any problem in the class. Teachers will be able to choose and try to develop the supporting materials which help them to accomplishing the goals of the learning process which has been told in the points of indicators (Suherdi, 2013).

Moreover, Harmer (2007) mentioned some tasks which can be recognized as aspects of fulfilling pedagogical competence, there are:
1) Preparation
   Teachers need to have some idea of what the students are going to achieve in the lesson.
2) Keeping records
   It is important for professional teachers to try to evaluate how successful an activity has been in terms of student engagement and learning outcomes.
3) Being reliable
   Good teaches are reliable about things like timekeeping and homework.

In addition, Harmer (2007) also mentioned some skills shall also be accomplished by teachers, they are:

1) Managing Classes

   Successful class management also involves being able to prevent disruptive behaviour and reacting to it effectively when it occurs

2) Matching tasks and groups

   Students will learn more successfully if they enjoy the activities they are involved in and are interested or stimulated by the topics teachers bring into the classroom.

3) Variety

   Good teachers vary activities and topics aver a period of time.

4) Destination

   It will be helpful if teachers can make sure that students leave the class with some tangible result. That is why a summing up, or feedback session at the end of a discussion is so valuable.

   The last point Harmer (2007) stated is teacher knowledge which relates to material and resources used in classroom activity, the using of classroom equipment and the ability of teachers to have a keeping up-to-date knowledge so can make various activities for students.

c. Teachers' Competences

As teacher, the need to have as such competency shall not be noted as the unimportant point. Teacher is the person who can light up the dark, the person who can guide the lost, the person who can make rain in the middle of a dry season (Bandingkan dengan Tim Pendidikan karakter UPI, 2012 cited in Suherdi, 2013). As described, teachers should have some competency fulfilled so that they can do the job successfully. There are four competencies as cited in Suherdi (2013). There are pedagogical competence, social competence, personal competence, and professional competence.

d. 2013 Curriculum

Considering to Undang-Undang (UU) Nomor 20 Tahun 2003 tentang Sistem Pendidikan Nasional, the government – in this case – Ministry of Education and Culture is trying to revise and develop National Curriculum which is concerned on the values, knowledge, and skills of the learners – namely 2013 Curriculum.

The implementation of 2013 Curriculum which is launched by the government – Ministry of Education and Culture – and is applied in some "pilot project" schools has reformed our paradigm particularly stakeholders, teachers and students who are involved directly in the process of teaching and learning. This paradigm leads to our understanding that 2013 Curriculum is basically the revision of School Based Curriculum, specifically on its four National Education Standards (*Standar Nasional Pendidikan): Standar Kompetensi Lulusan (SKL), Standar Isi (SI), Standar Proses (SP)* and *Standar Penilaian.* The goal of this curriculum is to build students competencies holistically in form of values system and attitude, knowledge, and skill which is needed to prepare them successfully in the era in which technology and science is getting advanced in human civilization as part of globalization. On the other hand, the values system is built during learning process as part of

character building which is needed as a tool for learners in coping with the modern life in technology era.

English language learning in 2013 Curriculum is taught as a compulsory subject in secondary school (grade 7 – 12). English language learning is conducted by considering the theories of learning and language learning. Behaviorism, cognitivism, humanism, and constructivism are the theories of learning underlying the learning process. Genre and text, speech act, and communicative competence are the theories of language learning underlying English language learning. In 2013 Curriculum, some methods and approaches which explore students abilities and skills in using English as a means of communication in a meaningful way is strongly suggested to be applied by English teachers during teaching learning process in order to help the students achieving learning objectives that cover three learning dimensions: *sikap (*values system/attitude), *pengetahuan* (knowledge), and *keterampilan* (skill). These dimensions are described clearly in some competencies (core and base competencies) which have to be acquired by students by using various methods, such as scientific method, inquiry method, problem-based learning, project-based learning. During English language learning, teachers should be able to facilitate students to explore their abilities through observing, questioning, collecting information, associating, and communicating. The process of assessment is integrated with learning process. Teachers are required to observe and assess students' performance during learning process that covers those three dimensions of learning.

3. Problem Statements

This study will explore English teachers' perception at a senior high school in Bandar Lampung. Specifically, it will observe the teachers' perception on characteristic of a pedagogical competence for English teachers, the teachers' implementation of pedagogical competence in the learning activities and the teachers' problems faced in implementing pedagogical competence in 2013 curriculum. The problem of the present study is broken down into the following research questions:

a) How do teachers perceive pedagogical competence in implementing 2013 curriculum?
b) How do teachers implement pedagogical competence in learning classroom activities in 2013 curriculum?
c) What are problems faced by teachers in implementing pedagogical competence referring to 2013 curriculum?

4. Grand Theory

a. *Implementation of Teachers Pedagogy Competence to Optimizing Learners Development in Public Primary School in Indonesia is written by Akhyak, Mohammad Idrus, Yunus Abu Bakar*

The aims of this study is to research how the implementation of teachers pedagogical competence to optimize the learners development of the intellectual, emotional, and moral aspects in public primary school in Indonesia. The result of this study was that the implementation of teachers pedagogy competence to optimize learners development in public

primary school in Indonesia seem to made a serious efforts in the development of the intellectual, emotional, and moral to learners.

b. *The Competency of Primary School English Teachers in Indonesia is written by Endang Asriyanti, Asfah Rahman, Arifuddin Hamra, Nurdin Noni*

The aims of the study were to explore the primary school English teacher competence about their professional and pedagogical competences. The recommendations for the improvement of professional and pedagogical competence of primary school teachers of English were also provided.

5. Purpose of Study

Departing from the problems mentioned in statement of the problem, the present study aims to:

1. investigate teachers' perception about pedagogical competence
2. figure out how teachers implement the pedagogical competence in EFL learning process
3. find out the problem faced by teachers in implementing pedagogical competence.

6. Significance of the Study

Theoritically, this study attempts to investigate the comment and the perception of two English teachers at a senior high school in Bandar Lampung regarding to the concept of pedagogical competence of English teacher. More specifically, this study describes their perception on pedagogical competence concept, their implementation of pedagogical competence in EFL learning process and their problem in implementing pedagogical competence.

Practically, this study attempts to be the evaluation in the first year of the application of 2013 curriculum. This study can be one of the evaluation references for the stakeholder of 2013 curriculum.

B. RESEARCH METHOD

A qualitative research methodology was used in this study to investigate EFL teachers' perception about pedagogical competence, to figure out how EFL teachers implement the pedagogical competence in EFL learning process and to find out the problem faced by EFL teachers in implementing pedagogical competence in the context of 2013 curriculum.

This study was conducted at a private senior high school in Bandar Lampung. It is a private senior high school that recently has become one of the most favorite schools in Bandar Lampung and one of the pilot schools in implementing 2013 curriculum. The access for the study becomes the main reason why the researcher conducted the study in this school is because the researcher's role in the previous years as the academic consultant for local content subject.

In this study, two teachers became the participants. They were selected because they were the teachers who implement the 2013 curriculum especially in "Lintas Minat Class" and they have different year experience of teaching. The first participant has taught for more than

10 years and the second one teaches English for the first time which this year becomes her first year in teaching English.

In collecting the data, the researcher used interviews and classroom observations as the instrument. The researcher observed the classroom activities to find out the implementation of pedagogical competence and interviewed the pasrticipants to gain the data of their perception of pedagogical competence and problem faced in implementing pedagogical competence in EFL classroom in the context of 2013 curriculum.

The procedure of data collection can be described through the following steps:

1. Observing classroom activities

   The researcher observes class for about three times.

2. Interviewing participants

   After observe the activities, the researcher interviews the participants.

3. Analyzing the Data

   After collecting the data, the data were then analytically described, analyzed, and interpreted as they were relevant to issues and problems in the teaching of English based on the 2013 English curriculum

C. FINDINGS AND DISCUSSION

1. Findings

It was found that the teachers' pedagogical competence in the context of 2013 curriculum had reached the expectation of 2013 curriculum. Based on some previous theories, it can be concluded that teachers who have pedagogical competence can fulfilled some characteristics which are divided into three parts such as teacher task, teacher skills and teacher knowledge.

From the classroom observation, it was found that the two participants had proved that they have fulfilled the competencies need before it is stated as the obligation in 2013 curriculum. In fulfilling teacher task (Harmer 2007), the participant had already discussed the material would be delivered to the students in the beginning of the semester so that the preparation needed before the class had been perfectly prepared. Not only the preparation, but the participants also noted and discussed the progress of the learners to help them finding out the progress or the problem faced by the learners in the process of learning. Participants also give homework for learners in many ways to keep the variety of the study and to have a continuous lesson after school time.

In fulfilling the skills (Harmer, 2007), they also had a good technique. They created a variety technique referring to scientific approach of learning where they were managed well, varied lesson and gave clear feedback so that learners could get the main point in learning the subject. As the example, the first participant asked learners to make a conversation of descriptive in movie form while the other participant asked the learners to make a simple magazine which can be distributed to their junior in some junior high schools.

Later on, the equipments and materials used in the process of learning were suitable to the goals of 2013 curriculum which is the using of technology and suitable to the methodology used in 2013 curriculum which is scientific approach. The learners are asked to

create their own product referring to the material learned by using their own creativity without any pressure from the teachers who were the participants. The participants also realized that in fulfilling pedagogical competence, they needed to keep being up-to-date. Because of that, the participants used magazine and movie as the final project of the class because they were realizing that those materials were the present materials which close to the learners.

When doing the interview, the researcher found that participants were completely understood of the main elements in implementing 2013 curriculum. Although the deep understanding was completely mastered by the participants, they still found some problems in applying pedagogical competence in 2013 curriculum. The first problem is hard for participants to gain the target lesson in every semester with a very limited time of teaching. The participants thought it almost impossible that in a semester, there are with so many targets should be fulfilled with the given time of teaching. The participants realized that in mastering one skill such as speaking, it needs like 2 meeting to fulfill the target, because in one meeting the participants need to do brain storm in the beginning of the meeting, then review the previous material then move on to the present material. As that explained, it was hard to shorten the materials into several times. The other problem faced by participants was the hard access to have a seminar or training to improve their pedagogical competence. Because they are the teachers for private school, it seems to be so hard to get the information about the qualified training held by the local government. Fortunately, the school committee is responsible institution so that the school committee made some private training to develop the competencies of teachers. .

2. Discussion

As a result of the adopted concepts underlying the new curriculum, pedagogical competency expected from the learners of English in Indonesia school as it is explicitly stated in the 2013 curriculum are considered to have been set not suitable. The expected competencies which are explicitly stated in the curriculum include the ability in transferring knowledge, the ability to design the material and the ability to design the process of learning should be redesign. In 2013 curriculum, the learning time to comprehend the target of the curriculum is set too high. From the previous curriculum, the teachers are able to conduct the various materials and accomplish pedagogical competence because the time given by the curriculum indeed is suitable. By having English which is not considered as one of the main subject in the school with the related target, teachers should give extra time for students to learn more. While on the other side, teachers should prepare materials given in the class and doing evaluation for every lesson learned.

The responsibility given to teachers for accomplishing 24 hours of teaching is seemed so hard to be fulfilled. It is because since 2013 curriculum has shortened the time to teach the target lesson, teachers will not have as much time, for each class as before. It should be considered that for being a professional teacher, who has four competencies which one of them is pedagogical competence, teacher need to conduct a standard procedure of teaching English in the class. There should be a time for teacher to conduct pre activity, main activity, and post activity in one time process of learning. In pre activity, teacher will give such

activity such as review to the previous material, brain storm to the new material and ice breaking to get students' attention. In main activity, teacher need to conduct a various activity which should be fulfilled the target of the lesson where English has four skills to be mastered. On the other side, in main activity, teacher should create some activities that can produce students-centered process of learning. By having in post activity, teacher is not free yet. They have to design an evaluation for checking out students' feedback of the lesson given. Homework should be given in the end of the class to have a continuous lesson so that students will not easily forget about the lesson learned.

The need to have an easy access for teachers' training should be considered as well. It would be better if the training will focus to the ability of the teacher not the knowledge of the teacher. The main point in here is the teachers need to work on the program to so that teachers will be creative because they will not only understand about the material but also the real practice that they can use in the real situation. In this point, workshop format is better than seminar for training session for teachers.

D. CONCLUSION

As it is stated, the goal of 2013 curriculum is to build students competencies holistically in form of values system and attitude, knowledge, and skill in the era in which technology and science is getting advanced in human civilization as part of globalization. Moreover, teachers should be able to facilitate students to explore their abilities through observing, questioning, collecting information, associating, and communicating. To reach this target as the need of fulfilling pedagogical competence is unquestionable. The process of assessment is integrated with learning process. Teachers are required to observe and assess students' performance during learning process that covers those three dimensions of learning. Teachers are asked to be creative in designing the materials of learning.

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IN-SERVICE EFL TEACHERS' BELIEFS ABOUT LANGUAGE LEARNING AND THEIR APPROACHES TO EFL INSTRUCTIONS

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Abstract

This research reports the in-service teachers' beliefs about language learning and their approaches to EFL (English as a Foreign Language) instructions. The study was conducted to answer the main questions: What are the common beliefs about language learning that the in-service EFL teachers have regarding the approaches to EFL instructions? and What are, in specific, the beliefs about language learning they have in the links with their teaching approaches? The data were collected with survey called the Beliefs about Language Learning Inventory (BALLI) provided quantitative data and interviews were used to elicit the qualitative data. The result revealed that in-service EFL teachers share common beliefs regarding their approaches to EFL instructions, with an inconsistent links between their approaches in the importance of grammar in learning a foreign language and the beliefs of nature of language learning. As to the held beliefs there are four beliefs were reported, i.e.: Language learning aptitude, Difficulty of language learning, Nature of language learning, and Learning and communication strategies. This study is hoped to be significant for both theoretical and practical considerations for teachers in the EFL context.

Keywords: teachers' beliefs, language learning, teaching approaches.

A. INTRODUCTION

1. Background

Beliefs about language learning have been one of the research focuses in the field of second language acquisition, yet, teachers' beliefs about language learning is a relatively new topic in language, tracing back to the mid-1970s when Lortie published his classical study on teachers' socialization (Lortie, 1975 in Barcelos, 2000). Lortie's study was one factor that contributed to the recognition of teacher thinking as a concept in education and teaching as a cognitive undertaking (Freeman, 1996). From this study, researchers began to realize that in order to understand teaching it was necessary to study it from the teachers' point of view. The emphasis of the research is on understanding how teachers' interpretations and cognitive processes are embedded in their practice (Johnson, 1999). Likewise, Prabhu (1990) brought a concept about sense of plausibility which refers to teachers being able to act according to their beliefs and to explain why they do and why they do what they do (Barcelos, 2000).

A number of studies have been conducted to examine language teachers' beliefs which have suggested that such beliefs may influence the teachers' actions in the classroom. Some

researchers have argued that not only do language teachers' belief influence their practice, but their beliefs also help shape the nature of the classroom interaction (Johnson, 1992), as well as students' perceptions of classroom practices (Fang, 1996). Another study conducted by Johnson in 1992 investigated the beliefs of thirty ESL teachers and found out that teachers' literacy instruction was consistent with their belief. Furthermore, Mangano and Allen (1986 in Barcelos, 2000) studied the relationships between teachers' theoretical orientation towards students' writing and their (teachers') instructional practices. This result suggested that not only were teachers' belief consistent with their practice, but teachers and students interacted differently because of the teachers' theoretical beliefs about language instruction. Also, Smith (1996) conducted a research on the influence of teachers' belief on their decision-making process and found out that, whereas teacher decisions revealed an eclectic use of theory, their beliefs and practices were internally consistent. In addition, some beliefs about language learning have been found to correlate with teacher education programs (Dole & Sinatra, 1994; Horwitz, 1985 in Vibulphol 2004) which can limit their choices of instructional practices.

Although there were a few studies (Almarza, 1996; Brown & McGannon, 1998; Cabaroglu & Roberts, 2000; Johnson, 1994; Peacock, 2001 reported in Vibuphol 2004) focused on pre-service ESL/EFL teachers' belief development during their teacher education programs and only Peacock conducted his study in an EFL context, there had not been a study that focused on development of beliefs about language learning of in-service EFL teachers— the teachers who have more learning experience in English and would be more proficient in English as compared to the pre-service teachers (Richards & Schmidt, 2002).

2. Research questions

Two main research questions were used as the framework of the collection and analysis of the data in this study.
1. What are the common beliefs about language learning do the in-service EFL teachers have regarding the approaches to EFL instructions?
2. What are, in specific, the beliefs about language learning do they have in the links with their teaching approaches?

3. Significance of the Study

This study is hoped to be significant for both theoretical and practical considerations. Theoretically, this study is important in that it shed understanding on the beliefs about language learning of in-service teachers in the EFL context in Indonesia by undertaking a qualitative investigation that looks the reflections of teachers' beliefs through actions in the classroom. Practically, the result of this study could be an input for teachers to enhance their language learning instructions to achieve the language learning targets.

B. LITERATURE REVIEW

Beliefs about language learning, as well as other cognitive and affective variables, have become an interest of researchers in the field of second language acquisition because of assumptions that "success depends less on materials, techniques, and linguistic analyses, and

more on what goes on inside and between the people in the classroom" (Stevick, 1980, p.4 in Vibulphol, 2004). Puchta (1999 in Vibuphol, 2004) claimed that beliefs are "guiding principles" of people's behaviors. He elaborated that beliefs "are generalizations about cause and effect, and [that] they influence our inner representation of the world around us. They help us to make sense of that world, and they determine how we think and how we act" (pp. 68-69). As Barcelos (2000) stated, beliefs do act as a filter in teachers' practice and teachers will try to act according to them. Beliefs are based on experience and context. Context plays a very important role and it is through the inconsistencies, hotspots, and dilemmas that we will be able to understand the complexities of teachers' belief and practices.

Some researchers viewed beliefs about language learning as a part of meta-cognitive knowledge; however, Wenden (1998) claimed that in second and foreign language literature, these two terms are used interchangeably to refer to the same construct. The term, beliefs about language learning, were not clearly defined by researchers in previous studies. In most studies, the term, beliefs about language learning, is used as a known construct without providing further explanation while some studies define the term beliefs alone.

Horwitz referred to "beliefs" using the terms such as preconceptions (1985), preconceived ideas (1987), and preconceived notions (1988) without giving specific descriptions about the construct. In her instrument, the Beliefs about Language Learning Inventory, which has become one of the most widely used instruments in studies on beliefs about language learning, she used the word opinions to refer to beliefs, the construct that the inventory is aimed for. In a number of studies, the definition of beliefs alone is provided. Nevertheless, researchers do not seem to have reached the same consensus about the meaning of beliefs. Because of its complexity, it may be difficult to generate a fixed set of meaning or to be defined precisely. Pajares (1992) stated that, "defining beliefs is at best a game of player's choice".

Unlike most of the research on language learners' beliefs, the term knowledge is more commonly used in the research about teachers' beliefs. Although some researchers still see beliefs as synonymous with 'false ideas,' other researchers are more interested in 'knowledge in action" or "reasoning-in-action" (Freeman & Johnson, 1998). The paradigm of 'teacher point of view' in language learning brought the terms teacher thinking, teacher cognition, teacher learning and teacher knowledge (Freeman, 1996a). Clark and Peterson (1986) stated that teachers' thought processes include teachers' theories and beliefs, teachers' planning and teachers' interactive thoughts and decisions.

C. METHODOLOGY

In this study both quantitative and qualitative research methods to elicit data for the analysis were used. Using a combination of both methods allows for triangulation of the data to achieve accurate and reliable findings (Ellis, 1994). Two major complementary sources of data were used i.e. two parts of a survey called the Beliefs about Language Learning Inventory for the quantitative data and interviews were used to elicit the qualitative data.

1. **Subjects of the study**

   The study was originally designed to survey 20 in-service EFL teachers who are taking their S2 study in a state university in Bandung and having teaching to various level of education in several places in Indonesia. However, there were only 13 subjects participated.

2. **Instrument of the study**

   The instrument used in this study was a modified version of a survey, Beliefs about Language Learning Inventory (BALLI which was published by Horwitz in 1987), an ESL student version; an adaptation version from Vibuphol's, 2004.

3. **Data Analysis**

   In analyzing the data, Miles and Huberman's, 1994 (Punch, 2005) approach was applied. Thus, the data were organized in the table and presented in form of explanation that moved the analysis forward into drawing and verifying conclusion. The data were analyzed through by firstly counting each answer given. Each response from each statement had a numerical value, i.e., *1 = strongly agree; 2 = agree; 3 = neutral; 4 = disagree; 5 = strongly disagree*. The statements on the questionnaire were then grouped into four beliefs categories, which are *Beliefs about Language Learning Aptitude, Beliefs about Difficulty of Language Learning, Beliefs about the Nature of Language Learning, and Beliefs about Learning and Communication Strategies*.

D. FINDING

1. **The common beliefs about language learning that the in-service EFL teachers have regarding the approaches to EFL instructions**

   The vast majority of the subjects (84.6%) were in favor of the belief that *language can be thought of as meaningful communication and is learned subconsciously in non-academic, social situations*. There were 61.5% of the subjects who held beliefs that *as long as EFL students understand what they are saying, they are actually learning the language* and *if EFL students understand some of the basic grammatical rules of the language they can usually create lots of new sentences on their own*. Another similar beliefs was that *as long as EFL students listen to, practice, and remember the language which native speakers use, they are actually learning the language*; which was reported by 53.8% of the subjects.

2. **The beliefs (in specific) about language learning that the in-service EFL teachers in their teaching approaches**

a. *Beliefs about Foreign Language Aptitude*

   There were 61.54% subjects agreed with the statement "It is easier for children than adults to learn a foreign language", 30.77% strongly agree and only 7.69% were neutral. None of the subjects disagree with this concept. With the belief about the special ability for language learning, more than sixty percent agreed and 23.08% strongly agree. Interestingly, with those beliefs, the subjects were not confident to say that "People from my country are good at learning foreign languages." (53.85%) and to affirm that "It is easier for someone who already speaks a foreign language to learn another one." (50%).

b. Beliefs about the Difficulty of Language Learning

The second category of BALLI items concern beliefs about the difficulty of language learning. Half of the participants (50%) reported believing that some languages are easier to learn than others, while about fifty three percent disagreed with the statement that it is easier to speak than to understand a foreign language and 46.15% chose 'neutral' about the statement of 'It is easier to read and write English than to speak and understand it'. Regarding the difficulty of English, 53.85% rated it as "a language of medium difficulty." An equal percentage (23.08%) of the subjects believed that English was "a difficult language" and also "an easy language." None of the participants rated English as "a very easy language" or "a very difficult language." In response to the question about time commitment for English learning, the subjects had different ideas. About forty nine percent believed that it would take a person one to two years of studying English one hour a day to be able to speak English well. Thirty eight percent of the subjects believed that it would take "less than a year"; the rest, fifteen percent of the subjects, believed that no one can learn to speak English well if he or she only spent one hour a day learning it.

c. Beliefs about the Nature of Language Learning

In the third category, the statements in the BALLI address the issues related to the nature of language learning. The results showed that the subjects believe that knowing about English-speaking cultures is necessary in order to speak English (53.85%) and also believed that learning a foreign language is different than learning other academic subjects. The majority of the participants reported believing that it is best to learn English in an English speaking country (69.23%) and that vocabulary (69.23%) was important in learning English. By contrast, grammar was viewed not as the most important part of learning a foreign language (38.46% agree, 38.46% neutral, 15.38% disagree, and 7.69% strongly disagree). This, however, contradicts their reported beliefs regarding their approaches in the language instruction which revealed that sixty one percent believed *if EFL students understand some of the basic grammatical rules of the language they can usually create lots of new sentences on their own.*

d. Beliefs about Learning and Communication Strategies

The result showed that majority of the subjects believed that it is important to speak English with excellent pronunciation and strongly agreed that practice to repeat a lot was important in learning English. Interestingly, two groups of subjects were contradict in that they agreed (38.46%) that 'If beginning students are permitted to make errors in English, it will be difficult for them to speak correctly later on' while the other (38.46%) disagreed and strongly disagree (15.38%). For learning strategies, the subjects' beliefs were varied concerning the use of cassette tapes in practice or learning the language (46.15% agreed, 38.46% were neutral, and 15.38% disagreed).

E. DISCUSSION

As can be seen from the finding, the in-service EFL teachers share common beliefs regarding their approaches to EFL instructions: *language can be thought of as meaningful communication and is learned subconsciously in non-academic, social situations*; *as long as*

EFL students understand what they are saying, they are actually learning the language and *if EFL students understand some of the basic grammatical rules of the language they can usually create lots of new sentences on their own*; and *as long as EFL students listen to, practice, and remember the language which native speakers use, they are actually learning the language*. As stated by Johnson (1992), some researchers have argued that not only do language teachers' beliefs influence their practice, but their beliefs also help shape the nature of the classroom interaction, as well as students' perceptions of classroom practices (Fang, 1996 in Barcelos 2000).

The interview result reflects that the subjects believed that forms of instructions such as lecture, tutorials, and pre- or post-reading assignments were important in learning a foreign language. They believe that their instructions and teaching styles affect the learners' success in learning the target language. As regards to the fact that they were non-native English speaking lecturer, they perceived themselves having more benefit in teaching their students. Harmer (2008) explained that non-native-speaker teachers may have advantages in teaching because they often had the same experience as their students in learning English, and this gives them a quick understanding of what their students are going through.

In general, the subjects endorsed the concept that there is such a thing as foreign language aptitude. The subjects did not associate second language learning ability with other ability and intelligent. The responses to the statement "People who are good at mathematics or science are not good at learning a foreign language" varied. As to 'People who speak more than one language are very intelligent', more than half of the subject agreed with the statement, since they also held a strong belief that 'Everyone can learn to speak a foreign language'. The other items in the category of beliefs about foreign language aptitude concern some individual characteristics such as gender that some people believe can affect success in language learning. The responses to the items were 69.23% stayed 'neutral', 23% 'disagree' and 7.69% 'strongly disagree'.

Barcelos (2000) explained that EFL teachers, with their beliefs in teaching the language may influence the learners' experience in language learning. Horwitz (1987), nevertheless, claimed that a belief in the existence of foreign language aptitude may result from unsuccessful learning experience. Thus, understanding this belief is helpful in helping teachers to adjust their role in the classroom (Holec, 1987 in Barcelos 2000).

The second category of BALLI items concern beliefs about the difficulty of language learning. The beliefs about language difficulty of the target language were associated with anxiety. Learners who perceived foreign language was relatively difficult were found to have higher anxiety than those who believed they were learning an easy langauge (Horwitz, 1989 and Truitt, 1995 in Vibulphol, 2004). Accordingly, in the classroom instruction and practice, Horwitz (1985) underpinned that teachers who underestimated the difficulty of the language they are teaching may have false expectations about their students' progress.

In the third category, the issues related to the nature of language learning. The results showed that the subjects believe that knowing about English-speaking cultures is necessary in order to speak English and also believed that learning a foreign language is different than learning other academic subjects. By contrast, grammar was viewed not as the most important

part of learning a foreign language. This, however, contradicts their reported beliefs regarding their approaches in the language instruction. The strong beliefs about the importance of vocabulary and grammar in language learning risk negative effects (Horwitz, 1987 in Barcelos, 2000). Horwitz uttered that when teachers exaggeratedly believe in the importance of vocabulary and grammar, then, the approach of memorizing vocabulary lists and grammar rules may put learners spend a lot of time in their expense of other language learning practices. On the other hand, a study conducted by Wen and Johnson in 1997 (Vibulphol, 2004) challenged the arguments, coming with the finding that it is not likely that beliefs about grammar and vocabulary would yield negative effects.

The fourth category of BALLI items addresses issues about learning and communication strategies. In the classroom instructions, teachers' beliefs about learning and communication strategies may undermine learners' success in learning a foreign language, since the teachers may unconsciously inhibiting their attempts, limiting their perception about new approaches to language learning, and reducing their use of the target language; thus, misleading the students expectations on their own learning (Vibulphol, 2004).

F. CONCLUSION

The result revealed that in-service EFL teachers share common beliefs regarding their approaches to EFL instructions, with an inconsistent links between their approaches in the importance of grammar in learning a foreign language and the beliefs of nature of language learning. As to the held beliefs of Language Learning Aptitude, they believed in the existence of a special ability for language learning, they thought that average ability was adequate for language learning and that young learners can learn a second language more easily than adult learners. In the category of the difficulty of language learning revealed that half of the in-service EFL teachers in this study reported believing that different languages had different relative difficulty levels and they viewed English as a language of medium difficulty. About the relative difficulty of language skills, a majority of the participants reported perceiving that some language skills were easier than others.

Most of the in-service EFL teachers reported believing that learning vocabulary, and culture were important for English learners, but they did not believe that grammar played the most important role in English learning. They also believed that the best place to learn English was to be in an English-speaking country. Concerning learning and communication strategies showed that the in-service EFL teachers had some beliefs that facilitate the concept of English learning for communication such as practicing, learning about cultures, and using communication strategies.

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THE INFLUENCE OF FEEDBACK ENVIRONMENT ON THE SELF-EFFICACY OF TEACHING

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Abstract

In facing the change in the era of globalization, giving feedback cannot be overstated, particularly in the transformation of the present leaders. In the context of education, leaders must foster a culture of constructive feedback to help followers developing their potential and talents and improving their work performance. Feedback delivered either formally or informally, helps to improve the performance of followers. Therefore, the feedback environment is believed to play an important role to improve the feedback interventions in organizations. Global assessment of the feedback environment focused on the followers' perception on the source credibility, feedback quality, feedback delivery, favorable feedback, unfavorable feedback, source availability, and promoting feedback seeking (Steelman, Levy, & Snell, 2004). Previous studies explained that the feedback environment encourages behavior feedback on job performance among followers, integrate the followers in the social group at work, and identify their behavior with the expectations and standards fixed. In addition, the study also found that feedback environment that is conducive to increase the ability of individuals in accomplishing the task given. Indirectly, educators with high teaching self-efficacy will view the task as a challenge while educators with low self-efficacy will feel the challenge as a threat to themselves. Thus, it is believed that feedback environment particularly will be able to generate high self-efficacy among the educators.

Keywords: Feedback environment, Self-efficacy of teaching

A. INTRODUCTION

Feedback is defined as the reaction of others to influence the behavior of another person, especially in terms of their emotions and perception (Kunich & Lester, 1996). In the context of education, feedback referred as the information provided to individuals based on their performance reflects the adequacy, quantity or quality of teaching performance (Tower, 1999). Now, providing feedback to the employee in the organization is important to maintain and increase motivation and job satisfaction among workers (Lam, Yik, & Schaubroeck, 2002). Studies have found that individuals are not merely passive recipients of feedback delivered. Ashford and Cummings (1983) also described the worker as an active participant through the behavior of seeking feedback on performance from their leader. However, a leader who failed to respond to his followers would not be effective even if the individual has

a variety of leadership skills (Kunich & Lester, 1996). This is because all the vision, talent and competence among leaders and followers will not be attributed to a reality without feedback. In addition, the working relationship between leaders and followers were not well constructed. Wanberg and Kammeyer-Mueller (2000) described a good working relationship helps explain the expectations of a leader to his followers. Through feedback, the individual is not only present his views on others, but individual is able to see him up close (Kunich & Lester, 1996). The level and depth of information in a two-way flow should provide a solid foundation to develop trust in the management and improve employee perceptions of supervisory support in the organization.

Study of Kluger and DeNisi (1996) have found that feedback usually leaves moderating effect on performance. The study has found that more than 38% of the effect obtained is composed of a negative impact. The results of this study indicate a feedback mechanism is not understood as expected (Steelman, Levy, & Snell, 2004). It must be emphasized positive feedback culture is inculcated in every organization to help individuals receive, obtain, and use their feedback on whether either formally or informally in order to improve their performance (London & Smither, 2002).

B.   FEEDBACK IN TRANSFORMATION LEADERSHIP

According to Bandura (1997), the development of efficacy beliefs through enactive representation domination "creates cognitive and self-regulating facilities for the effective performance" and "achieved by mastery experiences in a way that is appropriate for the acquisition of generative skills". To achieve high performance, cognition must be transformed into action through conceptual matching process. There are two key elements in the process. First, the standard of the actual performance should be established in order to be measured and compared. Second, feedback on the actual performance of duties must be in a form that facilitates comparison based on a set of performance standards. By comparing the information received in response to a clear performance standards, these individuals can identify and eliminate errors made. Accordingly, this action will enhance self-efficacy and performance of their work.

The effectiveness of the conception matching process can be improved was said to depend on the extent to which the actions and decisions directly observable and monitoring of one's own behavior (Bandura, 1997). This opinion is supported by Ashford (1989), which describes the performance of an individual is influenced by feedback generated internally than externally feedback received. Overview of Kopelman (1986) on 72 experimental studies of feedback control tasks have reported increased response task work behavior or performance in 68 studies identified. Now, the feedback about the quality of products has been empirically identified as an important component of continuous quality improvement work through individual participation perform technical tasks (Black & Porter, 1996). In a meta- analysis of feedback interventions on performance, Kluger and DeNisi (1996) remarked feedback intervention can produce significant and positive effect on performance in certain situations. In particular, the response to contain elements which support learning and to draw attention to

the standard varieties feedback, are more likely to raise their performance significantly (Shea & Howell, 1999) .

Feedback conceptualized as information provided by an agent such as a teacher, peer, book, parent, self, and others about aspects of one's performance or understanding (Hattie & Timperly, 2007). A teacher or a parent can provide corrective information and encouragement, a peer can propose an alternative strategy, a book can provide information about a vague idea, and a student may seek permission to evaluate the answer. Thus, the effect of feedback on one's performance (Hattie & Timperly, 2007). Winne and Butler (1994) provides a comprehensive definition of feedback in which the response is "Which information with a learner can confirm, add to, overwrite, tune or restructure information in memory, whether that information is domain knowledge, meta-cognitive knowledge, beliefs about itself and tasks, or cognitive tactics and strategies. "

Burns (1978) refers transformational leadership as a process in which leaders seek to influence subordinates to improve the motivation and loyalty to the organization by increasing the level of concern for the interests of achieving organizational goals. There are four dimensions of transformational leadership of the charismatic (trying to gain the trust and respect of subordinates through the vision of the organization), sparked motivation (communication through vision by stimulating the spirit, consciousness, and awareness and optimism among the subordinates), intellectually stimulating (push subordinated to see things from the perspective of a new one), and individual consideration (giving individual attention to all subordinate) (Bass & Avalio, 1990).

According to Shamir, House, and Arthur (1993), transformational leaders are more likely to influence individual performance when performance goals cannot be defined precisely and the way to achieve that goal is vague. This situation represents a weak psychological situation in which each individual has different expectations for desired behavior, performance incentives that are unclear or lack of conditions that form in response to a successful learning behavior. Accordingly, leaders can involve the transformation of identity and self-concept in motivating their followers in the weak psychological situations (Shamir et al., 1993). Situations where no feedback given task have been considered as poor psychological condition as difficult to measure and link rewards to the achievement of goals. Theoretical arguments by researchers also stated the impact of transformational leadership on follower performance becomes clearer if no response task compared with the existence of the feedback task (Shamir et al., 1993). In contrast effects of transformational leadership as well as leadership on follower performance will be more significant if the task feedback available. This is also proved by the study of Shea and Howell (1999) in which participants under the leadership of transformation indicate performance regardless of task feedback. In contrast, participants under the leadership of transformational leaders do not perform differently depending on whether they receive feedback tasks.

C. FEEDBACK ENVIRONMENT

The process of channeling feedback from employers to employees is also seen as the use of the whole set of information that displays their work performance through involvement in organizations (Hanser & Muchinsky, 1978). Feedback environment created to provide space for workers to obtain information on their performance (Herold & Parsons, 1985). To measure the feedback environment, Herold and Parsons (1985) have developed a set of measurement scales to determine the type of feedback there. However, this scale is rarely used in research because there are findings that have been described inconsistent results through the use of this scale (Ashford, 1993; Greller & Parsons, 1992).

The first empirical study performed on feedback environmental has focused on the amount and type of information in the feedback given by many different sources (positive or negative feedback that can be obtained from supervisors, peers, self, and the work performed) (Greller & Herold, 1975; Herold & Parsons, 1985), the interests of employees using feedback from different sources (Ashford, 1993), as well as the relationship between perceptions of the feedback environment and different performance criteria (Becker & Klimoski, 1989).

Now more emphasis is given to the development of the organizational environment that supports the feedback interaction process in the organization (Levy & Williams, 2004; London & Smither, 2002). Levy and his teams (Norris-Watts & Levy, 2004; Rosen, Levy, & Hall, 2006; Steelman et al., 2004) have referred the feedback environment as daily feedback process for leader-follower and the followers of other than formal feedback sessions conducted for performance evaluation. Thus, the feedback environment is believed to play an important role in determining the employee to seek, receive, process, and utilize feedback. Therefore, a more comprehensive understanding of the environmental feedback is very important to get a clearer picture of the feedback intervention and reconstructing of an organization.

Several empirical studies have been conducted to study the effects of the organizational environment that supports the process of feedback. Most of these studies have used the Feedback Environment Scale (FES), which has been specifically developed and validated to diagnose the extent to which the organization supports the feedback process. Global assessment of the environmental feedback made by focusing on employee perceptions about (1) the sources credibility, (2) the feedback quality, (3) feedback delivery, (4) favorable feedback, (5) unfavorable feedback, (6) source availability and (7) promoting feedback seeking from the perspective of the both supervisors and employees (Steelman et al., 2004).

The results have found that employees in an encouraging feedback environment will be more motivated to use the feedback, more satisfied with the responses given, and receive feedback more frequently (Steelman et al., 2004). The study of Anseel and Lievens (2007) on 155 employees, also found that an encouraging environment feedback has relationship with the high job satisfaction.

1. Feedback Credibility

According to Giffin (1967), source credibility refers to the source expertise and trustworthiness. Source expertise is related to the knowledge of the response of the recipient against job requirements, knowledge of performance, and the ability to accurately assess

performance. Trust referred to an individual's belief on a source of feedback and accuracy of information about the performance (Ilgen, Fisher, & Taylor, 1979). Feedback from (a) a person who has been observing the behavior of individuals, (b) the authority to evaluate, and (c) have a motive to provide feedback that can be trusted arguably more likely to influence the behavior of followers with a source of feedback is seen as not competent in assessing the work behavior (Albright & Levy, 1995; Ilgen et al., 1979; Makiney & Levy, 1998). Accordingly, Fedor, Eder and Buckley (1989) also say that followers will be more motivated to use feedback if feedback is a competent source.

2. Feedback Quality

One important aspect is the consistent quality of feedback and the usefulness of such feedback (Greller, 1980; Hanser & Munchinsky, 1978; Herold, Liden, & Leatherwood, 1987). Feedback quality is consistent across time, specific, and are seen as more useful than the feedback of low quality. Quality of feedback varies according to feedback source climate, feedback target, and the observation chances (London, 2003). In addition, the feedback from the feedback receiver's perspective is an important factor in determining whether the feedback received and ready to respond to the feedback.

3. Feedback Delivery

The perception of feedback receiver to source intent in giving feedback will have an impact on the reactions and responses to feedback (Fedor, Eder, & Buckley, 1989). Steelman and his friends (2004) described the increasingly strong source of feedback during the delivery, the more likely an individual to receive feedback and respond to it. Ilgen, Peterson, Martin, and Boeschen (1981) remarked that the judgment made in the relationship respond positively to feedback ambience, the usefulness of feedback, and self-satisfaction feedback. In this case, the feedback presenter to learn about the message to be delivered, but the intentions and attitudes of individuals in the process of providing feedback.

4. Favorable Feedback

Good feedback is considered valuable if it helps individuals to achieve set targets. Good feedback is also considered as the frequency of positive feedback such as praise (Steelman et al., 2004). Followers see the result of their performance that promises positive feedback from the leader. Review of Ilgen and Moore (1987) found that individuals will be satisfied with the feedback if the feedback is seen useful to followers and able to improve their performance. In addition, the study of Ilgen and Hamstra (1972) have found an increasing number of good feedback delivered, the recipient will respond more satisfactorily with the feedback received.

5. Unfavorable Feedback

Unfavorable feedback perceives as a negative feedback frequency as expressions of displeasure and the curse from the leader and / or co-workers (Steelman et al., 2004). In this case, the views on feedback given by the leader is not favoured by them.

6. Source Availability

Meyer (1991) states that formal performance appraisals and generally only run once a year. Therefore, employees should refer to the daily updates at work informally (Ashford & Cummings, 1983). Operational availability of resources refers to the frequency of contact between leaders and / or colleagues to get feedback.

7. Promoting Feedback Seeking

Ashford and Cummings (1983) say that every individual is an active feedback seekers. Review of Ashford (1989) found that employees often express their desire to get feedback. However, the ego problems and other reasons, individuals are reluctant to take initiative to seek feedback (Levy, Albright, Cawley, & Williams, 1995).

Williams, Miller, Steelman, and Levy (1999) state that one of the important determinants of the frequency of workers seeking feedback is to what extent the leader encourages followers looking for feedback. Encouragement to seek feedback is also seen as the extent to which the environment provided encouraging individuals to seek feedback (Steelman et al., 2004). Researchers also found that employees receive feedback more frequently if their employers provide positive support (Williams et al., 1999), mutual trust, respect for the ideas of employees, and consider their feelings (VandaWalle, Ganesan, Challagalla, & Brown, 2000).

D. SELF-EFFICACY OF TEACHING

Teaching is about what is conveyed by a teacher, while learning is what is received by the students. If teaching is not effective, students will not be taught properly and effectively. Thus, a teacher must have confidence in their ability to teach. A teacher must have self-efficacy as a key element in them (Bandura, 1986). Bandura 's (1986) teacher self-efficacy refers to the ability of his confidence to learn, perform at the level of behavior required, manage tasks, and obtain the desired result. Bandura 's (1986) assumes the way people function in life is influenced by three elements that make up the triangle of (a) personal factors that include cognitive, mood, and biological elements, (b) the individual's behavior, and (c) the influence of the environment forms of interaction. These three elements are seen to have a reciprocal relationship which is termed as the concept of "reciprocal determination". According to Bandura (1986), cognitive plays an important role in determining self-efficacy, self- regulation, information and shaping individual behavior.

According to Ross, Cousins, Gadalla, and Hannay (1999), there are different constructs of teachers' self -efficacy is defined and measured. Self-efficacy refers to the self-perception and not an objective measurement of the effectiveness of teaching. However, teachers' self-efficacy expectations reflect more on teachers ability to bring positive change to student learning (Ross et al., 1999). Thus, in other words, teaching self-efficacy specifically enables the teacher to make a positive impact on student achievement (Ross, 1994) in teaching and learning the prescribed curriculum (Fletcher, 2004). Definition of Fletcher (2004) is quite consistent with the fact of Ross's team (1999) in which Fletcher (2004),

emphasizes the role of teachers as instructional leaders in the classroom compared to other tasks. As instructional leaders, teachers should be able to improve teaching strategies from time to time and to increase the value added in knowledge gained. Series of behaviors that are required in specific teaching situations must be compiled and executed with confidence themselves (Tschannen-Moran, Hoy & Hoy, 1998).

According to Shaukat and Hafiz (2012), teacher efficacy is based on two dimensions as teaching efficacy and personal efficacy. For the first dimension, it relates to teaching ability and competence to promote and stimulate students to learning by addressing the external factors such as the background of the students. The second dimension is about the personal beliefs of teachers and to transfer essential teaching behaviors to impact student learning (Ashton & Webb, 1986). However, Woolfolk and Hoy (1990) found that there was no relationship between the two dimensions of teacher efficacy beliefs.

Self-efficacy not only allows educators or teachers to deliver the knowledge to students. Teachers with higher self-efficacy on teaching have higher goals for students (Allinder, 1995), readily accept to new ideas openly, and try different techniques or new methods of teaching (Guskey, 1988); have a high resistance to doing the new or difficult teaching tasks (Coladarci, 1992). Therefore, high efficacious teachers will seek for variety of teaching skills to meet the challenges in the teaching profession. According to Azwan, Abdul Ghani, Mohammad Zohir, and Abd. Rahman (2005), high efficacious individuals will face difficult tasks as challenges to overcome, even with a strong effort to improve achievement and character. Instead of teachers teaching with low self-efficacious have low aspirations and will try to avoid facing new and difficult teaching assignments. In this situation, they give up and feel the stress in teaching assignments .

In addition, Hoy (2000) described teachers self-efficacy reflecting on what teachers can do in certain situations and not what has been achieved by them or why they achieve in the past. In other words, self-efficacy beliefs influence the choice of action, thought patterns, and emotional reactions of a teacher to a social situation (Azwan et al., 2005). In developing quality human capital on an ongoing basis, teachers can not rely on experience alone, but must continue to be exposed to his approach, methods, strategies, and techniques that vary from time to time. This is important to develop the human capital that can think creatively, critically, and innovative.

All educators need to have high self-efficacy in teaching in order to carry out the duties entrusted to it. Teaching self-efficacy is considered as the teachers' perception of teaching that will guide human capital towards success and personal satisfaction (Newmann, Rutter, & Smith, 1989) . Teachers' personal beliefs that would make a teacher effective (Kellenberger, 1996) and are motivated and committed to teaching (Masitah et al., 2013). Furthermore, teachers with high self efficacious will be more optimistic in facing the new challenges. This situation indirectly reinforces the importance of self-efficacy because self-efficacy individuals are often thought of as a skill to be effective or produce the desired result. Not only that, self-efficacy is an aspect that could be developed through a variety of methods such as education, seminars, and adaptation of the understanding. It is also used in selected

areas throughout life. Thus, the self-efficacy should be considered important and given priority in education (Masitah et al., 2013) .

Teacher beliefs about their ability to influence student learning and achievement of students, including students who are less motivated and harder referred to as teacher self-efficacy (Bandura, 1977; Guskey, 1987; Hoy, 2000). High teaching self-efficacy should be considered as an important element because it affects the performance, the attitude, and the effectiveness of student development (Greenwood, Olejnik, & Parkay, 1990; Shahid & Thompson, 2001). Shahid and Thompson (2001) also say teachers' self-efficacy is often associated with teacher behavior in the classroom, their openness to new ideas and attitudes towards teaching.

Self-efficacy on teaching for all educators also affect the performance itself. Greenwood and his colleagues (1990) have referred teacher self-efficacy as a teacher belief in its ability to influence student performance. Teaching would be affected if the individual fails to have the confidence to carry out their teaching effectively. As a result, the likelihood that they will get the job pressure (Teng, 2006). Thus, self-efficacy on teaching can refer to a teacher expectations in its ability to effectively manage their teaching.

Dembo and Gibson (1985) consider teachers' self-efficacy as the extent to which teachers believe in their ability affects learning in students. They stressed that there are two types of relevant beliefs that teachers in general can influence student learning otherwise known as general teaching efficacy and beliefs about teaching ability to influence the outcome of the students' known as personal teaching efficacy.

Accordingly, researchers have suggested that self-efficacy valid measurement should include both components of the teaching task analysis and evaluation of the effectiveness of a combination of personal instruction and interaction of the two components form the self-efficacy of teachers. However, these two components are interrelated and occur simultaneously in the formation of teachers' self-efficacy (Tschannen-Moran et al., 1998). Tschannen-Moran, Hoy, and Hoy (2001) have produced a new instrument for measuring self-efficacy of teachers based on their proposed model. This instrument measures three subscales of self-efficacy of teachers' efficacy for instructional strategies, efficacy for student engagement, and efficacy for classroom management.

1. The Importance of Self-Efficacy of Teaching

The concept of self-efficacy of teachers has remained a very important variable in education for the past 25 years (Cakiroglu, 2008; Goddard & Goddard, 2001). The earliest relationship between self-efficacy of teachers and student achievement as determined by the Armor's team (1976) in their study on the benefits of reading among school children of Los Angeles. Armor and his team (1976) using the reading scores in 1974 and 1975 obtained through the administration of the California Test of Basic Skills, they have found that the higher efficacy of teachers in a special reading program, students gain more and more interest reading obtained. Since then, numerous studies have to be performed to determine the relationship between teacher efficacy and student achievement (Anderson, Greene, & Loewen, 1988; Ashton & Webb, 1986; Ross, 1992).

Collins (1982) as described by Bandura (1986), has conducted a study on two groups of children based on their mathematical abilities. The study has found that students in high-level group has outperformed students in the primary level. However, all students, irrespective of the group, who believe in their ability to solve mathematical problems have chosen to focus more on math problems answered incorrectly and has shown a more positive attitude towards mathematics (Crain, 2000).

Further, past studies have shown self-efficacy has to do with the success of the leader and the individual (Bandura, 1977; Hoy & Woolfolk, 1993). The studies also found that effective teachers have self-efficacy than teachers who are less effective (DeMoulin, 1993; Dimmock & Hattie, 1996). According to Sazali, Zurida, and Mustapa (2002), beliefs about the ability to perform a task is an important area to explore in the future. However, the personal characteristics of self-efficacy is given less attention by researchers (Bandura, 1977) while some studies have shown that a person's success can be predicted by self-efficacy (Bandura, 1977).

Self-efficacious teachers are also associated with high - class organization, teaching strategies, questioning techniques, determination of duties granted, the level of risk-taking and innovation, feedback to students, and management of student assignments in a timely manner (Gibson & Dembo, 1984) . According to Teng (2006), teachers with high self-efficacy are more willing to accept innovation in the education system. They will be a key driver to the development of education that will lead the country into a third wave of civilization. Moreover, they tend to prefer the humanistic management, emphasizing the autonomy of the students (Woolfolk & Hoy, 1990; Woolfolk, Rosoff, & Hoy, 1990). Accordingly, teachers with high self-efficacy will promote students' self-efficacy (Sewell & St-Geoger, 2000, Usher & Pajares, 2006), foster student engagement in the classroom and students' efforts to solve the problem (Ross, 1998). When teachers believe in their teaching, students will also have a high level of academic achievement, have autonomy and motivation, and have confidence in themselves (Cheung, 2008) .

Abu-Tineh, Khasawneh, and Khalaileh (2011) also say that high self-efficacy among teachers will be able to predict significantly to productive teaching practices. According to Henson (2001), self-efficacy variables has been one of the few variables consistently related to positive behavior and achievements in teaching. Accordingly, Goddard, Hoy, and Woolfolk (2004) reported that teachers who have the perception of strong self-efficacy are more effective use of in their classroom management skills. They are more likely to take the classroom management strategy that is more organized and structured, student-centered and humanistic as well as more open to the ideas of the students (Anthony & Kritsonis, 2007).

Study of Main and Hammond (2008) on the student teachers have found the teachers to be high self efficacious more use of effective classroom management strategies, and they are also able to effectively handle student behavior problems (Giallo & Little, 2003). In this case, the master teacher classroom management skills are limited and low credit rates will undoubtedly be exposed to a variety of behavioral problems in aggressive students (Shernoff & Kratochwill, 2007). In contrast, teachers with high self efficacious will spend more time in

academic activities, provide guidance to students who are weak and tend to be less critical and more encouraging achievement (Abu-Tineh et al., 2011).

Indirectly, teacher self-efficacy will also be able to predict their willingness to work with students who have difficulty of referring troubled students to special education (Tschannen-Moran et al., 1998). According to Tschannen-Moran and colleagues (1998), high self-efficacious teachers are more likely to accommodate students with learning disabilities, behavioral problems or both in regular education. High efficacy beliefs motivate teachers to put more effort in the task of teaching the lessons to diversify and not easily deterred (Tschannen-Moran & Hoy, 2001).

Jerald (2007) in the study highlighted that teacher behaviors associated with teacher self-efficacy. According to Jerald (2007), teachers with high self-efficacy (1) tends to demonstrate the level of planning and organizing high (Allinder, 1994), (2) more open to new ideas and willing to try new methods to meet the needs of students, (3) more tenacious and high resilient when there are constraints in doing things, (4) do not act critical when students make mistakes, and (6) are less likely to refer troubled students to special education (Soodak & Podell, 1993) .

In an interview conducted by Shaughnessy (2004), Woolfolk has formulated practical about the efficacy of the teacher, the teacher who set high goals and continuously trying different strategies to find a new approach to find a teacher who has a high level of self-efficacy and will act to thereon. These teachers are more likely to have students to study with him.

E. FEEDBACK ENVIRONMENT EFFECTS ON SELF-EFFICACY OF TEACHING

Feedback on job performance is important to every employee (Ashford & Cummings, 1983). It is the amount of information transmitted directly and clearly received from the performance and effectiveness of the work of an individual (Hackman & Oldham, 1980). According to Firestone and Pennell (1993), knowledge of the work is determined by the feedback related to the work done by an individual.

Theoritically, Hackman and Oldham (1980) describes feedback is important to maintain high internal motivation to both the organization and its activities. Thus, the leader is responsible for providing information about the work performance continuously and non-seasonal to the employees (Aguinis, Joo, & Gottfredson, 2011). Conducive feedback environment (Shalley & Zhou, 2008) and promote a sense of support (Sparr & Sonnentag, 2008) are needed to support interactions in an organization should be established (Levy & Williams, 2004; Steelman, Levy, & Snell, 2004). More specifically, individuals have a tendency to feel valued, treated with care, and supported by colleagues and supervisors in an environment of positive feedback (Sparr & Sonnentag, 2008). Young and Steelman (2014) also describes an environment that encourages feedback will enable the individual to find useful information about the performance they are able to integrate themselves in social groups in the workplace and identify their behavior to fit in with the standards set by the organization (Whitaker & Levy, 2012).

One of the challenges of a transformational leader is raising motive and inspiration among their followers to higher levels (Tickle, Brownlee, & Nailon, 2005). A leader of an organization must demonstrate behavior and willingness to sacrifice for his organization, a source of inspiration, faith, and commitment to the followers. Next, organizational leaders should be capable of recognizing the needs of followers and is always ready to develop the ability to look at old problems in a new way (Joseph & Winston, 2005). Thus, to face the challenge, the leader must play its role in shaping responses to environmental feedback to explain the expectations of employers (Wanberg & Kammeyer-Mueller, 2000) and create a good impression among employees (Edwards, 1995).

In a study of feedback seeking behavior, Levy, Cober, and Miller (2002) also found that followers are more likely to get feedback from transformational leaders than transactional leaders . Workers in an environment that encourages feedback will be more motivated to use the feedback, the more satisfied with the feedback, and receive feedback on a regular basis (Steelman et al., 2004). This also helps employees improve and eliminate mistakes made. This in turn will increase self-efficacy and performance (Bandura, 1997).

F. CONCLUSION

Leaders within the organization play an important role for the development of followers and increase their performance. In improving the performance of followers, leaders should encourage openness and dissent among the followers (Bass & Riggio, 2006), encourages followers challenging problems in the organization (Wright & Pandey, 2010), encourages followers to think for themselves (Goodwin, Whittington, Murray, & Nichols, 2011), and promote the ethical conduct among followers (Ng & Sears, 2012). To prevent the leader presents "one man show ", leaders must respond constructively (Zaidatol, Teng, Foo, Zakaria, & Jegak, 2008) for the development of dynamic followers. Thus, the feedback environment in creating an environment that causes the employee to meet performance expectations, but to exceed performance dijaangkakan (Wan Faridah, Noor Azmi, & Isaac, 2002), and to improve the search behavior of feedback among the followers should be created in every organization .

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AN EXPERIMENTAL STUDY OF LANGUAGE AND CULTURE CONTRAST IMPORT IN CHINA'S UNIVERSITY JAPANESE CALSS

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Abstract

Based on the curriculum aim and description of Japanese course properties, there are many studies related with relationship study between culture and language skills. According to teaching experiments and data analyzed, it is meeting the demands of the learners' interesting and acquisition that is introducing Chinese-Japanese culture contrast in Japanese class, which can clearly improve learners' writing and reading skills, ability of self-regulation of learning, cultural knowledge, and learning self-assessment. This research discussed the misunderstanding between language environment and cultural introduction in Japanese class; afterward, possibility of promotion between input and output is discussed as one of purpose in this study; as a final point, interference factor of two cultures is discussed, which is based on the theory of cross-cultural communication. Therefore, culture contrast content should be introduced in Japanese class when learning as foreign language, because this is feasible.

Keywords: Japanese-Chinese cultural contrasts; college Japanese teaching.

A. INTRODUCTION

1. Background

Based on the syllabus and predicts the tendency of teaching College Japanese as the foreign language (2008), it has determined the new definition of foreign language teaching is intersection of two kinds of langauge when course objective included international comunication as a skill need to practice. That is learners need to master the target Japanese, after that, the ethnic culture could be described by Japanese, but not only chat in Japanese. Thus, "mother tongue culture" factor in the foreign language education is one of purpose of realizing foreign language education, it can improve learners' comprehensive cultural qualities.

2. Review of Related Literature and Problem Statement

Zhang and Li (2011) concluded that langauge is a product of culture and society, so must be understood from different cultural dimention and social factors. There are researchers has emphazied it is compulsory and strategic that import Japanese culture into Japanese teaching. (Kramsch, 1993; Hammond, 2007; Zhao, 2010a & 2010b). Fukushima and

Fujimoto (2012) reported that content of native culture is almost emperty in Japanese teaching, as well as Zhao and Lin claim that Chinese native culture still can not engaged with foreign lanague teaching, thus, this is a important factor to lead to failure of cross-curture communication. Thereafter, Japanese culture's import and Chinese culture's teaching and learning both need to value in education in order to improve learners' cross-cultural communicational skill.

According to Chen (2008), the learners' needs is the basic of active learning, but tranditional teaching overlook the process of language output, that is, explaining text and vocabualry plus grammar are main content of Jaoanese class, which is using textbook as only one teaching instrument. According to Zhao and Lin (2011), unversity students long for Japanese culture, cuch as custom, trandition, value and so on during their Japanese study.

As the basic theory of this research, teaching principle and curriculum will be compared between China and other conunries according to different standard.

The first standard is foreign language learning standard is oriented toward 21 sentury, which is designed by American. Because in the end of 20th century, it is especially when the economic globalization, political pluralism and world economic integration have already become the development trend of that American current society, the importance of foreign language education is reminded once again by American educators. They claims that American students must be grasp one foreign langauge in 21st century, thus, based on the extensive investigations, United States Department of Education (USDE) was published a standard is foreign language learning standard is oriented toward 21 sentury, which is also called United States Foreign Language Standard (USFLS).

The USFLS has been focusing on communication (コミュニケーシュン). There are five dimensions defined this standard are communication (コミュニケーシュン),cultures (文化),connections (つながり), comparisons (比較), and communities (地域社会). This is the very famous 5 C's standard (五つのｃ) in foreign language study area. According to Brecht and Walton (1994), USFLS has been described more specificly from three dimensions are connmunication with other people, how to understand others, and how to transfer own idea to other people. For each dimention is discussed from definition, paths as shown as table 1.

Table 1. Communication's Morphological Structures

	Comunication with other people	**Understand each other**	**Idea's transfering**
Definition	Spoken or wroten communication between individuals	Indirect mode, such as medium and books through reading and listening	Information is transfered by oral and written forms. Otherwise, information can be published from audio-visual media
Paths	Expressive ability: speaking or writing; and input capability: listening and reading	The main input capability includes listening, reading and viewing	The main output capability is shown as speaking, writing, and showing

As shown in table 1, communication, understanding and idea's transfering are got very close relationship with culture background and language is shown in speaking, writing and reading skills. Because any communication will be not done without culture. In addition, culture contrast also is shown as a important and basic part in the Common European Framework of Reference (1996) (CEFR/CEF), which is officially issued in 2001. There are two basic principles in CEFR are action-oriented, and plurilingualism. Relationship of lingustic ability and social environment more clearly shown the importance of cultur learning and teaching as well as curriculum standards and 『ＪＬＣ日本語スタンダーズ２００９改訂版─外国語としての日本語教育の基準』in China. The color of culture contrast becomes more powerful as shown in plurilingualism, because there are two kind of different language and cultures combined into to one language, such as Chinglish, Chinese-Japanese or India-Japanese are taking a much more localised approach.

The ability of expozation of CEFR and 『ＪＦ日本語教育スタンダード試行版』（ＪＦ標準）shown culture contrast content should be tought as the contents and standards of Japanese teaching evalusation. Especially, 柴原 智代 (2005) explained a bility of cultureal understanding as follows: 相互理解のための日本語に理念は、国籍や民族を超えた日本語使用者のコミュニケーシュンに資する、そして、特定の課題を共同で遂行する、最後には複合の視野、自文学への視点、人間の豊かさの獲得の三つの集約される。According to 柴原智代 (2005), a ability to complete tasks and another ability of comprehension in corss-sultural will be realized in Japanese teaching of culture-contrast between Chinese culture and Japanese culture.

Based on these three basic standard, teaching priciple is gradually changed as shown in table 2.

Table 2. The Keywords of Japanese Teaching Priciple in Different Times

Year	The keywords of Japanese teaching priciple.
1980s	Grammar knowledge; reading practice; translation and listening ability; initial ability stage of writing and speaking; the acquization of professional information.
1990s	Basic language knowledge; listening, reading, speaking and writing skills; practical operating ability.
Since the 21st century	Basic language knowledge; listening, reading, speaking and writing skills; practical operating ability; world and cultural background knowledge; Cultural intelligence; oral Japanese comprehensive skills; cross-cultural communicative competence; complete all tasks in Japanese; overall cultural literacy.

As shown in the table 2, proportion of culture teaching increased since the 21st century and curriculum standard also becoms more and more close with 5 C's standard and CEF. According to Zhao and Lin (2011), Japanese teaching strtegy is conlcuded in to three points are practical using Japanese in class, accroding Chinese to explain Japanese culture until Japanese culture is explained by Japanese, and two cultures contrast in Japanese teaching curriculum as a course.

This research purpose is improving Japanese class teaching efficiency according to cultural contrast. The mistakes of curtual input and language environment also is discussed and correct from the resultof this study, in order to highlight it is compossible part in Japanese language teaching that cultural contrast content is combained with normal teaching.

B. METHODOLOGY

1. Research Questions

    a. Does Chinese-Jaoanese culture contrasts influence learning effectiveness in college Japanese teaching?

    b. Does Chinese-Jaoanese culture contrasts influence learning inspire learners' interest of learning Japanese?

2. Hypothesis

Ho1: Acording to the cultural contrast learning between Chinese culture and Japanese culture, there is significant difference of post-test result between control group and experimental group.

Ho2: According to this cultural contrast learning, there is no difference of learning interesting and autonomy between control group and experimental group.

3. Research method consists of research framework

a. Research Particpents

In this research, there are two groups are chosen from first-year undergraduate stuents in Xi'an International Studies University (XISU). All exam results and questionnaires are collected from the school of Japanese culture and economics; there are two classes is chosen, which includes 28 participants and 31 participents in each class.

b. Research Instruments

Research instruments includes SPSS20.0 is using as statistical tools; the Japanese pre-test paper are designed by teaching group of first grade. But post-test paper is designed by researcher, there are 50 items are chosen from Japanese-Language Proficiency Test (JLPT) level 3 in 2013. Both of pre-test and post-test includes vocabualry and grammar, reading comprehension, listening comprehension, and writing.

The self-assessment questionnaire of Japanese learning interesting and autonomy (Zhang and Li, 2011) is covering 59 participants in control group and experimental group. According to Zang and Li (2011), this questionnaire has used in English class after tought culture contrast between English culture and Chinese culture in order to test the sense of accommplishment during English study from 100 university students. The Cronbach α is 0.85

in Zhang and Li's (2011) research, which is according Likert scale in five levels are shown as follows.

1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree.

The basic text book is the first volume of 『新文化初級日本語』, 『中日習慣と風俗の比較』(Feng, 2005). 『中日習慣と風俗の比較』(Feng, 2005) includes six chapters are the history of cultureal exchange between China and Japan, Hanzi and Kanji, the different customs of langauge expression between China and Japan, comparison of tranditional culture between China and Japan, comparison of local customs and practices between China and Japan, and taboos of etiquette's comparison between China and Japan.There are total about 8,000 words in each chapter, after that, the average of new words is 1.5% in each chapter, that is, every chapter includes about 120 new words. The self-assessment questionnaire of Japanese learning interesting is designed in 13 itesm, which is shown as appendix 1.

c. Pilot Study

Before the actual study started, a pilot study was conducted. According to Ary et al. (2006), the pilot study is a preliminary testing of the hypothesis, and the pilot study may show the validity and reliability of tests and questionnaire in this study. The polot study includes validating the test items, a pilot testing of the questionnaires.

There are 20 students are invited from first year second semester's business Japanese major degree students in Xi'an International Studies University (XISU), which were randomly divided into tow groups are control group and experimental group. Pre-test and post-test are same with actual study during 6 weeks, the pre-test questions are same with mid-term examination, and the post-test is same with final examination for all first year undergraduate students. Furthermore, the reading materials of cultural contrast between China and Japan as same as actual study also. For each test, there are 50 single-choice questions and every item is 2 points.

There are total 50 questions in pre-test for 20 participants, the result of Cronbach's Alpha is 0.648 that is shown in Table 3 .

Table 3. Crobach's Alpha in Pre-test

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.648	.650	38

According to Cortina (1993), George and Malllery (2003), and Kline (2000), if the Cronbach's Alpha data is between $0.6 \leq \alpha < 0.7$, so the internal consistency still are acceptable. But the No.1, 2, 3, 4, 6, 7, 10, 11, 12, 14, 15, and No. 25 questions are removed from the pre-test as shown in appendix 3. So there are 13 questions were deleted from pre-test, because all of those answers are correct; that is, the test content is already totally grasped by participants and validity of these questions will increasingly be less effective. In addition, the 33rd question's Cronbach Alpha is the lowest value than others, which is only 0.573 as shown in appendix 3. After researcher checked the 33rd question as shown as below:

(33) この車はにほんせいです。
　　1　この車はにほんでのられました。
　　2　この車はにほんでうられました。
　　3　この車はにほんでなおされました。
　　4　この車はにほんでつくられました。

     The verbal form of possibility has not been learned in first year, and almost answer is incorrect in pre-test. Therefore, the 33^{rd} question is deleted in this study, and totally 13 questions should be deleted from pre-test.

     The post-test was held after six weeks, which includes 6 chapters reading materials of cultural contrast in Japanese gave to students in per-week. That is, each chapter have been read in a week by experimental group includes 10 students, which are chosen randomly. But other 10 students are selected in control group without those reading materials in per-week, but following normal class as usual. the post-test is same with final examination. there are 50 single-choice questions and every item is 2 points, that is, total 100 points for post test. After tested, the Cronbach's alpha is 0.62 and $p = 0.00$ in table 4 and 5 that is, based on the SPSS analysed that 14 questions need to remove, because quite easy or more difficult. The 6^{th}, 8^{th}, 10^{th}, 11^{th}, 12^{th}, 17^{th}, 18^{th}, and 21^{st} questions are 100% correctly answered from these 10 participents, but the 23^{rd}, 32^{nd}, 36^{th}, 37^{th}, 39^{th}, and 42^{nd} questions have the main problem is grammar is the new knowledge that does not learn yet. Therefore, post-test items includes total 36 questions.

Table 4. Reliability Statistics for Post-test

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.621	.665	36

     Also in the pilot study, the sample t-test is used as main statistical method to compare these two groups after 6 weeks cultural contrast study, and tested which is based on previous pilot study result. The p value still is less 0.05 that means there are significant differences between control group and experimental group. The mean score of experimental group also is higher than control group.

Table 5. Sample T-Test in pilot study for post-test

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Control group	35.562	9	.000	73.800	69.11	78.49
Experimental group	31.703	9	.000	78.400	72.81	83.99

The self-assessment questionnaire of Japanese learning interesting is collected from these 20 participents that seperated into two groups. The Cronbach's alpha is 0.934, thus, there is no items change after this pilot study.

Table 6. Reliability Statistics of self-assessment questionnaire

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No of Items
.936	.934	13

Based on the pilot study in this research, pre-test and post-test are changed items, such as, there are 37 questions in pre-test, and 36 questions in post-test. there is no item changed in questionnaire.

4. Actual study

The actual study includes pre-test and post-test; there are 37 questions in pre-test which is total 74 points. The post-test includes 36 questions are total 72 points are counted. In order to confirm the homogeneity from these two groups, the first semester final exam results is used as independent sample is tesing significance of difference. Therefore, sample's uniformity is controlled in the same grade level and same Japanese language level (Coakes & Steeds, 2003). All participants are chosen from major of Japanese literature undergraduate students in second semester of first grade. The pre-test use the hundred percentage point system, difference of two groups is tested by independent sample t-test, which is shown the result of mean difference is -3.002; that is, the experimental group got the score as follows: *Max = 63, Min = 33, Range = 44.65*; control group also got the score from same tests as shown: *Max = 65, Min = 34, Range = 47.64*. Due to *F = 0.29, and Sig. > 0.866,* thus there is no big significant difference between these two groups.. In addition, these two groups had no significant difference for means of pre-test score, that is, *t = 1.482, Sig. > 0.05*. Therefor, those experiemental and control groups can compare as homogeneous sample for teaching experiments in this research.

Table 7. The Difference of Mean Score in Pre-test

Group	N	Mean	Std. Deviation	Std. Error Mean
Control Group	28	50.65	7.748	1.392
Experimental Group	31	47.64	7.799	1.474

Table 8. the Difference of Mean Score's Independent Sample T-Test in Pre-test

	Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
E.V.A	.029	.866	-1.482	57	.144	-3.002	2.026	-7.060	1.056
E.V.N			-1.481	56.316	.144	-3.002	2.027	-7.063	1.058

In addition, one of group is randomly chosen as experimental group includes 31 participants are learning Japanese, which is according to a text book of 『新文化初級日本語』. The material of culture contrast is 『中日習慣と風俗の比較』(Feng, 2005) includes six chapters, which are handed out during twelve weeks, that is, each chapter have to finish the reading tasks in two weeks and submit a reflection paper. In addition, there are 28 participants in the control group are following normal curriculum procedure with the test book of 『新文化初級日本語』in twelve weeks. The self-assessment questionnaire of Japanese learning interesting is handed out after twelve weeks for both of two groups, totally 59 participents will be submitted this questionnaire and measured.

The same final exam paper (Cronbach $a = 0.621$) is used in control and experimental groups in order to test the effectiveness of the teaching mode as post-test in this research. All subjective questions are excluded, such as writing and translation, in order to reduce the difference between individual for marking standards. Thus, only objective exam items are used as machine-readable performance, which includes 11 questions of listening comprehension, 10 questions of reading comprehension, and another 15 questions are vocabulary and grammar. There are total 36 questions included in the post-exam and 2 points for each question. Therefore, the full marks of post-exam are 72 points. The results show that the control group (*Max = 55, Min = 28, Range = 44.21*) and experimental group (*Max = 59, Min = 39, Range = 48.61*) compared and got the very low variance data is shown as $F = 0.046, p > 0.05;$ mean difference between control group and experimental group is very low as shown is *-4.399*, and $t = -2.588,$ but $p < 0.05;$ that is, there are significant difference between control group and experiment group. Afterward, the experimental group got the higher score than control group, even though control group's score was higher than experimental group in pre-test.

Table 9. The Differences of Mean Score of Post-test.

Group	N	Mean	Std. Deviation	Std. Error Mean
Control group	28	44.21	6.713	1.269
Experimental group	31	48.61	6.339	1.138

Table 10. The Difference of Mean Score's Independent Sample t-test in Post-test

	Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
E.V.A.	.046	.830	-2.588	57	.012	-4.399	1.700	-7.802	-.995
E.V.N.			-2.581	55.565	.013	-4.399	1.705	-7.814	-.983

The self-assessment questionnaire of Japanese learning interesting is used in this research as one of the instrument for 59 participants when the *Cronbach a* is 0.934. Based on the difference of mean in table 11, mean of control group is higher than experiential group is only shown in the 7th item of this questionnaire. The 1st, 9th, 10th, 11th, 12th, and 13th are shown the media and mode of experimental group is higher than control group. The 1st, 5th, 9th, 10th, 11th, 12th, and 13th are tested and the result is shown mode of experimental group is higher than control group. Further, there is a significant difference of variance between control group and experimental group in the questionnaire items of 4th, 6th, 5th, and 13th. What is more, the questionnaire items of 2nd, 4th, 5th, 6th, and 9th got the result of significant mean difference in this research.

Table 11. The distribution and difference of self-assessment questionnaire of Japanese learning interesting
(total sample's number is 59, 0 = experimental group, 1=control group)

No	Items	Group	Mean	Median	Mode	Std. Deviation	Std. Error Mean
1	I am more interested in Japanese study than before.	0	4.01	4	4	0.597	0.107
		1	3.29	3	3	0.535	0.101
2	I am more willing to study Japanese with the guidance of teacher.	0	3.65	4	3	0.661	0.119
		1	3.29	3	3	0.600	0.113
3	I still can keeping learning modivition when learning content is too much after Japanese class.	0	4.39	4	4	0.495	0.089
		1	3.96	4	4	0.508	0.096
4	I can almostly finish all of the homework at our teacher's desire.	0	4.42	4	4	0.502	0.090
		1	4.07	4	4	0.378	0.071
5	My horizons is broadened when I learning Japanese as foreign language.	0	4.45	5	5	0.675	0.121
		1	4.18	5	4	0.548	0.104
6	I want to know more knowledge about the difference between China and Japan.	0	4.81	5	5	0.402	0.072
		1	4.61	5	5	0.497	0.094
7	I got rapid progress of Japanese language learning in this semester.	0	2.82	3	3	0.612	0.091
		1	3.48	3	3	0.508	0.116
8	I made big progress of Japanese speaking.	0	3.26	3	3	0.575	0.103
		1	2.79	3	3	0.568	0.107
9	I got rapid progress of	0	2.74	3	3	0,514	0.092

		0	2.39	2	2	0.479	0.094
	Japanese writing in this semester.	1	2.39	2	2	0.479	0.094
10	I got rapid progress of Japanese reading in this semester.	0	2.94	3	3	0.250	0.045
		1	2.18	2	2	0.390	0.047
11	Basiclly, I changed my reading method that translate every word and senetence while reading.	0	3.45	3	3	0.506	0.091
		1	2.29	2	2	0.460	0.087
12	I was more satisfied my Japanese vocabulary study in this semester.	0	2.81	3	3	0.402	0.072
		1	2.36	2	2	0.488	0.092
13	I am sure I can do well in Japanese with endeavor, and I can get better score than before.	0	4.87	5	5	0.341	0.061
		1	4.25	4	4	0.645	0.122

Table 12. Independent Samples Test of the Self-Assessment Questionnaire of Japanese Learning Interesting

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
1	E.V.A	.044	.834	-5.472	57	.000	-.811	.148	-1.108	-.514
	E.V.N			-5.503	56.997	.000	-.811	.147	-1.106	-.516
2	E.V.A	1.526	.222	-2.179	57	.033	-.359	.165	-.690	-.029
	E.V.N			-2.190	56.997	.033	-.359	.164	-.688	-.031
3	E.V.A	6.369	.014	-3.236	57	.002	-.423	.131	-.684	-.161
	E.V.N			-3.231	56.068	.002	-.423	.131	-.685	-.161
4	E.V.A	23.621	.000	-2.983	57	.004	-.348	.117	-.581	-.114
	E.V.N			-3.026	55.294	.004	-.348	.115	-.578	-.118
5	E.V.A	5.218	.026	-1.694	57	.096	-.273	.161	-.596	.050
	E.V.N			-1.712	56.388	.092	-.273	.159	-.592	.046
6	E.V.A	10.730	.002	-1.701	57	.094	-.199	.117	-.434	.035

		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
	E.V.N			-1.682	51.951	.099	-.199	.118	-.437	.038
7	E.V.A	.192	.663	-4.541	57	.000	-.662	.146	-.955	-.370
	E.V.N			-4.498	52.702	.000	-.662	.147	-.958	-.367
8	E.V.A	.125	.725	-3.167	57	.002	-.472	.149	-.771	-.174
	E.V.N			-3.169	56.535	.002	-.472	.149	-.771	-.174
9	E.V.A	1.528	.221	-2.644	57	.011	-.349	.132	-.613	-.085
	E.V.N			-2.649	56.721	.010	-.349	.132	-.613	-.085
10	E.V.A	8.021	.006	-8.965	57	.000	-.757	.084	-.926	-.588
	E.V.N			-8.773	45.130	.000	-.757	.086	-.931	-.583
11	E.V.A	5.680	.021	-9.226	57	.000	-1.166	.126	-1.419	-.913
	E.V.N			-9.271	56.996	.000	-1.166	.126	-1.418	-.914
12	E.V.A	7.737	.007	-3.876	57	.000	-.449	.116	-.681	-.217
	E.V.N			-3.838	52.470	.000	-.449	.117	-.684	-.214
13	E.V.A	15.799	.000	-4.685	57	.000	-.621	.133	-.886	-.356
	E.V.N			-4.550	40.022	.000	-.621	.136	-.897	-.345

The result proves that experimental group's vocabulary learning task is higher than control group, because the learning tasks in comparison of culture and custom between China and Japan, which includes above 50,000 words in reading materials. The post test result is shown the experimental group is better than control group that includes listening, reading and linguistic knowledge. It also turned out that culture contrast learning is a way can improve Japanese learner's overall level. The questionnaire survey result shown the learner autonomy of tasks, self-assessment of reading and writing skills, and personal learning satisfaction are significantly higher than control group after compared with control group. Therefore, the Chinese and Japanese culture contrast is an effective method to improve learners' autonomy, which is also motivate and keep the learning interest at the same time.

C. DISCUSSION

Language is a carrier and connotation of culture, which is why language and culture are inseparable. It is not in conflict between the limited class time and culture contrast teaching and practice, because language skills is appearing in communication process, and cross-culture knowledge is compulsory for successful communication. Furthermore, the improvement of language skills has laid the groundwork for cultural literacy, and cultural literacy improvement is direct service to language skills. According to this research, it is feasible in practice and theory that culture learning is an effective method could be

significantly improving learners' language skills, which is based on a purpose of language learning is language proficiency, which is following university Japanese curriculum requirements.

D. CONCLUSION

According to this teaching test in Japanese class, the main objective is a task to finish Chinese and Japanese cultural contrast reading in one semester, and the purpose of this research is improvement of language skills and learning autonomy, self-assessment of reading and writing skills, and learning interesting. The researcher advocate that it is double dimensions that is cultural introduction is using in university Japanese class; after that, a multi-dimensional language environment is need to construct during learning; furthermore, it is possible for input and output of culture contrast is combined together in Japanese class, which content and difficulty of cultural contrast materials should be followed learners demands.

But there are some limitations in this study, that is, according to experimental group's learning report, almost 30% students have responded that reading tasks is a little bit heavy and a lot of content cannot understand during reading, but there are still 70% students of experimental group have reported that there is lack of practice chance for cultural contrast knowledge between China and Japan in Japanese class. therefore, all of these limitations effected the test result in this study.

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A TEACHER'S WRITTEN FEEDBACK AS FORMATIVE ASSESSMENT ON STUDENTS' WRITING

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Abstract

Writing plays a significant role for college-level students' success since almost all subjects require them to produce academic writing. However, some students still have a lack of academic writing ability since errors are unavoidable in a variety of writing issues. Therefore, feedback is crucial to take place as an attempt to evaluate and give suggestions for students' writing improvement which leads them to be problem solvers and independent writers. Thus, using document analysis and a questionnaire, this study aims to explore both a teacher's written feedback practices and nine English students' perceptions towards the feedback at one postgraduate school in Bandung. It was a qualitative case study with a touch of quantitative data. The findings reveal that the teacher gave selective and indirect error correction which mostly aimed at asking for information dealing with the content of students' compositions. The results also show that the students placed a high value on the teacher's written feedback especially on the content and indicated preferences for both comprehensive error feedback and direct error correction which are contradictory to the teacher's practices. Thus, the study suggests both the teacher and the students to make an agreement regarding what factors contribute to the development of writing.

Keywords: a teacher's written feedback, student's perceptions, content, organization, grammar, mechanics and vocabulary.

A. INTRODUCTION

As a part of academic surrounding, writing plays a significant role for college-level students' success since almost all subjects require them to produce academic writing. However, some students still have a lack of academic writing ability which has become a national issue in Indonesia (Meilani, 2013, p. 379). This might happen because students are required to struggle with a variety of writing issues including delivering the content, using the language, using the mechanics, organizing the report, choosing the appropriate vocabulary, and giving the style on the writing (Ferris, 2003). In fact, this is not an easy task because errors are unavoidable (Hamouda, 2011; Katayama, 2007; Kavaliauskiene & Anusiene, 2012).

In this regard, students should be assisted and guided to produce valuable pieces of writing. One of the possible ways is to provide supportive feedback from the teacher since valuable writing cannot be accomplished in one draft (Friedlander, 1990, p. 110; Hyland, 2009, p. 21). Feedback is beneficial to assess students' writing process including its strengths,

weaknesses and to give suggestions for the future writing development (Coffin *et al*., 2003, p. 104; Carless, 2006, p. 220 & Mahfoodh, 2011, p.7). It will further be crucial to ensure the successful writing process (Aridah, 2003, p. 106; Coffin, *et al.,* 2003, p. 102; Hyland, 2003, p. 177; Hyland & Hyland, 2006, p. 83, 2006, p. 1; Carless, 2006, p. 219; Emilia, 2012, p. 63).

Since feedback is central to the writing process, a study about feedback is crucial to take place. Many researchers have advocated the effectiveness of feedback in writing process (Hamouda, 2011; Mahfoodh, 2011; Kavaliauskiene & Anusiene, 2012; Purnawarman, 2011). However, studies about teachers' feedback in Indonesian context have been being concerned by a few researchers (Purnawarman, 2011; Irawati & Maharani, 2012; and Ratnah, 2013) especially to graduate students (Hyland & Hyland, 2006, p. 87). This study, hence, discusses a teacher's written feedback practices and students' preference related to the written feedback at one postgraduate school in Bandung.

B. LITERATURE REVIEW

1. Teacher Feedback

Feedback is defined as a method of giving information to improve performance (Kavaliauskiene & Anusiene, 2012, p. 88; Ratnah, 2013, p. 54; Hattie & Timperley, 2007, p. 81) which is provided by "teacher, book, parent, self, experience" as the agent (Hattie & Timperley, 2007, p. 81).

2. Types of Feedback

Regarding how errors should be corrected, feedback can be classified into several types. However, there are four types of feedback which are relevant to this study. The first type of feedback is known as teacher corrections in which the teacher corrects students' writing mistakes directly (Saito, 1994, p. 46).

The second type is commentary (Saito, 1994, p. 47; Hyland, 2003, p. 180; Harmer, 2004, p.110; and Williams, 2005, p. 102) in which the teacher gives comments in the process of students' writing related to what they have done and what they should do to improve it (Harmer, 2004, p. 110). The third type is error identification which refers to circling and underlining students' errors and it is widely used technique in correcting ESL students' writing errors (Saito, 1994, p. 47). The fourth type is coding in which the teacher gives codes and symbols either in the body or in the margin of the writing (Harmer, 2004, p. 111).

3. Purposes of Feedback

There are at least three purposes of giving feedback (Hyland, 2003, p. 177 & Coffin, *et al*., 2003, p.104). The first is to indicate the progress in writing as an attempt to strengthen learning (Hyland, 2003, p. 77 & Coffin *et al.,* 2003, p. 104). This indicates that the feedback is the initial attempt to give insights for the students to improve and develop their writing.

The second is to evaluate what has been written by the students including its strengths and weaknesses and to suggest on what should be done in their future writing (Coffin *et al.,* 2003, p. 104). As the students know their strengths, they will maintain and apply it for the next writing. Meanwhile, when they have weaknesses, they will be a consideration for them to develop the weaknesses to be better and to avoid the same mistake in writing other texts. The last is to build students' confidence in writing (Hyland & Hyland, 2006, p. 83). Students

who receive encouraging feedback from the teacher will be motivated to revise their writing in order to produce worthier texts.

C. METHODOLOGY

This study employed a qualitative case study design involving nine English students academic year 2012-2013 at one postgraduate school in Bandung. Through purposive sampling, these students were chosen as the participants as written feedback was only given to this class. They have taken Systemic Functional Grammar course in the third semester. Each of them was required to make an essay using Systemic Functional Grammar (especially Theme ad Transitivity system). These respondents were anonymous.

To obtain the data, document analysis and a questionnaire were employed in two stages. The documents were collected as they provided unchangeable data which could be re-analyzed and provided information that could not be obtained in another way (Saedi, 2002, p. 59). A questionnaire was devised as it allows for collecting identical results that can be compared from one another (Saedi, 2002, p. 41). The data were collected in two stages. First, compositions along with the teacher's feedback were collected in order to identify the teacher's written feedback practices including the feedback focus, the error correction strategies, and the communicative aims of the written comments. Second, a questionnaire consisting of 13 items was distributed in order to elicit information dealing with their preference on the teacher's feedback focus, the teacher's error correction strategies, and students' strategies for handling the feedback. The items were developed from Saito (1994), Ngai (2009) and Hamouda (2011).

Both quantitative and qualitative data analyses were employed. A quantitative method was used to analyze the data from the close questionnaire and students' compositions. A qualitative method was used to analyze the data from open ended questionnaire. A qualitative data analysis was conducted by rewriting respondents' answers into the data sheet, categorizing and interpreting them. To ensure the validity of the conclusion, two types of triangulation were also used including methodological (document analysis and a questionnaire) and data triangulation (information obtained from the teacher and the students' answers).

D. FINDINGS AND DISCUSSION
1. A Teacher's Written Feedback Practices
a. *Error Feedback Focus*

Regarding the analysis of the teacher's written feedback on nine students' compositions, Table 1 summarizes the teacher's error feedback focus. Among 91 points of feedback given by the teacher, the highest points (67 points) were addressed to the content issue while the lowest ones (3 points) were addressed to the vocabulary issue.

Table 1
The Teacher's Error Feedback Focus

Error Type	Total
Content	
Meaning of ideas	34
Missing of necessary information	33
Language	
Articles/ determiners	1
Noun endings (singular/plural)	3
Preposition	4
Sentence structure	6
Subject-verb agreement	2
Verb form	2
Word form	3
Mechanics	-
Organization	-
Vocabulary	-
Word choice	3
Total	**91**

The results reveal that the teacher placed great emphasis on the content, especially meaning of ideas and missing of necessary information, instead of the others. These are also in agreement with the students' report in the questionnaire arguing that content was the first focus of the teacher's written feedback. Student 7 said:

The teacher corrected the content of my essay. The ideas were not coming from me but I did not give any credit for the authors who have the ideas.

These results confirm those of Cohen's & Cavalcanti's (1990, p. 165) study which have shown that the teacher mostly stressed the importance of content in giving feedback to students. On the other hand, the results are inconsistent with Ngai's (2009, p. 25) study which has indicated that the teachers paid much attention to the language instead of the other aspects of written feedback.

This suggests that it is important for the teacher to focus both on the content and the language when giving feedback to students in which the focus on language is given after the students are able to develop their ideas (Fathman & Whalley, 1990, p. 180-181 & Hyland, 2003, p. 185) depending on students' critical needs (Ferris, 2003, p. 23). Focusing on content might contribute to the writing fluency while focusing on the grammar might contribute to the writing accuracy (Aridah, 2003, p. 108 & 110).

b. *Error Correction Strategies*

Table 2 presents error correction strategies employed by the teacher when giving feedback on students' essays. The table shows that all types of correction strategies were employed by the teacher. Among 79 corrections strategies used, 55 of them indicate indirect feedback while 24 of them indicate direct feedback.

Table 2
The Teacher's Error Correction Strategies

Error correction strategy	Explanation	Total
Direct feedback	Deleting words	3
	Inserting words	4
	Locating and correcting errors	14
	Rewriting	3
Indirect coded feedback	Locating errors and indicating error types	17
Indirect uncoded feedback	Simply locating errors	38
Total		**79**

The results show that indirect feedback was the most prevalent strategy adopted by the teacher. This preference might imply that that the teacher wanted to promote students' problem-solving and responsibility for writing development (Ferris, 2010, p. 190). The results do not concur the results of Ngai's (2009, p. 26) study which have argued for direct error feedback as the most prevalent strategy adopted by the teacher in error correction.

Conversely, as revealed in the open ended questionnaire, the students expressed their preference for the direct feedback by providing a reason as follow:

So that I know which parts that I make errors and I know how to correct them (student 3)

I'd rather to have the correction of my essay…so that I get a clear direction of what should I do next on my essay (student 7)

These students perceived the direct feedback as the guideline which was beneficial to correct errors on the current essays and on the compositions afterwards. This probably happens because they believed that it was the teacher's responsibility to correct the errors directly (Lee, 2004, p. 295). The teacher's practice is not only contradictory to the students' preference but also to the results of Ngai's (2009, p. 46) study which have indicated that direct correction was the most comprehensive way for the students as they could identify their mistakes clearly.

Thus, it seems to be a mismatch between the teacher's and students' preference towards the written feedback strategies which might lead to unsatisfactory learning outcomes (Katayama, 2007, p. 285 & Hamouda, 2011, p. 128). Therefore, it is important for both the teacher and the students to make an agreement regarding what contributes to the writing development (Leki, 1991, p. 203). It is also necessary for the teacher to give a suggestion for students that they have to change their expectation if they want to achieve the maximum result of writing (Leki, 1991, p. 203).

c. *The Aims of Written Comments*

There are four types of the teacher's communicative aims of giving written comments on students' composition which are displayed in Table 3.

Table 3
The Communicative Aims of the Teacher's Written Comments

Communicative aims	Total
To ask for information	23
To make a suggestion/ request	7
To give information	2
To give positive or encouraging feedback	1
Total	**33**

The table describes that 23 out of 33 comments aimed at asking for information that can be seen in the following examples:

berarti apa yang harus dilakukan? (so, what should be done?)

apakah bisa menggiring pembaca? (can it guide the readers?)

What do you think about the practice of these themes?

Meanwhile, 7 comments aimed at making suggestion/ request, such as "Beri comment tentang linguistic features" (Give comments on the linguistic features). Furthermore, 2 comments aimed at giving information, such as "This is an argumentative test". Finally, 1 comment aimed at giving positive or encouraging feedback, such as "Good!"

The results imply that asking for information was the most common aim of the teacher's comments. The large proportion of asking for information might indicate that the teacher intended to encourage students to provide further thought of the ideas that have been delivered (Ferris, Rezone, Tode & Tinti, 1997, p. 164).

Different from the results above, Ngai's (2009, p. 30) findings have indicated that the teacher mainly intended to give positive or encouraging feedback in order to build students' confidence in writing.

Because of the important role of positive feedback, it is necessary for the teacher to give more encouraging feedback based on their needs and task types (Harmer, 2004, p. 262).

2. Students' Preference Related to the Feedback
a. Students' Preference for Feedback Focus

Table 4 illustrated the rank of the feedback focus as rated by the students. Content was rated by 4 students as the first focus that should be addressed by the teacher, organization was rated by 4 students as the second focus, grammar was rated by 5 students as the third focus, and vocabulary as well as mechanics were rated as the least focus as rated by 7 students.

Table 4
Students' Preference for Feedback Focus

Rank	Focuses	Rated by
1.	Content	6
2.	Organization	6
3.	Grammar	5
4.	Vocabulary & Mechanics	7

The students' preference for the content as the main feedback focus is in line with the teacher's feedback practice. The students said:

In my opinion, lecturer doesn't need to be confused by the mistakes in those areas. Students of S2 should have no more problems or errors in those areas. So lecturer needs to focus on the content and the organization (student 8)

I really need the input of content and organization because those show the teacher style in evaluating and scoring the paper. Grammar, mechanics and vocabulary choice basically can be done by myself (student 7)

Based on the students' explanations above, two possible reasons for the preference on content can be drawn. First, as stated by student 8, it was believed that for postgraduate level student, there would be no more problems related to the other aspects except for content as they were perceived as more proficient learners. Therefore, the focus should be on content. Second, as stated by student 7, this preference may due to the students' desire to fulfill the teacher's expectation. In other words, they rated content as the first focus because the teacher mainly focused on it in assessing and scoring the students' compositions.

These results are different from the results of Hamouda's study (2011, p. 132) which have reported that the students preferred grammar as the highest attention that should be given by the teacher. However, this idea is supported by the minority of the students. Student 1 said "I need my work to be as accurate as possible. I care the most about accuracy" while student 6 said "Grammar is important so my writing should have error as little as possible"

The statements indicate that they needed grammar as the main focus of the teacher's feedback practice because they thought that it helped them to produce accurate writing. Thus, it appears that postgraduate students also need attention on grammar besides of content. Therefore, it is more beneficial for the teacher to increase the frequency of giving feedback on grammar in addition to the feedback on content to facilitate them to produce both fluent and accurate writing (Aridah, 2003, p. 108 & 110).

b. Students' Preference for Error Correction Strategies

Table 5 describes the preference for the teacher's error correction strategies as rated by the students. Each student was asked to rank the strategies from 1 to 3. It was found that 4 students rated correcting errors as the first preferred strategies to be employed by the teacher, 4 students rated writing comment only as the second preference, and 6 students rated indicating errors by underlining, circling or marking as the last preference.

Table 5
Students' Preference for Error Correction Strategies

Rank	Students' Preference for Error Correction Strategies	Rated by
1	Correcting errors	4
2	Writing comments only	4
3	Indicating errors by underlining circling/ marking symbol	6

The students also provided the reasons of choosing correcting error as the first preference. They said:

> So that I know which parts that I make errors and I know how to correct them (student 3)
>
> By indicating my errors I would know what I should revise in terms of grammatical rules, while by giving comments I would know the revision in term of cohesion & coherent (student 6)

These students argued that correcting errors, which is the direct from of feedback, was crucial in order to know their errors or weaknesses that could be used as the guideline for their writing afterwards. These findings indicate that there is a mismatch between the students' preference and the teacher's practice. The students placed a high value on the direct correction strategy while the teacher employed indirect strategy.

The mismatch probably happens because they did not want to be busy to make revisions and expected the teacher to do it for them. This is in line with a study conducted by Lee (2004, p. 295) which have reported that students perceived error correction as the teacher's responsibility.

Hence, it can be inferred that indirect feedback is crucial to encourage students to be independent writers and achieve long-term writing ability that enables them to avoid the same mistake for the other compositions. This can be achieved through locating, indicating the error types, or both of them.

Accordingly, it is necessary for the teacher to maintain the indirect feedback practice since it would guide the students and give them a space for problem solving which further leads them to be independent writers and editors (Nunan, 2003, p. 93; Kim & Kim, 2005, p. 4; Hyland & Hyland, 2006, p. 96 & Ngai, 2009, p. 55). Furthermore, it is important for the teacher to suggest the students to modify their preference from the direct feedback into the indirect.

c. *Students' Preference for the Strategies for Handling Feedback*

Table 6 displays students' preference for the strategies to handle the feedback. In this regard, 7 out of 9 students indicated that they rewrote the papers by revising and expanding and asked classmates for help while 6 out of 9 students preferred to use internet to find more references and rewrote only by incorporating the teacher's comments.

Table 6

Students' Preference for the Strategies for Handling Feedback

Strategies for handling feedback	(√)
rewriting by revising and expanding	7
Peer correction	7
identifying points to be explained	6
using the Internet to find more references	6
rewriting by only incorporating teacher's comments	5
asking for teacher's help	3

referring back to previous compositions	2
consulting a grammar book	2
going to the library	2
making a mental note	1
writing down points by type	1
ignoring them	-
Other(s):	-

Whereas, five students rewrote the essay by only incorporating the teacher's comments, two students referred back to previous composition, consulted a grammar book, and went to the library to consult reference materials. Meanwhile, there was only one student who made a mental note and wrote down points by type.

Rewriting by revising and expanding and peer correction are the most preferred strategies employed by the students in handling feedback. Rewriting by revising and expanding shows the students' willingness and motivation to improve the quality of their essays. It might be true because as postgraduate students, they are more proficient with a higher level of education; therefore, they will maximize their ability to write seriously. This is in contrast with the results of Cohen's & Calvacanti's (1990, p. 161) study which reported that rewriting is useful if it is dealing with grammar and spelling while in this study, rewriting is also useful when dealing with content. This suggests that rewriting is not only useful for the errors on grammar and spelling but also for the improvement on the content.

The preference of peer correction is probably because "it is less threatening, less authoritarian, and more supportive" (Kavaliauskiene & Anusiene, 2012, p. 98) as well as "comfortable and not fearful" (Hamouda, 2011, p. 134). These can be achieved in "a friendly and cooperative atmosphere" (Kavaliauskiene & Anusiene, 2012, p. 98). Therefore, it is important for the teacher to promote peer correction among the students because of its important role in developing students writing quality.

E. CONCLUSION

Based on the findings, two major conclusions can be drawn related to the teacher's written feedback practices and the students' attitudes towards the feedback. In relation to the former, the results indicate that the teacher mainly focused on the content when marking students' errors by employing selective and indirect error correction which mainly aimed at asking for further information.

With regard to the latter, the results show that the students put high emphasis on the teacher's written feedback and support the teacher's focus of giving feedback. However, they preferred for selective and direct error feedback to be given by the teacher.

This study suggests that the teacher and the students should have a discussion regarding the effective feedback practices that constitute the improvement of their writing. It is important for the teacher to communicate the criteria, expectation, and purpose of her feedback practices as an attempt to promote problem-solving and independent writers who are able to evaluate their own writing.
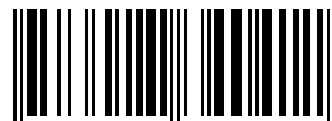
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