

**METACOGNITIVE STRATEGIES TRAINING IN READING  
CLASS**

**(A Thesis)**

**By**  
**MELATI DWI ANDA SYAPUTRI**



**MASTER IN ENGLISH LANGUAGE TEACHING STUDY PROGRAM  
LANGUAGE AND ARTS EDUCATION DEPARTMENT  
TEACHER TRAINING AND EDUCATION FACULTY  
LAMPUNG UNIVERSITY  
BANDAR LAMPUNG  
2018**

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A Thesis

Submitted in a partial fulfillment of  
The requirements for S-2 Degree



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2018**

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## **ABSTRACT**

### **METACOGNITIVE STRATEGIES TRAINING IN READING CLASS**

By:

Melati Dwi Anda Syaputri

This study investigated the effect of (i) metacognitive strategies training on the use of metacognitive strategies, and (ii) metacognitive strategies training on students' reading achievement.

This study employed an experimental design. The participants of this study were fourteen of the tenth grade students of SMA Darma Bangsa. The data were collected using questionnaires, an interview and the reading test. The questionnaires and the interview were used to address the effect of metacognitive strategies training on the use of metacognitive strategies. Then, the reading test was administered to find out the effect of metacognitive strategies training on students' reading achievement. The means score of student's metacognitive strategies use and reading achievement were analyzed by using Paired Sample T-test with SPSS version 17 to test the difference between the score pre-test and post-test.

The result showed that metacognitive strategies training had statistically effect on the students' metacognitive strategies use with the significant level 0.05. This finding was supported by the interview results that the majority of students (72%) showed positive responses toward the training in the sense that metacognitive strategies training was beneficial and could facilitate them to understand reading. Furthermore, metacognitive strategies training had significant affected on the students' reading achievement in terms of five aspects: understanding main idea, specific information, reference, inference and vocabulary with significant level 0.05. This indicates that metacognitive strategies training improved students' awareness to use the metacognitive strategies in reading. It was notified that students began to pay attention to use metacognitive strategies in reading as all strategies in planning, monitoring and evaluating were improved gradually. This also suggests that the training facilitates students to improve their reading skills. In short, the metacognitive strategies training leads to students' awareness of using metacognitive strategies, ultimately improving students' reading achievement.

## **CURRICULUM VITAE**

The writer was born on June 2nd, 1992 in Bandar Lampung. She is the second child of four children from the happy couple Mr. Syaparudin, S.E. and Mrs. Andasia Malyana, M.Pd. She is now the wife of Ferdian Muhammad and she has a baby boy.

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She has begun her career as an English teacher since she was in the third semester of under graduate. She worked at some English courses for more than four years. Now, she is an English teacher at SMA Darma Bangsa in Bandar Lampung.

## **DEDICATION**

*Bismillaahirrahmaannirrahiim.* By offering my praise and gratitude to ALLAH SWT for the blessing given to me to the whole of my life, this piece of work is sincerely dedicated to:

my beloved parents:

Syaparudin, S.E and Andasia Malyana, M.Pd.

my beloved husband and son:

Ferdian Muhammad, S.Pd. and Muhammad Farand Emery

my beloved thesis advisors and examiners:

Prof. Ag. Bambang Setiyadi, Ph.D., Mahpul, M.A. Ph.D., Dr. Muhammad Sukirlan, M.A., and Prof. Dr. Cucu Sutarsyah, M.A.

My adorable Almamater, University of Lampung



## **MOTTO**

“MAN JADDA WAJADA”

Siapa bersungguh-sungguh pasti berhasil

“MAN SHABARA ZHAFIRA”

Siapa yang bersabar pasti beruntung

“MAN SARA ALA DARBI WASHALA”

Siapa menapaki jalan-Nya akan sampai ke tujuan

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## I. INTRODUCTION

This chapter presents background of research, research questions, objectives, scope, significant of the study and definition of terms, clarified as the followings.

### 1.1. Background of Research

To master English, one needs to be good at the four language skills i.e. reading, writing, listening, and speaking. Reading, for example, is one of the crucial language skills since there are a lot of advantages students can obtain from this skill. They can improve their vocabularies and expand their knowledge (Yusnita, 2015). Reading is one of the four skills that students of foreign languages need to master in order to successfully learn the language (Rraku, 2013). Apart from that reading is one of the most significant ways of acquiring knowledge and successful reading, not only improves the quality and quantity of our knowledge, but also use of time whether it is applied in different study context or learning of various academic subject. Alsamadani (2011) also mentioned for foreign language learners, reading is the most important skill to acquire.

Reading skill is important for students. However, it was found that students' ability in reading was still low (Sinambela et.al, 2015). They stated that it is certainly not easy to present the English reading to Indonesian students whose language system is different. Reading in their own language is much easier than in foreign language because they have mastered the vocabulary and the structure of their own. As reading plays an important role in language learning, it would be better that this teaching is wisely done. The students faced many difficulties in reading texts. They often failed in reading tests because of lack of vocabularies and technique in reading. The problem also comes from the teacher's technique and strategy in teaching. During the writer's observation, she found that the

teacher still applied a traditional method, the teachers asked the students to write things in their exercise books freely, read the texts by heart and opened dictionary anytime they stuck on using words that they didn't know. It caused the students bored and did not have a concentration in learning so they could not gain the purpose of reading.

In addition, Bölükbas (2013) stated that reading is not just decoding words from print: the essential point is understanding. In other words reading does not mean anything unless there is comprehension. When thought in this sense, to be a good reader one needs to learn how to combine his/her background knowledge with what she/he is reading, understanding what he/she is reading and interpreting it, understanding the full text by establishing a relationship between the pieces of the text and evaluating the text by looking at it with a critical eye.

Moreover, the similar case was found in Riani's study (2013) who interviewed English teacher at one of senior high school, it was found that many students still had problems in reading. When the teacher asked students to read, they seemed to be less motivated and some other students were found lack of vocabulary, with the result that these situations made them difficult to understand what they were reading. The other problem from the students was fluency. Many students were not fluent in reading. Those cases were quite problematical and should be solved because they can cause further difficulties to the next reading lesson. Thus, it is important to find out solution for students' reading problems.

This case also happened in other countries where English is a foreign language such as in Iran (Afzali and Tavangar, 2011; Karbalaei and Amoli, 2011; Jafari, 2012; Ghafournia, 2014; Khoshsima and Tiyyar, 2014; Tavakoli and Koosha, 2016), in China (Pei, 2014 and Yang, 2016), in Saudi Arabia (Alsamadani, 2011;

Hazaea and Alzubi, 2016; Meniado, 2016), in Albania (Rraku, 2013), and in Turkey (Çubukçu, 2008). In those countries, some researchers did research to improve reading skill because reading is assumed as complex skill and it is important to find out solution for students' reading problems.

According to Nuttal (1982: 83), Sinambela et.al (2015: 15-16), and Novita (2016: 16-17) to understand texts there are some aspects should be understood. They are understanding main idea, specific information in text, vocabulary, reference, and inference. This could be inferred that to comprehend the text deeply students need to understand those five aspects. Thus, the researcher assumes that students need learning strategies to help them understand the aspects of reading. As Bölükbas (2013) stated that in order to help students to comprehend the text deeply the use of reading strategies is one of the activities which can improve reading comprehension skills in foreign language learning. It can be inferred that the students who have employed certain strategies will report better language comprehension.

Numerous studies have revealed that students need strategy to learn easier and improve students' comprehension. Many studies had investigated the implementation of learning strategy in language learning (See Cubukcu, 2008; Alsheikh and Mokhtari, 2011; Zhang and Seepho, 2013; Estacio, 2013; Rraku, 2013; Korotaeva, 2014; Ghafournia, 2014; Setiyadi, Sukirlan & Mahpul, 2016). They assumed that the use of certain strategy can improve the comprehension of students in learning English. Furthermore, Rraku (2013) had emphasized the effect of the use of reading strategies can have on the improvement of foreign language reading comprehension. Then, he found that the study pointed to a noticeable improvement of students' reading comprehension once they had used reading strategies to do their exercises. As a conclusion, the article pointed out



that reading strategies are essential for the improvement of reading comprehension and they should be promoted in English language teaching.

One of strategy that can facilitate students to improve their reading comprehension is metacognitive strategy. Chamot and O'Malley (1996: 264) stated that metacognitive learning strategies include planning, monitoring and evaluating strategies. That is, learners set a goal for and decide how to organize a task before embarking on it, regulate their performance as they engage in the task, and check their performance after completing the task. Then, Zhang and Seepho (2013) mentioned that all the three sub metacognitive strategies were also positively correlated with reading achievement.

There are many studies investigated the use of metacognitive strategy in learning reading. Henia (2003), Cubukcu (2008), Alsheikh and Mokhtari (2011), Takallou (2011), Aghaie and Zhang (2012), Estacio (2013), Rraku (2013), Zhang and Sheepo (2013), Korotaeva (2014), Pei (2014), Mistar, Zuhairi and Yanti (2016) had investigated this study. Then, the results showed that metacognitive strategy gives positive effect and can improve student's comprehension in learning reading. Metacognitive strategy plays important role in English majors' EFL reading.

In order to facilitate students with metacognitive strategies, they need training of this strategy. Some previous studies revealed that students' reading comprehension can be improved if they have training about the use of metacognitive strategies (See e.g. Henia, 2003; Gooden et.al 2007; Sporer et.al 2009; Takallou, 2011). They found that training learning strategy is beneficial to the students. In addition, Mistar et.al (2016) suggested that in order to facilitate the reading comprehension of readers such strategies should be incorporated

within the normal syllabus and as part of the reading tasks and the teachers should be more attentive to these strategies and try to overtly teach the readers how to apply such tricks in actual process of reading.

Besides, Sen (2009) stated that learning and implementing special reading strategies and specializing in the implementation of such strategies enable not only a more efficient use of time but also an easier and more sustained period of reading. Increasing brain power at the time of reading is directly related to developing strategic reading skills. The student who is made aware that the thinking process requires the use of metacognitive strategies can develop strategic reading skills and think about the process of thinking. Then, Gooden et.al (2007) found that the metacognitive reading comprehension instruction significantly improved the academic achievement of third-grade students in the domains of reading comprehension and vocabulary over the other instruction that was offered to the students in the comparison school. The intensity of the study and the systematic instruction of metacognitive strategies led to positive effects for understanding written text, which is the reason for reading.

Wilawan (2013: 65) stated that the training of metacognitives strategies may facilitate students to get knowledge about metacognitive especially in learning reading. In the training, the instructor becomes a mediator who provides explicit explanation, modeling, and scaffolding to help students become aware of the strategies they employ, regulate strategy use while reading, construct understandings about the content of the text, and monitor their comprehension. By increasing awareness of their reading strategies, students can improve comprehension. Therefore, due to enhance the development of students' metacognition in EFL reading classes, the researcher assumes that the training of

metacognitive strategies is considered can be one of solution to facilitate students during the learning process.

There were many researchers who used Cognitive Academic Language Learning Approach (CALLA) model in their metacognitive strategies instruction (See e.g. Lv, 2010; Coskun, 2010; Takallou, 2011; Aghaie and Zhang, 2012; Al-Khasawneh and Huwari, 2014; Pei, 2014; Khonamri and Ahmadi, 2015). CALLA was developed by Chamot and O'Malley as a metacognitive strategy training model. It helps teachers to combine language, content, and learning strategies in a carefully planned lesson. In the CALLA model, students' prior knowledge and their habit of evaluation of their own learning seem to be the major principles (Coskun, 2010). Thus, CALLA will be utilized as the model of strategy training in this study. It focuses on explicit instruction in learning strategies. The model is presented through five basic phases: preparation, presentation, practice, evaluation, and expansion.

Many researchers had done studies related to metacognitive strategies training by using CALLA model to improve reading comprehension. However, different researchers had different focuses of reading aspects to be taught through the training. In Aghaie and Zhang's study (2012) the focus of the training was to enable students make critical and personal comment on the text, decide specific aspect of information to look for, and look for main ideas and details. Then, in Pei's study (2014) the focus of the training was to enable students predict or guess a text meaning in reading text. Moreover, in Takallou's study (2011), it focused on the effect of instruction only on two kinds of metacognitive strategies which were planning and self-monitoring strategies on the EFL learners' reading comprehension performance (on authentic or inauthentic texts) and their metacognitive awareness.

Although similar studies related to this research had been conducted, the effect of metacognitive strategies training on student's reading comprehension performance regarding the five aspects of reading which were finding main idea, detail information, reference, understand inference and vocabulary had not been previously reported in EFL context. Then, different from the previous study the metacognitive strategies training in this study was about using planning, monitoring and evaluating to facilitate students understand the five aspects of reading. Therefore, the present study focused on promoting metacognitive strategies (planning, monitoring, and evaluating) training to facilitate students able to locate main idea, detail information, reference, inference and vocabulary in reading text. As Nuttal (1982), Sinambela et.al (2015: 15-16), and Novita (2016: 16-17) stated that in reading those five aspects can help the students to comprehend the text deeply.

Moreover, as Chamot and O'Malley (1996: 265) mentioned that metacognitive strategy is categorized into three stages which are planning, monitoring, and evaluating. In planning, the learners preview main idea, skim a text, plan what to do, read selectively, scan, find specific information, attend to keywords, plan when, where and how to study. In monitoring learners think while reading or checking one's comprehension during reading. Then, in evaluating, learners check back, reflect on what they have learned or judging how well one has accomplished a learning task. Besides, Sheorey and Mokhtari (2001) mentioned that metacognitive strategies in reading are setting purpose for reading, previewing text before reading, checking how text content fits purpose, noting text characteristics, determining what to read, using text features, using context clues, using typographical aids, predicting or guessing text meaning and confirming predictions.

However, as Novita (2016) mentioned that finding main idea is getting the most important idea stated in the topic sentence. It is the main purpose of comprehension. There is no reading without understanding the main idea. To understand the main idea, reader needs previewing and finding information from the text. Then, finding the specific information or part of text means looking for the information that relevant to the goal in mind and ignores the irrelevance. Besides, finding reference means interpreting and determining one linguistic expression to another. It contains words or phrases used as a signal to know other meaning referring the words provided in the text in order to avoid unnecessary repetition of words or phrases. Making inference is drawing conclusion based on the facts in the text. It is one of comprehension strategies to make conclusion about what is not directly stated in the text based on clues given. Furthermore, understanding vocabulary is an important role in understanding the meaning of context by identifying the synonyms, antonyms, compound words and their components, and also grammatical category.

By looking at the categories of metacognitive strategies and the explanation of five aspects of reading, the researcher assumed that metacognitive strategies might facilitate students to comprehend those five aspects of reading. Based on the background above, this present study was aim at finding out the effect of metacognitive strategies training on the use of metacognitive strategies and the effect of metacognitive strategies training on students' reading achievement.

## **1.2. Research Questions**

Based on the background above, the researcher decided to formulate the research questions as follows:

1. What is the effect of metacognitive strategies training on the use of metacognitive strategies?
2. What is the effect of metacognitive strategies training on the students' reading achievement?

### **1.3.Objectives**

The objectives of this present study were to:

1. find out the effect of metacognitive strategies training on the use of metacognitive strategies.
2. find out the effect of metacognitive strategies training on students' reading achievement.

### **1.4.Scope**

This study was qualitative and quantitative study. It was conducted at the tenth grade students of SMA Darma Bangsa which consists of 14 students in academic year 2017/2018. The students were trained to be aware of using metacognitive strategies which were planning, monitoring and evaluating in reading comprehension. The study used triangulation data analysis to answer the research questions qualitatively and quantitatively. This present study was aim at finding out the effect of metacognitive strategies training on the use of metacognitive strategies and the effect of metacognitive strategies training on students' reading achievement.

### **1.5. Significant of the Study**

The significant of this study were:

1. Theoretically, this present study can be used to evaluate and to extend finding from previous studies and be used as a reference for further study of metacognitive strategies training.

2. Practically, this present research can be used to give English teachers a consideration about the importance of training metacognitive strategies to improve student's awareness of metacognitive strategies in reading comprehension.

### **1.6. Definition of Terms**

In this research, there were several definitions of terms that should be considered well as follows:

- a. Reading is an ability to read text, process it, and understand its meaning.
- b. Metacognitive strategy is categorized into three stages which are planning, monitoring, and evaluating. In planning, the learners advance organization such as previewing the main ideas, planning how to accomplish the learning task, planning the parts and sequence of ideas to express, attending to key words, phrases, ideas, linguistic markers, and types of information, seeking or arranging the conditions that help ones learn. Then, in monitoring, the learners check one's comprehension during reading. In evaluating, the learners judge how well one has accomplished a learning task (Chamot and O'Malley, 1994).
- c. Learning strategies training in an interaction which focuses on the learning strategies to be used by learners in improving their leaning performance.

## II. LITERATURE REVIEW

This chapter presents the theories which are related to the research. It covers a number of aspects, such as review of previous studies, reading, metacognitive strategies, knowledge of metacognitive strategies, metacognitive strategies in reading, training of metacognitive strategies, theoretical assumption and hypotheses of the study.

### 2.1. Review of Previous Studies

Previous studies revealed that students' reading comprehension can be improved if they have training about the use of metacognitive strategies (See e.g. Henia, 2003; Gooden et.al 2007; Sporer et.al 2009; Takallou, 2011). They found that training learning strategy is beneficial to the students. Furthermore, Henia (2003) investigated to what extent a metacognitive strategy training course in the study skills and strategies necessary for reading scientific research articles can help ESP students in an EFL context read more efficiently and rapidly in their subject area. The general hypothesis of this study was that a metacognitive strategy-training course has a different effect compared to a traditional course of English on subjects' performance on reading tests in their disciplinary area. That is, the students who received this training would show enhanced declarative and procedural knowledge (as indicated by their higher scores and lower task-achievement timings) at the end of the course.

The findings of the study, notwithstanding its limitations, provide new evidence in favor of the idea of teaching strategy use to advanced level EFL Science students who are reading research articles in their specialty area. Both the quantitative and qualitative parts of this study point towards the fact that the



students who received training did indeed benefit from it. What this study also confirmed the usefulness of training advanced level ESP students in a variety of reading styles so as to empower them with the flexibility required to operate under different real-life constraints. The results of this study emphasize the importance of choosing appropriate reading materials in terms of content and length, and the necessity of setting time limits for reading tasks, and last but not least, the need to focus on the reading process and how it relates to the product of reading.

Then, Cubukcu (2008) found that unskilled readers can become skilled readers and learners of whole text if they are given instruction in effective strategies and taught to monitor and check their comprehension while reading. It could be inferred that students with low proficiency could improve their ability if they used strategies during learning process. Besides, Shmais (2003) found that students with high achievement in English use more metacognitive strategies than students of low achievement in that language. Her findings show that high achievers are highly aware of their needs and seek more opportunities to practice English. Then, Setiyadi et.al (2016:35) study showed that the high proficiency students demonstrated higher frequency in using most of metacognitive strategies than the low proficiency students.

Besides, as Kummin and Rahman (2010: 146) said that skilled readers have metacognitive skill. Then, the study found that there was a relationship between the use of metacognitive strategies and achievement in English. Moreover, Zhang and Seepho (2013) found that the high proficiency students apparently possessed metacognitive awareness and were able to use some metacognitive strategies to enhance reading comprehension. They knew when they should use a particular strategy and when to change to another to facilitate reading comprehension. Moreover, Wong (1985) found the fact that the better readers

were already using some metacognitive strategies, so that their growth might not be as dramatic as that of students who were employing no strategies initially. However, for the students who had low proficiency might improve their achievement since they had metacognitive strategies training which could help them improve their reading achievement. This was also in line with O'Neill (1992) statement that the use of metacognitive strategies is a learned skill which must become habitual to be effective. It is possible that over time those students utilizing metacognitive strategies more frequently will be able to integrate these strategies more efficiently to improve reading comprehension.

Moreover, Gooden et.al (2007) found that the metacognitive reading comprehension instruction significantly improved the academic achievement of third-grade students in the domains of reading comprehension and vocabulary over the other instruction that was offered to the students in the comparison school. The intensity of the study and the systematic instruction of metacognitive strategies led to positive effects for understanding written text, which is the reason for reading. Then, Kummin and Rahman (2010) found that there was relationship between metacognitive variables strategies and achievement in English.

Another study was done by Sporer, Brunstein, and Kieschke (2009). They investigated the effects of three different forms of strategy instruction on 210 elementary-school students' reading comprehension. Students were assigned to any one of three intervention conditions or to a traditional instruction condition (control condition). Training students were taught four reading strategies (summarizing, questioning, clarifying, predicting) and practiced these strategies in small groups (reciprocal teaching), pairs, or instructor-guided small groups. Then, to implement the strategy instruction, explicit teaching was chosen as instruction form. Hence, the findings of the present study confirmed the efficacy

of explicit reading instruction as a feasible tool to enhance students' reading comprehension.

In Sen's study (2009) about relationship between the use of metacognitive strategy and reading comprehension stated that students should definitely be taught strategic reading skills. An applied training should be given to students about the steps they have to take before, during and after a reading activity. Students should be informed about *preparing a plan before any reading activity, how to prepare a monitoring plan during the reading activity and how to prepare an evaluation plan after the reading activity*. They should be guided in preparing a reflective diary and in the questioning of themselves. Students should be taught the steps to be taken and the strategies to be adopted in guessing the end of a text and finding its main idea.

Takallou (2011) examined the effect of metacognitive (planning & self-monitoring) strategy instruction on EFL learners' reading comprehension performance (on authentic and inauthentic texts) and their metacognitive awareness. In her study, the model of strategy instruction utilized is the Cognitive Academic Language Learning Approach, or CALLA developed by O'Malley & Chamot in 1990. This approach focuses on the integration of three aspects of learning: content area instruction, academic language development, and explicit instruction in learning strategies.

The major concern of Takallou's study was to explore the effectiveness of metacognitive strategies instruction on the reading comprehension performance of the EFL students and their awareness to metacognitive strategies. As it was shown, the experimental groups outperformed the control group on the reading comprehension performance. Thus, the metacognitive strategies instruction seems

to have contributed to the improvement of students' reading comprehension performance. In other words, the explicit instruction and practice the experimental groups received about how to plan and how to monitor their reading, contributed to this improvement. In addition, the findings of this study indicated that metacognitive strategies instruction increased the experimental groups' metacognitive awareness. Meanwhile, it should be mentioned that both experimental and control groups outperformed in the authentic section of the reading comprehension test.

Then, Aghaie and Zhang (2012) explored the impact of explicit teaching of reading strategies on English as a foreign language (EFL) students' reading performance in Iran. The study employed a questionnaire adapted from Chamot and O'Malley's 1994, cognitive and metacognitive strategies framework. To test the effects of explicit teaching of cognitive and metacognitive reading strategies on reading performance and strategy transfer, the study has a quasi-experimental design involving a contrast group and a treatment group, with whom an intervention program was implemented. The treatment group achieved significantly better results than the contrast group after four months of strategy-based instruction. Results of paired-sample t-tests and independent t-tests and effect size showed that reading comprehension and reading strategy use improved with strategy instruction. Moreover, SPANOVA analyses showed that the participants in the treatment group performed better than those in the contrast group in reading comprehension and reading strategy transfer. Results also showed that strategy instruction contributed to autonomous reading behaviors. Recommendations for further research are discussed.

Besides, in Aghaie and Zhang's study (2012) about effects of explicit instruction in cognitive and metacognitive reading strategies on Iranian EFL

students' reading performance and strategy transfer showed that explicit strategy instruction increased reading comprehension performance. Then, the metacognitive instruction enable students to make critical and personal comment on the text, check whether they accomplished the goal of reading, decide specific aspect of information to look for, look for main ideas and details, decide the reading purpose and check their prediction in reading text. Thus, the researcher assumes that to improve students' reading comprehension the training of metacognitive strategies is considered can be one of solution to help students during the learning process.

## **2.2. Reading**

Reading is one of the most important skills in learning a language besides listening, speaking and writing. The fundamental goal for any reading activity is knowing enough science concepts and knowing the language (Sinambela et.al, (2015). There are many definitions of reading according to many experts. Sinambela et.al (2015) defines reading is one of skills in English which is needed in the process to interpretation of graphic symbols and written symbols. We can give respond about the content of reading materials we has read, we are also can get the message from the reading materials. Then, Grabe (2002:1) defines reading as a complex ability to extract, or build meaning from a text. Reading requires efficient knowledge to world and given topic also an efficient knowledge of the language. It can be said that the more background knowledge the reader have, the easier they comprehend the text.

Meanwhile, comprehension is one of the influential aspects of reading because reading will not be successful without comprehending. Reading with comprehension means understanding what has been read. Comprehension involves understanding the vocabulary seeing the relationship among words and

concepts, organizing idea, recognizing authors' purpose, making judgment and evaluating. Word is important factor in determining the degree of comprehension (Sinambela, et.al, 2015). It can be said as the comprehension process, which is a process where the reader tries to connect their background knowledge, understanding, and their logical judgment of the text. Then, it is clearly stated that comprehension or understanding in every reading activity is an important part of skill learning. The student must be able to read a text consisting of many sentences and select the main idea to which all the sentences refer. After the reader is able to comprehend what the most important thought is, he needs to be able to identify the details that support the main idea. He must think about what he reads in order to interpret meaning as well as to get the factual information given.

In addition, Meniado (2016) states that reading comprehension is a complex cognitive process. It is explored by educational researchers with its multidimensional components, processes, and factors involved in different settings with the aim of finding better ways of developing it among learners. To achieve comprehension, it is crucial for the reader to make use of his previous experiences. In comprehension process, readers carry their background knowledge, ability to recognize, use rhetorical structure, and ability to use reading strategies in storing information contained in a text. It confirms that some capabilities in inviting and bringing the knowledge toward the text that is called recognizing and reading strategies are also important in comprehending process.

In addition, Grabe (1991: 378) stated that research has argued that fluent reading is *rapid*; the reader needs to maintain the flow of information at a sufficient rate to make connections and inferences vital to comprehension. Reading is *purposeful*; the reader has a purpose for reading, whether it is for entertainment, information, research, and so on. Reading for a purpose provides motivation—an important

aspect of being a good reader. Reading is *interactive*; the reader makes use of information from his/her background knowledge as well as information from the printed page. Reading is also interactive in the sense that many skills work together simultaneously in the process. Reading is *comprehending*; the reader typically expects to understand what s/he is reading. Unlike many ESL students, the fluent reader does not begin to read wondering whether or not s/he will understand the text. Reading is *flexible*; the reader employs a range of strategies. From the definition above, it can be summarized that reading comprehension is a process not just to read the sequences of alphabets, but to discover and reveal what they mean and then send it to the readers' mind in order to understand what they are all about and the writer intends about the text by bringing the readers background knowledge and reading strategies.

### **2.2.1. Teaching Reading**

In recent year the feeling has been strong that teachers should spend most of their time teaching rather than testing. This has given rise to concern about how we should teach reading comprehension. In order to replace the traditional approach to teaching comprehension, developing other techniques for helping students to develop their own strategies for making sense of text can be beneficial (Nuttall, 1982: 125). It could be inferred that to teach reading, promoting learning strategies can help students to comprehend the text.

Moreover, Nuttall (1982: 148) stated that in teaching reading teacher is responsible to find out what the students can do and what they cannot, and working out a program aimed at giving them the skill they need. Then, choose suitable text to work on, choose or devise tasks and activities to develop the required skills, prepare the class to undertake the class, make sure that everyone in the class work productively and extracting maximum effort and best results by

encouraging the students and by prompting and probing until they produce the answer, instead of telling them what it is. Besides, make sure that everyone in class improves steadily according to his own capabilities.

Reading is one of the four skills that students of foreign languages need to master (Rraku, 2013). Reading does not mean anything unless there is comprehension. Therefore, students need tool to help them comprehend text. As Bölükbas (2013) stated that in order to help students to comprehend the text deeply the use of reading strategies is one of the activities which can improve reading comprehension skills in foreign language learning. It can be inferred that the students who have employed certain strategies will report better language comprehension. Thus, to teach reading the teacher can introduce and train the students with strategies that can help them comprehend the text easily. Moreover, Rraku (2013) had emphasized the effect of the use of reading strategies can have on the improvement of foreign language reading comprehension. Then, he found that the study pointed to a noticeable improvement of students' reading comprehension once they had used reading strategies to do their exercises. As a conclusion, the article pointed out that reading strategies are essential for the improvement of reading comprehension and they should be promoted in English language teaching.

In addition, Hasanah (2016: 13) stated that the principles of teaching reading were teaching reading strategies and encouraging readers to transform strategies into skills. Strategic reading means not only knowing what technique to use, but knowing how to use and integrate a range of strategies. A good technique to sensitize students to the strategies they use is to get them to verbalize or talk about their thought processes as they read. Reader's can listen to the verbal report of another reader who has just read the same material , and it is often revealing to



hear what other readers have done to get meaning from passage. Then, an important distinction can be made between strategies and skills. Strategies can be defined as conscious actions that learners take to achieve desired goals or objectives, while a skill is a technique that has become automatic. This characterization underscores the active role that readers play in strategic reading. As learners consciously learn and practice specific reading strategies, the strategies move from conscious to unconscious from technique to skill.

In conclusion, teaching reading means that teaching how to get the message from the text. In order to get the message teacher can create an active teaching learning and promote learning strategies to students. Learning strategies can be one of activities to help the students get the message from a text.

### **2.2.2. Aspects of Reading Comprehension**

Nuttal (1982: 83) stated that to understand texts there some aspects should be understood. The first one is concept. We shall assume that student has a reasonable understanding of the concept involved within the clause. Concepts expressed at higher levels are part of the message that the text expresses and will therefore be taken care of in other ways. In other words that student needs to understand the idea or topic of a text and information which is stated in text.

The second one is vocabulary and sentence structure. It is possible to have a pretty good idea of a writer's message without understanding the signification of every sentence, but it is not possible to be absolutely certain of it, nor to give the fullest response. This entails understanding all the vocabulary. This means that, student needs to understand vocabulary and sentence structure if they want to comprehend text.

The third one is cohesive devices. A further problem arises from the use of the various cohesive devices i.e. the ways of tying sentences together to create a cohesive text. Pronoun reference, elliptical sentence and so on are often so straightforward that their potential difficulty is overlooked, and it is only when he encounters a problem that the student will think them worth attending to. The problems that arise concern the signification of sentence: the reader who does not know what a pronoun refers to, or who cannot supply the full version of an elliptical sentence, will not be able to establish its signification. In other words, student needs to understand the reference of pronoun or elliptical sentence in order to comprehend text.

The next one is understanding inference. Even when the plain sense of each sentence has been understood, the reader may still unable to make sense of the text as a whole. Foreign learners given their different backgrounds, are likely to experience it frequently. Problem which goes beyond the plain sense of a sentence involve the interpretation of value, or the relationship between the utterances in a text, or between writer, reader and text. From the explanation of Nuttall (1982: 83) this could be concluded that to comprehend the text deeply students need to understand main idea, specific information of text, vocabulary, reference, and inference.

Moreover, Sinambela et.al (2015: 15-16) stated that reading with comprehension means understanding what has been read. Then, in reading the student must be able to read a text consisting of many sentences and select the main idea and which the sentence refer. After the reader is able to comprehend what the most important thought is, he needs to be able to identify the details that support the main idea. He must think about what he reads in order to interpret meaning as well as to get the factual information given. Besides, comprehension involves

understanding the vocabulary seeing the relationship among words and concepts, organizing idea, recognizing authors' purpose, making judgment and evaluating. Word is important factor in determining the degree of comprehension. In other words, finding main idea, details information in text, inference about what someone reads, reference of word and vocabulary understanding are important aspects for students to be learned in order to comprehend a reading text.

In addition, Novita (2016: 16-17) mentioned that in measuring reading comprehension, there are five skills to be leaned. Firstly, finding main idea is getting the most important idea stated in the topic sentence. It is the main purpose of comprehension. There is no reading without understanding the main idea. To understand the main idea, reader needs previewing and finds information from the text. Then, as Smalley and Ruetten (1986: 3) stated that a paragraph may be defined as a group of sentence that develops one main idea. In other words, a paragraph develops a topic. A topic is basically the subject of the paragraph. It is what the paragraph is about.

Besides, finding the specific information or part of text means looking for the information that relevant to the goal in mind and ignores the irrelevance (Novita, 2016: 16-17). As Smalley and Ruetten (1986: 3) stated that in order to develop main idea, there will be some support for the opinion, illustrate, explain or prove the point of main idea in paragraph.

Furthermore, Novita (2016: 16-17) stated that finding reference means interpreting and determining one linguistic expression to another. It contains words or phrases used as a signal to know other meaning referring the words provided in the text in order to avoid unnecessary repetition of words or phrases. Then, making inference is drawing conclusion based on the facts in the text. It is

one of comprehension strategies to make conclusion about what is not directly stated in the text based on clues given. Furthermore, understanding vocabulary is an important role in understanding the meaning of context by identifying the synonyms, antonyms, compound words and their components, and also grammatical category.

Based on the statements above, there have been five reading aspects that should be mastered by the readers to comprehend the text deeply. They are identifying main idea, specific information, references, inference, and vocabulary.

### **2.2.3 Reading Strategies**

The use of reading strategies is one of the activities which can improve reading comprehension skills in foreign language learning (Bölükbas, 2013). It could be inferred that the students who have employed certain strategies would report better language achievement. Rraku (2013) had emphasized the effect of the use of reading strategies can have on the improvement of foreign language reading skills. Then, he found that the study pointed to a noticeable improvement of students' reading skills once they had used reading strategies to do their exercises. As a conclusion, the article pointed out that reading strategies are essential for the improvement of reading skills and they should be promoted in English language teaching.

Furthermore, reading strategies demonstrate how readers regard a task, what contextual cues they attend to, how they understand the reading passages, and what they do when they do not understand. Reading strategies ranged from fix-up strategies such as rereading difficult sections and guessing the meaning of an unknown word from context, to more broad strategies such as summarizing and relating what is being read to the reader's background knowledge (Khoshsima and

Tiyar, 2014). In addition, reading strategies are of interest for what they reveal about the way readers manage their interactions with written text, and how these strategies are related to reading comprehension. Several empirical investigations have been conducted into reading strategies and their relationships to second language reading comprehension (Takallou, 2011).

Furthermore, Block (1986) defines reading strategies as actions of how readers conceive a task, what textual cues they attend to, how they make sense of what they read, and what they do when they do not understand. Then as Ismail and Tawalbeh (2015: 80) stated that the use of a reading strategy can help readers deal with the problems which arise while reading in a foreign language, and consequently, individuals' reading comprehension can be improved.

Besides, Sen (2009) stated that learning and implementing special reading strategies and specializing in the implementation of such strategies enable not only a more efficient use of time but also an easier and more sustained period of reading. Increasing brain power at the time of reading is directly related to developing strategic reading skills. The student who is made aware that the thinking process requires the use of metacognitive strategies can develop strategic reading skills and think about the process of thinking.

Kucukoglu (2013: 710) stated that in order to be a good reader, learners should set a goal for their reading; therefore good readers have a purpose for reading. One strategy for improving comprehension is predicting, which helps the reader set a purpose for their reading. Then, teachers can motivate students to visualize settings, characters, and actions in a story and ask them to make drawings or write about the image that come to their minds after visualizing the text. Besides, making connections is another strategy that can be used in the reading process. By

making connections, the learners can activate their prior knowledge and connect the ideas in the text to their own experiences. Reading becomes meaningful when the reader connects the ideas in the text to their experiences and beliefs, and the things happening in the outer world. Giving purpose to students' reading by asking them to find connections would help them comprehend the ideas better in the text.

Moreover, during the summarizing process, the students will be able to distinguish the main ideas from the supporting ideas. Distinguishing the related knowledge from the unrelated ones is another point in the summarizing process which will help the students' capacity to improve their text comprehension. Summarizing is a strategy which helps the students to organize the ideas even in the long reading passages which are usually perceived as threat for the students. Then, questioning before, during and after reading, students practice to distinguish between questions that are factual, inferred, or based on the reader's prior knowledge. The students return to the text throughout the reading process to find the answers to the questions asked by the teacher before, during and after the reading. The last strategy is inferring. Inferring refers to reading between the lines. Through inferring students will be able to draw conclusions, make predictions, identify underlying themes, use information to create meaning from text, and use pictures to create meaning. Students can be given techniques to use illustrations, graphs, pictures, dates, related vocabulary and titles from the text to make inferences.

#### **2.2.4 Explanation Text**

The purpose of explanation text is to give an account of how something works or reasons for some phenomenon (Derewianka, 1946: 60). She classifies explanation text into two types which are *explaining how* and *explaining why*. There are some

examples of *explaining how* texts such as mechanical explanation (how does a pump work?), technological explanation (how does a computer work?), system explanation (how does a company work?), and natural explanation (how are mountains formed?). Besides, there are some examples of *explaining why* texts such as why do some things float and other sink?, why is the ozone layer thinning?, why do we have different seasons?, why does iron go rusty?, and why do living things need food?.

According to Derewianka (1946: 62) explanations have a “process” focus rather than a “thing” focus. They are often concerned with a logical sequence. To position the reader, there is usually some statement about the phenomenon in question (often in the form of a heading or question), followed by a (sequenced) explanation of how/why something occurs. Therefore, she classifies explanation text into two text organizations which are *phenomenon* and *explanation*.

In addition, she also states some language features of explanation text. The first is generalized non-human participants (the wind, glaciers, and computers). The second is there are time relationships such as first, then, following, finally. Then, there is cause and effect relationships (if/then, so, as a consequence, since). After that, there are mainly action verbs such as falls, rises, and changes. There are also some passives (is saturated, are changed). The last is timeless present tense (are, happens, turns). Here is the example of explanation text:

### **How are sedimentary rocks formed?**

Sedimentary rock is formed by the compression of layers of particles into a solid form. Sediments such as sand and mud settle onto the floors of oceans and lakes. Over a long period of time, several layers of sediments collect on the floor. These layers are pressed together for many thousands of years, fusing the small solid particles of mud and sand to form solid rock. This type of rock is called sedimentary rock. (Derewianka, 1946: 61)

### 2.3. Metacognitive Strategies

Metacognitive strategies are defined as thoughts or behaviors consciously employed by the learner to think about the learning task, plan for the task, monitor the task, and evaluate how well he/she has completed the task (Lam, 2010). Besides, Kobayashi (2016) states that metacognitive strategies include planning (setting goals), monitoring, and evaluating. Then, Takallou (2011) stated that as learners have an important role in new teaching methodologies, raising their awareness of learning strategies and helping them utilize these strategies is a crucial aim of teachers. One type of these learning strategies is metacognitive strategies including planning, self-monitoring and self-evaluation. Lv (2010) states that metacognitive strategy is a term used in information-processing theory to indicate an “executive” function and it refers to the strategy that is used by learners as the means to manage, monitor and evaluate their learning activities.

Many studies have investigated metacognitive strategies in language learning and different names and categories have been used to refer to the same concept. Different from other studies, which classified metacognitive strategies under a single category for the four language skills Setiyadi (2012) classified metacognitive strategies for different language skills in separated categories: metacognitive strategies of speaking, metacognitive strategies of listening, metacognitive strategies of reading and metacognitive strategies of writing. Since in EFL setting language learners tend to learn the language based on language skills separately, a classification of learning strategies based on language skills may be appropriate to be used in this study.

According to Setiyadi et. Al (2016), metacognition in language learning involves processes related to monitoring and evaluating what has been done and planning what to do in acquiring another language. In the context of language learning



metacognitive strategies are a group of strategies which language learners employ independently; they rely more on themselves to direct, monitor and evaluate their learning, and correct their errors while learning the language skills. By using metacognitive strategies, language learners try to regulate their own learning. It may be concluded that the use of metacognitive strategies is a part of self regulation. The use of metacognitive strategies may trigger language learners to be self-directed.

#### **2.4. Knowledge of Metacognitive Strategies**

Wilawan (2013: 65) stated that metacognitive knowledge or knowledge of cognition is based on three subcomponents: knowing what the strategy is (declarative), knowing how it is used (procedural) and when it should be applied (conditional). In order to enhance the development of students' metacognition in EFL reading classes, they need to increase students' awareness of their reading strategy use and abilities. Moreover, the training of metacognitives strategies may facilitate students to get knowledge about metacognitive especially in learning reading. In the training, the instructor becomes a mediator who provides explicit explanation, modeling, and scaffolding to help students become aware of the strategies they employ, regulate strategy use while reading, construct understandings about the content of the text, and monitor their comprehension. By increasing awareness of their reading strategies, students can improve comprehension.

Moreover, Wenden (1998: 519) stated that strategic knowledge refers to general knowledge about what strategies are, why they are useful, and specific knowledge about when and how to use them. Furthermore, Sheorey and Mokhtari (2001: 433) stated that to accomplish the task of comprehending the text successfully, the reader must utilize metacognitive knowledge and must invoke conscious and

deliberate strategies. The reader's metacognitive knowledge about reading may be influenced by a number of factors, including previous experiences, beliefs, culture-specific instructional practices, and in the case of non-native readers, proficiency in L2, and it may be triggered, consciously or unconsciously, when the reader encounters a specific reading task. In their study, they suggest that the reader's metacognitive knowledge about reading includes an awareness of a variety of reading strategies and that the cognitive enterprise of reading is influenced by this metacognitive awareness of reading strategies. In their view, it is the combination of conscious awareness of the strategic reading processes and the actual utilization of reading strategies that distinguishes the skilled from unskilled readers.

Furthermore, Grabe (1991: 382) stated that metacognitive knowledge and skills monitoring is the final important component of fluent reading skills. As related to reading, this would include recognizing the more important information in a text; adjusting reading rate; using context to sort out a misunderstood segment; skimming portions of the text; previewing headings, pictures, and summaries; using search strategies for finding specific information; formulating questions about the information; using a dictionary using word-formation and affix information to guess word meanings; taking notes; underlining; summarizing information; and so on. Monitoring of cognition involves recognizing problems with information presented in texts or an inability to achieve expected goals (e.g., recognizing an illogical summary or awareness of non-comprehension). Self-regulation strategies would include planning ahead, testing self-comprehension, checking effectiveness of strategies being used, revising strategies being used, and so on.

In addition, metacognitive awareness includes knowledge of mental processes. Metacognitive awareness also refers to total knowledge of obtained skills which continuously advance (Temur et.al, 2010: 4194). Then, Pei (2014) stated that metacognitive knowledge is one's knowledge of the cognitive process in relation to three variables that affect the outcomes of the "cognitive enterprise", namely, reader variable (beliefs about oneself or others as a cognitive processor), task variable (understanding of the nature and demand of tasks), and strategy variable (perceptions about strategies and strategy use that facilitate learning).

In this study, the students got metacognitive strategies knowledge about knowing what the strategy was (declarative), knowing how it was used (procedural) and when it should be applied (conditional) especially in understanding five aspects of reading, which are finding main idea, detail information of text, reference, inference and vocabulary understanding. Students had metacognitive strategies training based on those five aspects of reading. Therefore, the knowledge of metacognitive strategies about the use of metacognitive strategies for helping students comprehended the five aspects of reading. The researcher assumed that, the training might give the students' knowledge about metacognitive strategies and later they could use these strategies in any kinds of reading task.

## **2.5 Metacognitive Strategies in Reading**

Metacognition plays an important role in reading comprehension since it enables readers to reflect upon and monitor their own reading processes (Wilawan, 2013). Learners, who have better metacognitive skills, are able to understand more effectively what they read (Temur et.al, 2010: 4194). Then, as Zhussupova and Kazbekova (2016) mentioned metacognition, or thinking about one's thinking, is the foundation for other reading comprehension strategies. Proficient readers continually monitor their own thoughts, controlling their experience with the text

and enhancing their understanding. As Tanny McGregor explained in *Comprehension Connections*, “Text plus thinking equals real reading!” Teachers can help students develop this skill by modeling and providing concrete experiences to help students understand and apply the strategy to fiction or nonfiction text. Comprehension is the understanding and interpretation of what is read.

Chamot and O’Malley (1996: 264) stated that metacognitive learning strategies include planning, monitoring and evaluating strategies. That is, learners set a goal for and decide how to organize a task before embarking on it, regulate their performance as they engage in the task, and check their performance after completing the task. They categorize metacognitive strategy into three stages which are planning, monitoring, and evaluating. In planning, the learners preview main idea, skim a text, plan what to do, read selectively, scan, find specific information, attend to keywords, plan when, where and how to study. In monitoring learners think while reading or checking one’s comprehension during reading. Then, in evaluating, learners check back, reflect on what they have learned or judging how well one has accomplished a learning task. Then, Sheorey and Mokhtari (2001) mentioned that metacognitive strategies in reading are setting purpose for reading, previewing text before reading, checking how text content fits purpose, noting text characteristics, determining what to read, using text features, using context clues, using typographical aids, predicting or guessing text meaning and confirming predictions.

## **2.6. Training of Metacognitive Strategies**

In order to facilitate students with metacognitive strategies, they need training of these strategies. Some previous studies revealed that students’ reading

comprehension can be improved if they have training about the use of metacognitive strategies (See e.g. Henia, 2003; Gooden et.al 2007; Sporer et.al 2009; Takallou, 2011). They found that training learning strategies is beneficial to the students. Besides, as learners have an important role in new teaching methodologies, raising their awareness of learning strategies and helping them utilize these strategies is a crucial aim of teachers. One type of these learning strategies is metacognitive strategies including planning, self-monitoring and self-evaluation (Takallou, 2011).

The intent of learning strategies instruction is to help all students become better language learners. When students begin to understand their own learning processes and can exert some control over these processes, they tend to take more responsibility for their own learning this self-knowledge and skill in regulating one's own learning is a characteristic of good learners, including good language learners. Research, with both first and second language learners, is revealing some of the ways of thinking that guide and assist an individual's attempts to learn more effectively. Besides, good language learners are more strategic than less effective language learners. By "strategic," I mean that they are better able to figure out the task requirements and are flexible in their approach to solving any problems they encounter while working on the task. Unsuccessful language learners, on the other hand, while not necessarily unaware of strategies, have difficulty in choosing the best strategy for a specific task, and often have a limited variety of strategies in their repertoire (Chamot, 1998).

Besides, Chamot et.al (1999) that the effect of learning strategies training may help students to become better language learner. Ismail and Tawalbeh (2015: 81) suggestion that EFL teachers should provide their students with reading strategy training which can lead to better achievement in reading comprehension. Then,

Chamot et.al (1999) stated that without explicit implementation of the model, students will not be able to exercise control over their learning because they will not know how, why, or when to engage in specific strategies behaviors. Without this knowledge, they also will not be able to transfer strategies from one task to the next. By teaching the model explicitly, teachers can have an impact on students' learning beyond the language taught in their classrooms.

There were many researchers used Cognitive Academic Language Learning Approach (CALLA) model in their metacognitive strategies instructions (See e.g. Lv, 2010; Coskun, 2010; Takallou, 2011; Aghaie and Zhang, 2012; Al-Khasawneh and Huwari, 2014; Pei, 2014; Khonamri and Ahmadi, 2015). CALLA was developed by Chamot and O'Malley as a metacognitive strategy training model. It helped teachers to combine language, content, and learning strategies in a carefully planned lesson. In the CALLA model, students' prior knowledge and their habit of evaluation of their own learning seemed to be the major principles (Coskun, 2010). Thus, CALLA was utilized as the model of strategy training in this study. It focused on explicit instruction in learning strategies. The model was presented through five basic phases: preparation, presentation, practice, evaluation, and expansion. Here were the steps of metacognitive strategies training by CALLA model (Chamot and O'Malley, 1996: 267):

- 1) **Preparation.** The purpose of this stage is to enable students to become aware of their prior knowledge of a topic and the strategies they are already using for the types of task to be accomplished.
- 2) **Presentation.** The focus of this stage is on conveying new information to students, including new concept, new language, and new strategies. The new information should be presented in a meaningful context and with substantial support from extra linguistics cues such as visuals and demonstration.

- 3) **Practice.** In this stage, students have the opportunity to use the new information actively and apply learning strategies with a classroom activity. Practice frequently takes place during collaborative work with classmates.
- 4) **Evaluation.** The main focus of this stage is to provide students with opportunities to evaluate their success, thus developing metacognitive awareness of their learning processes and accomplishments. In evaluation, students record what they have learned and the results of their learning strategies applications.
- 5) **Expansion.** In this stage, the students use the strategies in different situations or tasks, and given opportunities to practice it.

Many researchers had done studies related to metacognitive strategies training by using CALLA model to improve reading comprehension. However, different researchers had different focuses of reading aspects to be taught through the training. In Pei's study (2014) the focus of the training was to enable students predict or guess a text meaning in reading text. Besides, in Aghaie and Zhang's study (2012) the focus of the training was to enable students make critical and personal comment on the text, checked whether they accomplished the goal of reading, decided specific aspect of information to look for, looked for main ideas and details, decided the reading purpose and checked their prediction in reading text. Then, in Takallou's study (2011), the study focused on the effect of instruction on planning and self-monitoring strategies on the EFL learners' reading comprehension performance and this intended to explore the effect of text (authentic or inauthentic) on their reading comprehension performance.

Although similar studies related to this research had been conducted, the effect of metacognitive strategies training on student's reading comprehension

performance regarding the five aspects of reading had not been previously reported in EFL context. The present study focuses on promoting metacognitive strategy training to facilitate students able to identify main idea, find specific information, reference, inference and vocabulary understanding. As Sinambela et. al (2015), Nuttall (1982) and Novita (2016) stated that in reading those five aspects can help the students to comprehend the text deeply. By looking at the characteristics of metacognitive strategies and five aspects in reading, the researcher assumed that metacognitive strategies could facilitate students to comprehend those five aspects of reading.

### **2.7. Theoretical Assumption**

From the related theories on the literature review above, the researcher assumed that training metacognitive strategies was very useful to facilitate student improving their reading comprehension because the success of reading ability might depend on what and how learning strategies applied by readers. Moreover, reading strategies are interesting aspect that holds very essential role in supporting students' success in reading comprehension.

### **2.8. Hypotheses**

The hypothesis was statistically analyzed using Repeated Measures T-test that was used to compare two means and the result can be used to draw conclusion in significant level of 0.05 ( $P < 0.05$ ) with SPSS version 17. The hypotheses were as follow:

H<sub>0</sub>1: There was no significant different between students' metacognitive strategies use before and after metacognitive strategies training ( $p > \alpha$ ).

H<sub>0</sub>2: There was no significant different between students' reading achievement before and after metacognitive strategies training ( $p > \alpha$ ).



H11: There was significant different between students' metacognitive strategies use before and after metacognitive strategies training ( $p < a$ ).

H12: There was significant different between students' reading achievement before and after metacognitive strategies training ( $p < a$ ).

### **III. RESEARCH METHODS**

This chapter describes the research methodology includes details of research design, population and samples, data collecting techniques, research procedures, schedule of the research, scoring systems, criteria of a good test, data analysis.

#### **3.1. Research Design**

The study employed an experimental design. Both the pre- and post-tests were administered to the students. The design was shown in the following way:

**T1 X T2**

Where :

T1 : pretest

T2 : post test

X : treatments (metacognitive strategies training)

(Setiyadi, 2006:131)

#### **3.2. Population and Samples**

The population of this study was the tenth grade students of SMA Darma Bangsa. This school sets a small class for every grade in order to make teaching learning process more effective. The total population number of tenth grade was 28 students. There were two classes and 14 students in each class. The researcher used a lottery and took one class as the sample of this research.

#### **3.3. Data Collecting Techniques**

The technique of collecting data in this research was triangulation. Setiyadi (2006: 246) stated that triangulation is a combination between two kinds of data which are quantitative and qualitative. This way can give a general drawing of

result and process in a research. First, a questionnaire was administered to gather data of the effect of metacognitive strategies training on the use of metacognitive strategies. After that, an interview was used to gather data of students' response toward the use of metacognitive strategies in the training. Lastly, a reading test was administered in order to gather data of the effect of metacognitive strategies training on students' reading achievement.

### **3.3.1. Questionnaires**

The questionnaires were used to measure the effect of metacognitive strategies training on the use of metacognitive strategies before and after metacognitive strategies training in reading comprehension. There were 24 items of planning, monitoring and evaluating strategies related to find main idea, detail information, reference, inference and vocabulary meaning. The students should write their response (1, 2, 3, 4, or 5) that told how true of them that statement is. Number 1 means that it is never or almost never true of them, number 2 is usually not true of them, number 3 is somewhat true of them, number 4 is usually true of them, and number 5 is always or almost always true of them. The averages for metacognitive strategy use were applied to indicate the level of usage for the three sub-categories which were planning, monitoring and evaluating. In examining the reading strategy usage of individual and groups of students on the questionnaire, which ranges from 1 to 5, five levels of usage were identified which adapted from Oxford and Stock (1995: 12) for language learning strategies usage.

### **3.3.2. Interview**

Setiyadi (2006: 243) states that interview can be used to find out the causal relationship between aspects in qualitative research. Semi-structured interview was conducted to explain students' response toward the use of metacognitive strategies in the training. This interview was conducted following interview guidelines prepared to interview the students. The interview was conducted in the evaluation phase of the metacognitive strategies training. In this phase, the researcher showed a video during the training and it was paused for awhile in every stage (planning, monitoring and evaluating). Then the researcher asked student's responses of the strategies in every stage to find out their effectiveness. The data obtained was recorded in interview transcripts. After that, the transcripts were coded and classified into positive and negative responses.

### **3.3.3 Reading Tests**

To find out the effect of metacognitive strategies training on students' reading achievement, the researcher administered reading tests. These tests consisted of a pre-test which was conducted before the training and post-tests at the end of the research after the training of metacognitive strategies had been completely given. The tests were 40 items about finding main idea, detail information, reference, inference and vocabulary meaning in the form of multiple choices with four alternatives. The data was gathered from the tests and it was reported in the form of students' reading scores.

## **3.4. Research Procedures**

### **1. Administering Try-Out Test**

The try-out test was conducted at the first meeting in the class to know the quality of the reading test and questionnaire as the instruments of the research. A reading test was conducted in 60 minutes with the reading multiple-choice questions with

40 items and four options. Then, a questionnaire was conducted after students did a reading test. The items of questionnaire are 20 items and 5 responses that told how true the statements are to the students. Response 1 means never or almost never true of them, 2 means usually not true of them, 3 means somewhat true of them, 4 means usually true of them and 5 means always or almost always true of them. The result of try-out test was used to measure the level of difficulty, discrimination power, validity and reliability of the test.

#### 2. Administering Pre-Test of Reading Test

Pre-test of reading test was administered to find out the student's basic reading comprehension based on five aspects of reading before the treatments. The test was administered in 60 minutes with multiple choices reading test.

#### 3. Administering Pre-Test of Questionnaire

Pre-test of questionnaire was administered to find out student's strategies use of metacognitive strategies before the training of metacognitive strategies in reading comprehension.

#### 4. Conducting Treatments

The treatment was a training of metacognitive strategies. The model of training was Cognitive Academic Language Learning Approach (CALLA). CALLA was developed by Chamot and O'Malley (1996: 267) as a metacognitive strategy training model. The researcher had metacognitive strategies training in order to facilitate students understanding the five aspects of reading.

Before doing the research, the researcher had done a trial of metacognitive strategies training to students to make sure that the steps of metacognitive strategies could be implemented well and could facilitate students to understand five aspects of reading. It was held on 1st March 2018. During the trial, the researcher observed 14 students of tenth grade to get information of their response

toward steps of metacognitive strategies in reading class. Then, after the trial the researcher randomly chose three students to be interviewed in order to get their response whether these steps of metacognitive strategies are effective and can facilitate them to understand five aspects of reading and whether they had difficulties to use metacognitive strategies in reading.

After the trial, the researcher identified the result of observation. The researcher found that all of metacognitive strategies steps can be implemented to students in order to facilitate them understand five aspects of reading. They can follow all the instructions. Although, when they wanted to infer a sentence in text they needed longer time because they got difficulties to state the synonym of sentence in different types of syntax, but the metacognitive strategies steps could facilitate students to understand inference of sentence.

Moreover, some of steps like reading the first sentence in the paragraph to find main idea and read previous sentences to find inference had been used by some students. This means that they are already familiar with the steps. Then, the result of interview also convinced that the metacognitive strategies steps can be implemented well to facilitate students understanding five aspects of reading. Previously they read carefully a whole text and they read the question of reading task later.

After identifying the strategies, they could manage their time to be more efficient and decide which part they should read closely. Sometimes, they found meaning of each word in text to know what the text about, this takes longer time rather than they use metacognitive strategies. Furthermore, they said that if they follow the steps, they could find main idea of text, specific information and other reading aspects that researcher taught during reading class. Thus, the researcher

implemented all of metacognitive strategies steps that had been developed in order to facilitate students understanding five aspects of reading. The following were the procedures of metacognitive strategies training in this study:

### **Preparation**

In this phase, teacher explained the five aspects of reading comprehension. Then, Teacher identified students' current learning strategies in order to understand the five aspects of reading text.

### **Presentation**

In this phase, teacher explained and demonstrated metacognitive strategies to understand five aspects of reading such as:

#### Explanation:

#### **❖ Finding Main Idea**

If you want to find main idea in a paragraph, you can do strategies as follow:

#### **Planning**

1. Set a purpose in mind that you want to know what the main idea of a paragraph is. Setting your purpose gives you direction and allows you to understand the task and deciding what should you get out of it.
2. If there is a question in reading task, read the question first.
3. Read several times the first sentence in the paragraph and find specific information like subject and verb of that sentence. This will help you to understand what the paragraph is about.
4. Read the last sentence of the paragraph if it is not clear.

#### **Monitoring**

5. Check your comprehension during your reading by finding words that mostly appear in the text. Finding and identifying words that mostly appear in text will guide you to find main idea in text.

6. Find information related to the words which mostly appear in text.
7. Predict the topic of text.

### **Evaluating**

8. Confirm whether your prediction is correct or not by skimming again the paragraph and fit with your prediction. Confirming your prediction will make you sure that you have understood the main idea of that paragraph.
9. Reflect what you have learned. After accomplishing a learning task, reflect whether you have understood about main idea of the paragraph or not. Reflecting what you have learned can help you assessing how well the strategies facilitate you in the task so you can do even better the next time.
10. Repeat the strategies from the beginning and reread the text more carefully if you get difficulties to understand the main idea.

### Demonstration:

Teacher demonstrated how to use metacognitive strategies to find main idea. Then, students followed the teacher's direction to find main idea in text as the example. Here were the instructions:

### **Planning**

1. Students are asked to set a purpose in mind that they want to find main idea of a paragraph.
2. If there is a question of reading task, students are asked to read it first.
3. Then, students are asked to read several times the first sentence in the paragraph and find specific information like subject and verb of that sentence in order to understand what the first sentence tells about.
4. If it is not clear, students are asked to read the last sentence of paragraph.

### **Monitoring**



5. Students are asked to check their comprehension by finding words that mostly appear in the text.
6. After they find the words, they are asked to find information related to the words which mostly appear in text.
7. Then, students are asked to predict the topic of text.

### **Evaluating**

8. After getting the prediction of main idea in paragraph, students are asked to confirm whether their prediction is correct or not by skimming again the paragraph and fit with their prediction.
9. Last, students are asked to reflect what they have learned whether they have understood about main idea of the paragraph or not.
10. If they get difficulties to understand the main idea, they are asked to repeat the strategies from the beginning and reread the text more carefully.

### Explanation:

#### ❖ **Finding Specific Information in Text**

If you want to find specific information in text, you can do strategies as follow:

#### **Planning**

1. Set a purpose in mind that you are going to find specific information such as explanation, description or illustration of a topic in a text. Setting your purpose gives you direction and allows you to understand the task and deciding what should you get out of it.
2. If there is a question of reading task, read it first.
3. Attend to key word and scan the text. Scanning can help you to find specific words or fact quickly in text. You can attend to key word of specific information that you intend to know.

4. Scan the text to find key word. Scanning will help you to find key word and specific information in text.
5. Read carefully the sentences around the key word. You can read the sentences before and after the key word is located.

### **Monitoring**

6. Find fact, explanation, description or illustration which is related to key words in text.
7. Predict the specific information that you intend to know. Predicting by using your own words will make you understand the information clearer.

### **Evaluating**

8. Confirm whether your prediction is correct or not by skimming again the text and check whether your prediction of specific information in text already fits your reading purpose at first or not.
9. Reflect what you have learned. After accomplishing a learning task, reflect whether you have understood about specific information in the text or not. Reflecting what you have learned can help you assessing how well the strategies facilitate you in the task so you can do even better the next time.
10. Repeat the strategies from the beginning and reread the text more carefully if you get difficulties to understand specific information in text.

### **Demonstration:**

Teacher demonstrated how to use metacognitive strategies to find specific information in text. Then, students followed the teacher's direction to find specific information in text as the example. Here were the instructions:

**Planning**

1. Students are asked to set a purpose in mind that they are going to find specific information such as explanation, description or illustration of a topic in a text.
2. If there is a question of reading task, students are asked to read it first.
3. Then, students are asked to attend to key word of specific information that they intend to know
4. Students are asked to scan the text to find key word.
5. After getting the location of key word in text, students are asked to read carefully the sentences around it. They are asked to read the sentences before and after the key word is located.

**Monitoring**

6. Students are asked to find fact, explanation, description or illustration which is related to key words in text.
7. After that they are asked to predict the specific information that they intend to know.

**Evaluating**

8. After getting the prediction of specific information in text, students are asked to skim again the text and check whether their prediction of specific information in text already fits their reading purpose at first or not.
9. Last, students are asked to reflect whether they have understood about finding specific information in the paragraph or not.
10. If they get difficulties to understand specific information in text, they are asked to repeat the strategies from the beginning and reread the text more carefully.

Explanation:❖ **Finding Reference in Text**

If you want to find reference in text, you can do strategies as follow:

### **Planning**

1. Set a purpose in mind that you will identify reference of pronoun in text for example subject pronoun (I, you, they, we, she, he or it) or object pronoun (them, him, her, etc). Setting your purpose gives you direction and allows you to understand the task and deciding what should you get out of it.
2. If there is a question of reading task, read it first.
3. Scan the reference word. Scanning can help you to find specific word or fact quickly in text. You can scan the pronoun word and find specific information whether the pronoun is singular or plural and kind of subject or object pronoun, then use them as clue.
4. Read sentence before the pronoun word is located. This will help you to find what the pronoun refers to.

### **Monitoring**

5. Predict or guess what the pronoun refers to by matching the subject or object on the sentence before the pronoun is located and the clue you set before. This will make you understand the reference clearer.

### **Evaluating**

6. Confirm whether your prediction is correct or not by skimming again the sentence before the pronoun is located more carefully then match your clue again. Confirming your prediction will make you sure that you have understood what a pronoun refers to.
7. Reread the text if you are still not sure.
8. Reflect what you have learned. After accomplishing a learning task, reflect whether you have understood about reference or not. Reflecting what you have learned can help you assessing how well

the strategies facilitate you in the task so you can do even better the next time.

9. Repeat the strategies from the beginning and reread the text more carefully if you get difficulties to understand it.

#### Demonstration:

Teacher demonstrated how to use metacognitive strategies to find reference in text. Then, students followed the teacher's direction to find reference in text as the example. Here were the instructions:

#### **Planning**

1. Students are asked to set a purpose in mind that they will identify reference of pronoun in text for example subject pronoun (I, you, they, we, she, he or it) or object pronoun (them, him, her, etc).
2. If there is a question of reading task, students are asked to read it first.
3. Then, students are asked to scan the pronoun and find specific information whether the pronoun is singular or plural and kind of subject or object pronoun then use them as clue.
4. After that, students are asked to read for several times sentence before the reference word is located.

#### **Monitoring**

5. While reading, students are asked to predict or guess what the pronoun refers to by matching the subject and object on the sentence before the pronoun is located and the clue they set before.

#### **Evaluating**

6. After getting the prediction of reference, students are asked to skim again the sentence before the pronoun is located more carefully then confirm their prediction.
7. If they are not sure, they are asked to reread the text.

8. Last, students are asked to reflect whether they have understood about finding reference in text or not.
9. If they get difficulties to understand it, repeat the strategies from the beginning and reread the text more carefully.

Explanation:

❖ **Understanding Inference**

If you want to understand inference of text, you can do strategies as follow:

**Planning**

1. Set a purpose in mind that you want to infer a sentence or find synonym of the sentence in text. Setting your purpose gives you direction and allows you to understand the task and deciding what should you get out of it.
2. If there is a question of reading task, read it first.
3. Read for several times and pay greater attention to passage you want to infer.

**Monitoring**

4. Find the meaning of the sentence including meaning of content words (eg. verb, noun, and adjective), meaning of syntax (eg. passive or active sentence, conditional sentence, cause and effect, etc).
5. State synonym of that sentence in different types of syntax or grammar.

**Evaluating**

6. Confirm whether your prediction is correct or not by skimming again the sentence that you want to infer more carefully then fit your prediction with the context in the text.
7. Reread the text more carefully if you are not sure.

8. Reflect what you have learned. After accomplishing a learning task, reflect whether you have understood about understanding inference of sentence or not. Reflecting what you have learned can help you assessing how well the strategies facilitate you in the task so you can do even better the next time.
9. Repeat the strategies from the beginning and reread the text more carefully if you get difficulties to understand it.

Demonstration:

Teacher demonstrated how to use metacognitive strategies to understand inference. Then, students followed the teacher's direction to understand inference in text as the example. Here were the instructions:

**Planning**

1. Students are asked to set purpose in mind that they want to infer a sentence or find synonym of the sentence in text.
2. If there is a question of reading task, students are asked to read it first.
3. After that, students are asked to read for several times and pay greater attention to passage that they want to infer.

**Monitoring**

4. While reading, students are asked to find the meaning of the sentence including meaning of content words (eg. verb, noun, and adjective), meaning of syntax (eg. passive or active sentence, conditional sentence, cause and effect, etc).
5. After that, they are asked to state synonym of that sentence in different types of syntax or grammar.

**Evaluating**

6. After getting the prediction of inference, students are asked to skim again the sentence that they want to infer more carefully then fit their prediction with the context in the text.
7. If they are not sure, they are asked to reread the text more carefully.
8. Last, students are asked to reflect whether they have understood about inference of sentence or not.
9. If they get difficulties to understand it, students are asked to repeat the strategies from the beginning and reread the text more carefully.

Explanation:

❖ **Understanding Vocabulary**

If you want to understand vocabulary meaning in text, you can do strategies as follow:

**Planning**

1. Set a purpose in mind that you want to understand meaning of vocabulary in text. Setting your purpose gives you direction and allows you to understand the task and deciding what should you get out of it.
2. If there is a question of reading task, read it first.
3. Attend to key word of typographical aids such as underlined word, boldface word or italic word. This will help you to find the location of word quickly in text.
4. Scan the vocabulary word or a key word that you set before. Scanning can help you to find specific word or fact quickly in text.
5. Find specific information whether the word is a noun, verb, adjective or adverb, then use it as clue.

**Monitoring**



6. Read the sentence where the vocabulary that you intend to know is located and look at the text surrounding the word.
7. Guess the unknown word by connecting it with some words near it.
8. Read the wider context like sentence before or after the word is located and relate the unknown word to information which is stated in text if small context is not enough.
9. Guess the meaning of that word. Predicting or guessing the vocabulary meaning by looking at context will make you understand the meaning clearly.

### **Evaluating**

10. Confirm whether your prediction is correct or not by skimming again the sentence where the word is located or wider context then fit with your prediction. Confirming your prediction will make you sure that you have understood the vocabulary meaning.
11. Reread the text if you are not sure,.
12. Reflect what you have learned. After accomplishing a learning task, reflect whether you have understood about vocabulary meaning in text or not. Reflecting what you have learned can help you assessing how well the strategies facilitate you in the task so you can do even better the next time.
13. Repeat the strategies from the beginning and reread the text more carefully if you get difficulties to understand it.

### **Demonstration:**

Teacher demonstrated how to use metacognitive strategies to understand vocabulary in text. Then, students followed the teacher's direction to find specific information in text as the example. Here were the instructions:

**Planning**

1. Students are asked to set a purpose in mind that they want to understand meaning of vocabulary in text.
2. If there is a question of reading task, students are asked to read it first.
3. Students are asked to take typographical aids such as underlined word, boldface word or italic word as their clue before reading a text.
4. Then, students are asked to scan the vocabulary or the key word that they set before.
5. Students are asked to find specific information whether the word is a noun, verb, adjective or adverb then use it as clue.

**Monitoring**

6. After that, students are asked to read the sentence where the vocabulary that they intend to know is located and look at the text surrounding the word.
7. Students are asked to guess the unknown word by connecting it with some words near it.
8. If small context is not enough, students are asked to read the wider context like sentence before or after the word is located and relate the unknown word to information which is stated in text.
9. Then, students are asked to guess the meaning of that word.

**Evaluating**

10. After getting the prediction of vocabulary meaning, students are asked to skim again the sentence where the word is located or wider context then fit with their prediction.
11. If they are not sure, they are asked to reread the text.

12. Last, students are asked to reflect whether they have understood about vocabulary meaning in text or not.
13. If they get difficulties to understand it, repeat the strategies from the beginning and reread the text more carefully.

### **Practice**

In this phase, students worked in pair to do reading practice. They practiced to find main idea, detail information in text, reference, inference and vocabulary understanding in explanation texts using metacognitive strategies. After that, teacher and students discussed the answers of the reading practice.

### **Evaluation**

In this phase teacher reflected what students had learned by asking their responses related to the training of metacognitive strategies in order to understand five aspects of reading. In the last meeting of treatments, the students were interviewed in order to get the data of their responses of metacognitive strategies training.

### **Expansion**

In this phase students were given reading task related to find main idea, detail information in text, reference, inference and vocabulary understanding for homework in order to let them use the strategies to different tasks and gave opportunities to practice it at home.

## 5. Conducting the Interview

The interview was conducted in the evaluation phase of the metacognitive strategies training. In this phase, the researcher showed a video during the training and it was paused for awhile in every stage (planning, monitoring and evaluating). Then the researcher asked student's responses of the strategies in every stage to find out their effectiveness. The data obtained was recorded in interview transcripts.

#### 6. Administering Post-Test

Post-test of reading test was administered to find out aspect of reading that was significantly improved after the training of metacognitive strategies in reading comprehension based on five aspects of reading. The test was administered in 60 minutes with multiple choices reading test. Then, post-test of questionnaire was administered to find out effect of student's strategies use of metacognitive strategies after the training of metacognitive strategies in reading comprehension.

#### 7. Analyzing the Result of the Test

In this step, the researcher drew conclusion from reading test, questionnaire of metacognitive strategies in reading and interview transcript.

#### 8. Reporting the Results of the Research

The data from reading test, questionnaire of metacognitive strategies in reading and interview transcript were analyzed and reported by the researcher after all the data were collected.

### **3.5. Schedule of the Research**

The research of the data was taken in six meetings and 90 minutes of each meeting. This consists of:

- 1) First meeting: The try-out test.
- 2) Second meeting: The pre-test.
- 3) Third and fourth meetings: The treatments

- 4) Fifth meeting: The treatment and interview of training metacognitive strategies.  
 5) Sixth meeting: The post-test.

### 3.6. Scoring System

#### 3.6.1 Reading Test

The researcher used this following formula in scoring the students' result of reading test.

$$S = \frac{R}{N} \times 100$$

Note:

S = the score of the test

R = the right answer

N = the total of the items

After getting the data of students' reading achievement, the researcher will classify the score into some classes. The researcher used this following formula to decide the range of the score and interval class:

$$R = H - L + 1$$

R= Range

H= Highest Score

L= Lowest Score

$$\frac{R}{i} = 10 \longrightarrow 20$$

R= Range

i= Interval Class

(Sudijono, 2001: 48-50)

After getting the data of students' reading achievement, the researcher decided three interval class in order to classify the students' reading score (See Appendix 26). Here is the criteria of students' reading score:

**Table 3.1. The Criteria of Student's Reading Score**

<b>Reading Score</b>	<b>Categories</b>
82-92	Good
71-81	Fair
60-70	Low

The result of reading test was used to find out the aspect of reading that was significantly improved after the training of metacognitive strategies in reading comprehension.

### **3.6.2 Questionnaire**

To find out what the effect of metacognitive strategies training to the use of metacognitive strategies on students, a questionnaire was used. In the questionnaire students were given instruction to write their response to statements in the questionnaire. They should write their response (1, 2, 3, 4, or 5) that told how true of them that statement is. Number 1 means that it is never or almost never true of them, number 2 is usually not true of them, number 3 is somewhat true of them, number 4 is usually true of them, and number 5 is always or almost always true of them.

The averages for metacognitive strategy use were applied to indicate the level of usage for the three sub-categories which were planning, monitoring and evaluating. In examining the reading strategy usage of individual and groups of students on the questionnaire, which ranges from 1 to 5, five levels of usage were identified which adapted from Oxford and Stock (1995: 12) for language learning strategy usage: The frequency scales of strategy use and its interpretation are shown in Table 3.2 below:

**Table 3.2. Frequency Scales of Strategies Use**

<b>Mean Score</b>	<b>Frequency</b>	<b>Evaluation</b>
4.5-5.0	Very High	Always or almost always used
3.5-4.49	High	Usually Used
2.5-3.49	Medium	Sometimes Used
1.5-2.49	Low	Generally not used
1.0-1.49	Very Low	Never or almost never used

After answering the questionnaire, the result was counted and the researcher got the data of metacognitive strategies training effect to the use of metacognitive strategies on students. Then, in the post test the result of questionnaire was compared with the result in the pre test in order to find out effect of metacognitive strategies training to the use of metacognitive strategies on students after the training.

### **3.7. Criteria of Good Test**

A research instrument is said to have a good quality if it has good validity and reliability.

#### **3.7.1 Validity**

Validity is the extent to which an instrument really measures the objective to be measured and suitable with the criteria. A test can be considered to be valid if it can precisely measure the quality of the test (Setiyadi, 2006). There are four types of validity: face validity, content validity, construct validity and empirical or criterion-related validity. To measure whether the test has good validity, the researcher used content and construct validity since the other two were considered less needed. Face validity only concerns with the appearance of the test. Criterion-related validity was concerned with measuring the success in the future, as in replacement test. The two types used in this research were:

## A. Content Validity

### a. Content Validity of Reading Test

The content validity of the test items were conducted by including reading materials which were arranged based on the materials already given and suitable based on the recent curriculum of senior high school. In line with the syllabus for the tenth grade of senior high school, the students were required to be able to comprehend the explanation text. Then, the reading test was used to measure students' understanding of five reading aspects such as find main idea, detail information, reference, understand inference and vocabulary (Nuttal, 1982; Sinambela et.al, 2015: 15-16; Novita, 2016: 16-17).

### b. Content Validity of Questionnaire

Questionnaire was used to measure the effect of metacognitive strategies training on students' reading achievement. This present study focused on promoting metacognitive strategies training to facilitate students able to understand main idea, detail information, reference, inference and vocabulary in reading text. Therefore, the content of questionnaire in this study was about metacognitive strategies in order to understand the five aspect of reading. The items were designed based on metacognitive strategies classifications (Chamot and O'Malley, 1996 and Sheorey and Mokhtari, 2001) and the researcher developed the items related to understand the five aspects of reading (Nuttal, 1982; Sinambela et.al, 2015: 15-16; Novita, 2016: 16-17).

## B. Construct Validity



Construct validity is concerned with whether the test is actually in line with the theory of what it means to know the language (Setiyadi, 2006). Regarding the construct validity, it measured whether the construction had already in line with the objective of the learning. Basically, the construct and content validity overlap. It was a representative of the material from the subject.

a. Construct Validity of Reading Test

The relation validity of the instrument referred to construct validity in which the question represents five sorts of reading skills, i.e. finding main idea, finding the detail information, finding reference, making inference and understanding vocabulary. Skills of reading in the test were a part of the construct validity and the item numbers were a part of the content validity. In order to fulfill the criteria of construct validity, the test items were presented in the table specification below:

**Table 3.3. Specification of Reading Test**

No	Reading skills	Item Number	Number of Item
1	Finding main idea	1, 6, 11, 16, 21, 26, 31, 36	8
2	Finding the detail information	2, 7, 12, 17, 22, 27, 32, 37	8
3	Finding reference	3, 8, 13, 18, 23, 28, 33, 38	8
4	Understanding inference	4, 9, 14, 19, 24, 29, 34, 39	8
5	Understanding vocabulary	5, 10, 15, 20, 25, 30, 35, 40	8
Total			40

c. Construct Validity of Questionnaire

The relation validity of the instrument refers to construct validity in which the question represented metacognitive strategies (planning, monitoring

and evaluating). In order to fulfill the criteria of construct validity, the test items were presented in the table specification below:

**Table 3.4. Specification of Questionnaire**

<b>Metacognitive Strategies</b>	<b>Items Number</b>
<b>Planning</b>	1-11
<b>Monitoring</b>	12-19
<b>Evaluating</b>	20-24
<b>Total</b>	20 items

In order to measure the content and construct validity, *inter-rater* analysis was used to take the reading test and questionnaire instruments more valid. Moreover, three school English teachers were the raters in measuring the content and construct validity of the test instrument. They are Karlina, S.Pd., Bernarda Isti Wahywardani, S.Pd., and Iwan Sutanto, S.Pd. who took part in measuring the content and construct validity of the instruments. If the percentage of one item was >50%, it meant that the item test is taken.

### **3.7.2. Reliability**

Reliability refers to whether the test is consistent in its score and gives us an indication of how accurate the test scores are (Setiyadi, 2006). A test is called reliable if the score gained by the examiners is constant whenever and by whomever the test is conducted. A test does not be a good parameter unless the test is suitable or constant.

#### **A. Reliability of Reading Test**

To measure reliability of reading test the researcher used split half technique. The test was determined by using Pearson Product Moment

which measures the correlation coefficient of the reliability between odd and even number (reliability of half test) in the following formula:

$$r_{xy} = \frac{\sum xy}{\sqrt{(\sum x^2)(\sum y^2)}}$$

Where:

$r_{xy}$  : coefficient of reliability between odd and even numbers item

$x$  : odd number

$y$  : even number

$\sum x^2$  : total score of odd number items

$\sum y^2$  : total score of even number items

$\sum xy$  : total score of odd and even number

After getting the reliability of half test, the writer used Spearman Bowns Prophecy formula (Hatch and Farhady, 1982: 247) to determine the reliability of the whole tests, as follows:

$$r_k = \frac{2 r_{xy}}{1 + r_{xy}}$$

Where :

$r_k$  : the reliability of the whole tests

$r_{xy}$  : the reliability of half tests

The criteria of reliability as follows:

0.90 – 1.00 = high

0.50 – 0.89 = moderate

0.00– 0.49 = low

(Hatch and Farhady, 1982: 127)

## B. Reliability of Questionnaire

Moreover, since the questionnaire was developed using a Likert scale, a Cronbach alpha was used to measure the internal consistency of the items of the questionnaire. The alpha ranges between 0 and 1. The higher the alpha, the more reliable the questionnaire would be (Setiyadi, 2006:167).

And for knowing the classification of reliability, the following scale was used:

Between 0.800 to 1.00 = very high reliability

Between 0.600 to 0.800= high reliability

Between 0.400 to 0.600= moderate reliability

Between 0.200 to 0.400= low reliability

Between 0.000 to 0.200= very low reliability

### 3.7.3 Level of Difficulty Reading Test

Level of difficulty related to how easy or difficult the item was form the point of view of the students who took the test. It was important since test items which were too easy could tell us nothing about differences within the test population. Level of difficulty was calculated by using the following formula:

$$LD = \frac{R}{N}$$

LD = level difficulty

R = number of students who answers it right

N = total number of students

The criteria are:

LD < 0.30 = difficult

LD = 0.31- 0.70 = satisfied

LD > 0.71- 1.00 = easy

(Heaton, 1975: 178)

### 3.7.4 Discrimination Power of Reading Test

Discrimination power refers to the extent to which the item differentiates between high and low level students on that test. A good item according to this criterion is one in which good students do well, and bad students fail. The formula was:

$$DP = \frac{\text{Upper-lower}}{\frac{1}{2}(N)}$$

DP = discrimination power

Upper = proportion of “high group” students getting the item correct

Lower = proportion of “low group” students getting the item correct

N = total number of students

The criteria are follows:

DP = 0.00-0.20 = poor

DP = 0.21-0.40 = satisfied

DP = 0.41-0.70 = good

DP = 0.71-1.00 = excellent (Heaton, 1975: 180)

### **3.8. Data Analysis**

The data were analyzed in order to get the answer to the research questions proposed in the formulation of the problem, those were finding out the effect of metacognitive strategies training on the use of metacognitive strategies and the effect of metacognitive strategies training on students’ reading achievement.

To answer research question number one a questionnaire was administered to students in order to find out the effect of metacognitive strategies training on the use of metacognitive strategies and interview was conducted to explain students’ response toward the use of metacognitive strategies in the training. The data was analyzed by these following procedures:

1. Taking score of the pre-test and post-test of metacognitive strategies questionnaire
2. Tabulating the result of the questionnaire and calculating the mean score of metacognitive strategies use in pre-test and post-test
3. Analyzing the data using Paired Sample T-test with SPSS version 17 to test how significant the difference between the score pre-test and post-test, in which the significance is determined by  $P < 0.05$

4. Drawing a conclusion from tabulated result of the pre-test and post-test
5. Taking data of interview by recording
6. Writing the recording transcript of interview
7. Coding the recording transcript
8. Drawing a conclusion from tabulated result of coding.

To answer research question number two a reading test was administered to students in order to find out the effect of metacognitive strategies training on students' reading achievement. The data was analyzed by these following procedures:

1. Taking the score of pre-test and post-test of reading test
2. Tabulating the result of the test and calculating the mean score of reading score in general and every aspect of reading in pre-test and post-test
3. Analyzing the data using Paired Sample T-test with SPSS version 17 to test how significant the difference between the score pre-test and post-test, in which the significance is determined by  $P < 0.05$
4. Drawing a conclusion from tabulated result of the pre-test and post-test

### **3.9 Result of Tryout**

Try-out was conducted on 22<sup>nd</sup> march 2018. The try-out test was conducted to know the quality of the reading test and questionnaire as the instruments of the research. A reading test was conducted in 60 minutes with the reading multiple-choice questions with 40 items and four options. Then, a questionnaire was conducted after students did a reading test. The items of questionnaire are 20 items and 5 responses that told how true the statements are to the students. Response 1 means never or almost never true of them, 2 means usually not true of them, 3 means somewhat true of them, 4 means usually true of them and 5 means

always or almost always true of them. The result of try-out test was used to measure the level of difficulty, discrimination power, validity and reliability of the test.

Based on the table in appendix 12, there were 40 items in the try-out. After analyzing the criteria of good test by using level of difficulty and discriminating power , it was found that 5 items were omitted (item number 20, 29, 32, 36 and 40), 9 items were revised (item number 6, 8, 13, 15, 17, 18, 19, 23, and 25) and 26 items were good and can be administered (item number 1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 14, 16, 21, 22, 24, 26, 27, 28, 30, 31, 33, 34, 35, 37, 38, and 39). Finally, the items for the pretest were 35 items.

To analyze the reliability of the reading test, Split-half technique was used to estimate the reliability of the test. Then, to measure the coefficient of the reliability between odd and even group, Pearson Product Moment formula was used. The computation showed that the reliability coefficient of the reading test was 0.97 (Appendix 11 and 13). It can be stated that the reading test had a high reliability since the range of high criteria in the criteria of reliability was 0.80-1.00 (Hatch and Farhady, 1982: 127).

To analyze the reliability of questionnaire, Cronbach alpha was used to measure the internal consistency of the items of the questionnaire. The result of computation was .919 (see table 3.5). It meant that the questionnaire had very high reliability.

### **Table 3.5 Reliability of Questionnaire**

#### **Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.919	.919	24

In order to measure the content and construct validity, *inter-rater* analysis was used to take the reading test and questionnaire instruments more valid. Moreover, three school English teachers were the raters in measuring the content and construct validity of the test instrument. They were Karlina, S.Pd., Bernarda Isti Wahyuwardani, S.Pd., and Iwan Sutanto, S.Pd. who took part in measuring the content and construct validity of the instruments. If the percentage of one item was >50%, it meant that the item test is taken. The result of inter-rater analysis can be seen on Appendix 14 and 15.

Based on Appendix 14, the reading item number 13, 15, and 24 were revised because one of the raters disagree and gave suggestion to revise them. For item number 13 and 24, the third rater said that the questions were unclear and he suggested revising them. Then, for item number 15, the first rater said that it was too easy. Since the two raters agreed with those number items and the total percentage of the items were 66.66% thus they were taken and considered valid. Moreover, items number 20 and 40 were considered not valid because two raters disagreed to administer them in test because the items were too easy for the tenth grade students.

Based on Appendix 15, the three raters agreed with all items of questionnaire. Though, one of the rater disagreed with some items such as the questionnaire items number 6, 10, 20 and 23. For item number 6, the third rater suggested to give example or specific information about what sentence that the students should



read to find specific information. Then, for item number 10, the first rater suggested to give the example of typographical aids. For item number 20 and 23 were suggested to revise in order to make the statements clearer. However, since the two other raters agreed with those items number and the total percentage of those items were 66.66%, thus they were taken and considered valid.

Then, after the instruments were measured, the pretest was administered in Armstrong Class as the subject of the research.

## **V. CONCLUSION AND SUGGESTION**

This chapter describes the conclusion of the result of the research and also the suggestion from the researcher to other researcher and English teachers who want to conduct metacognitive strategies training in reading class.

### **5.1. Conclusion**

As there are two research questions addressed in this research, there are two conclusions would be presented.

1. Metacognitive strategies training gave effect to the use of metacognitive strategies. This could help students to be a good learner, be purposeful reader and comprehended reading text better. Then, metacognitive strategies training gave the students knowledge about strategies that are effective to facilitate students in learning reading.
2. Metacognitive strategies training effective to students in order to improve student's reading achievement. It can be one of activities that facilitated students to improve their reading skill and achievement especially understanding main idea, detail information, reference, inference and vocabulary. Therefore, it could be considered to promote metacognitive strategies training in reading class.

### **5.2. Suggestions**

This study proposed some suggestions with regard to the practical of English Language Teaching. The training of metacognitive strategies can be one of activities to give the students knowledge about metacognitive strategies and improve student's reading achievement. Teacher can train the students metacognitive strategies to facilitate students understanding the aspects of

reading. Then, the training of metacognitive strategies can be developed to improve student's achievement on other skill such as listening, speaking and writing.

In addition, the researcher also suggests more time to investigate the overall process of transferring declarative knowledge of metacognitive strategies use into procedural one in reading. Then, the future researcher also could transfer the training to different genre of texts.

At the end, the researcher suggests this research to be a reference for further research related to metacognitive strategies training especially in reading class. Thus, the importance of explicit strategies training will be more concerned by researchers, educators and teachers.

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