

# IMPROVING READING COMPREHENSION USING METACOGNITIVE STRATEGIES

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## ABSTRACT

This research discusses the use of metacognitive strategies to improve students' reading comprehension. The data was obtained from 50 students from two classes, one an Experimental Group (EG) and the other a Control Group (CG). The instruments used for collecting the data were tests (a pre-test and a post-test) and a questionnaire. The data collection was divided into four different phases of the research; the pre-test, the treatment, the post-test and the questionnaire. The results of the test were analyzed quantitatively to find any significant differences between the two groups. The results showed that there was a statistically significant difference after using metacognitive strategies in the reading comprehension of the EG students compared to those in the CG, who did not use metacognitive strategies for reading comprehension. The t-value (6.03) > t-table (2.01) meant that the alternative hypothesis was accepted. Further, the results from the questionnaires also showed the positive impact, viz: the positive classroom atmosphere, the improved motivation to learn, the improvements in students' knowledge and so on.

Keywords: *Improve, Metacognitive Strategies, Reading Comprehension*

## INTRODUCTION

Reading is considered one of the most important language skills. Through reading, students can develop their other language skills such as writing and speaking besides improving their language components,

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for instance vocabulary and grammar. Nunan (1991, p. 82) has argued that “there is a constant interplay between listening, speaking, reading and writing, besides that it is clear that in a lesson ostensibly labeled ‘reading’, opportunities exist for the language learners to develop the other language skills”. Therefore, to encourage and advance the students’ ability in reading, teachers have to teach reading integrated with the other language skills.

In fact, reading is not a favorite subject for some students. It can be seen from the way they behave when given a passage to read. Generally, in many schools, the teachers just ask the students to read and translate the passage. As a result, the teachers have to spend much time encouraging them to become interested in reading. According to the content of the 2013 Curriculum, students are expected to be able to comprehend several types of texts, viz: recount, descriptive, narrative and procedural. Those four types of texts or genre are taught intensively in order that the students are able to identify each type of text. Moreover, the teaching of reading comprehension is one of the methods used to help students to answer questions related to finding the main idea of a text, getting specific information, comprehending the reading passage and understanding the vocabulary, references and inferences and so forth.

It appears that the techniques and strategies now used by teachers for teaching reading comprehension are not very effective to enable students to become competent readers. The teachers usually teach reading by asking the students to read the text orally and to find the meaning of any unfamiliar words from a dictionary and afterwards they are asked to answer questions based on the text they have just read to measure their comprehension. Moreover, the students often do not have enough time to practice reading, because the Curriculum only provides them with 40 minutes in one session for each subject, including English. Consequently, not all students have time to grasp the language.

There are many kinds of strategies, methods and approaches that can be applied in teaching reading, one of them is the metacognitive strategy. Flavell (1979) says that metacognition plays an important role in reading comprehension and self-control fields and hence highlights the relationship between reading comprehension and metacognition. In addition, Zhang and Sheepo (2013, p. 55) state that “metacognitive strategies are regarded as high order executive skills that make use of knowledge of cognitive processes and constitute an attempt to regulate ones’ own learning by means of planning, monitoring, and evaluating”.

Hence, in reading, metacognitive strategies are categorized as self-monitoring and self-regulating activities of the students who can then focus on both the process and the product of the reading. To put it simply, it can be said that, with a metacognitive strategy, students are able to predict, monitor, and evaluate the content of the text even before they start to read.

Based on the problem, as well as the above explanations plus the researchers' observations, the researchers thought that teaching reading comprehension using metacognitive strategies could get better reading comprehension results. Therefore, the researchers conducted an experimental research study by applying metacognitive strategies in teaching reading comprehension to second year students at a middle school, SMP Unggul in Pidie Jaya, Aceh.

### **Research Questions**

1. Will there be any significant difference in reading comprehension scores between students who are taught using metacognitive strategies and those who are taught reading comprehension without using metacognitive strategies?
2. What will be the response of the students to using metacognitive strategies in learning reading comprehension?

### **Research Objectives**

1. To find out if there will be any significant difference in reading comprehension scores between students taught using metacognitive strategies and those who are taught reading comprehension without using metacognitive strategies.
2. To find out what the response of the students will be to using metacognitive strategies in learning reading comprehension.

## **LITERATURE REVIEW**

### **An Overview of Metacognitive Strategy**

The term metacognition has been given many definitions, and most of them define the major function of metacognition in ensuring improvement in active and autonomous learning. According to Cross and Paris (1988, p. 131) "metacognition is the knowledge and control children have over their own thinking and learning activities". Further, Haller, Child, and Walberg (1988) say that, there are three components of mental activity inherent in metacognition in terms of reading

comprehension, these are awareness, monitoring, and regulating. In addition, Baker and Brown (1984) in Pearson (n.d.) argue that metacognition includes the readers' awareness of whether or not they can comprehend the text they read; their ability to make a judgment about a reading task and their knowledge of when and how to use a specific cognitive reading strategy according to the difficulty of the text, the situational challenge, and the reader's own cognitive abilities. In short, metacognitive strategies in reading are those strategies which are designed to increase a readers' knowledge of awareness and control, to improve their reading comprehension, and to evaluate whether their attempts at comprehension have been successful.

### **Flavells' Model of Metacognitive Components**

There is a model of metacognitive aspects espoused by Flavell (1979) which has two variables related to metacognition, namely - knowledge and experience. He pointed out that metacognition can be divided into three components: first, metacognitive knowledge; second, metacognitive experiences and third, cognitive monitoring and use of strategy.

#### ***Metacognitive Knowledge***

According to Schneider (1988), metacognitive knowledge is a constant and can be articulated. It refers to the way a person acquires knowledge about cognitive processes, which include overseeing, controlling and regulating the cognitive processes. Hence, Metacognitive knowledge itself consists of three variable categories, viz: person, task, and strategy (Flavell, 1979). In a classroom setting, metacognitive knowledge of tasks functions when the task forces the learners to think about how they will manage it (Camalahan, 2006).

#### ***Metacognitive Experiences***

Metacognitive experiences are believed to be conscious thoughts about ones' cognitive processes that are occurring at a particular moment (Flavell, 1979). Occasionally, metacognitive experiences influence whether a person succeeds or fails to understand the text or do the task. It should be noted that not every learner resorts to metacognitive knowledge or metacognitive experiences in the same way, because different students set up different cognitive breakdowns by altering reading strategies differently (Bentahar, 2012).

### ***Cognitive Monitoring and Strategy Use***

The interconnection between metacognitive knowledge, metacognitive experiences, cognitive goals, and cognitive strategies is the core of cognitive monitoring (Bentahar, 2012). The ability of the learners to differentiate and monitor their cognitive activities will point to whether they are high achiever learners or low achiever learners (Cantrell, Almasi, Carter, Rintamaa & Madden, 2010). Often, low achiever learners do not even realize that their cognitive efforts have gone wrong, and most often it happens that the occurrence of faulty monitoring is very common amongst readers of all ages and different levels of proficiency (Garner, 1988).

### **Teaching Reading by Using Metacognitive Strategies**

There are several steps in metacognitive strategy which are used in teaching reading comprehension. According to Zhang and Sheepo (2013) metacognitive strategies are divided into three categories, they are: planning, monitoring, and evaluating. These steps are discussed below.

#### ***Planning***

Studying requires the ability to plan strategies for learning (Palinscar & Brown, 1984). Reading can be divided into three parts, viz: pre-reading, while reading and post-reading. As a metacognitive strategy, planning takes place in the phase of pre-reading. In the course of planning, learners would consider thinking about the reading topic and other features that can help them formulate a preliminary idea about the content of the text. Pictures, graphics, headings, and subheadings also play a remarkable role in helping readers make predictions about the content of the text and they are used as parts of the planning strategy (Benchmarkeducation, 2011).

#### ***Monitoring***

Thiede, Anderson and Therriault (2003) say that overall reading comprehension is influenced by how accurately one can monitor comprehension during reading. In this process, the students monitor how well they are learning the material, which is a step toward determining the current level or state of learning. According to Fogarty (1994) there are several strategies that the students can use for this monitoring aspect, such as: make connections, predictions, inferences, use context clues, use text features, identify text structures, use graphic

organizers to pinpoint particular types of text information and write comments or questions on self-stick notes or in the margins.

### ***Evaluating***

The next suggested metacognitive strategy is evaluating. Actually, evaluating itself has many purposes, for example - collecting feedback, gathering data or information, and doing assessments. In addition, evaluating in reading serves several purposes. Succinctly defined as making judgments, evaluating helps readers determine:

- (1) the importance of information obtained from the written text;
- (2) the accuracy and credibility of what has been read;
- (3) the appropriateness or usefulness of the ideas.
- (4) the amount of personal enjoyment in reading a text.
- (5) one's own progress as a reader (Fries-Gaither, 2012).

Moreover, Zimmermann and Pons (1986) say that strategies for evaluation are statements or behaviors that the students can use to measure the quality or progress of their work.

### **The Advantages and Disadvantages of Using Metacognitive strategies**

McMahon (2009) claims that we can get a lot of advantages from the use of metacognitive strategies in learning. Beside that, he also notes several disadvantages of using these strategies. According to him, metacognition strategies provide self-monitoring, which is a step-by-step process of evaluation during the learning process. In addition, metacognitive strategies develop higher learning and problem solving skills. In addition, St. Clair, (n.d.) says that metacognition enhances and enriches the learning experience. In line with those two experts, Papaleontin-Louca (2008) also states that applying metacognitive strategies such as self-awareness and self monitoring can develop independent learners who can control their own learning and learn how to learn for life.

By contrast, there are also many statements about the disadvantages of these strategies. McMahon (2009) has said that metacognitive strategies can create poor self-esteem and difficulty in problem solving for students. He also adds that these strategies can create poor reading comprehension, poor language and communication skills and difficulty in obtaining success in society.

## **Aspects of Reading**

The current research of Ellery (2009) proposes that there are seven reading components that should be mastered by students in order to comprehend a reading passage. Those components are discussed below.

### ***Main Idea***

The ability to identify the main idea in a text is a key reading comprehension skill. During this investigation, several definitions were found, viz: Durkin (1981) says that the teachers' talk during the teaching-learning process might help the students to identify the main idea in a connected discourse. Generally, the main idea can be defined as the key point of a text.

### ***Vocabulary***

According to Nation (2001) the acquisition of vocabulary is essential for successful second language use and plays an important role in the formation and completion of spoken and written texts. It is necessary to make a learner able to recognize the meaning of a message which is explicitly stated in a text.

### ***Stated Detail***

Hamdifar (2014) says that, a stated detail question asks about one piece of information in the passage rather than about the whole passage. The answers to these kind of questions are generally given in the passage, and the correct answer is often a restatement of what is given in the passage

### ***References***

A reference requires students to find the relationship that connects a word, usually a pronoun to a more concrete noun that it replaces. References can be found explicitly in the text.

### ***Inferences***

An inference question asks students to draw a conclusion by themselves based on the text they have just read. In other words, the information needed to answer an inference questions is implicitly stated in the text.

### ***Comprehension***

Comprehension can be defined as the process of simultaneously extracting and constructing meaning through interaction and involvement with the written language. Referring to statements by Cain and Oakhill (2007) comprehension involves the interaction of a wide range of cognitive skills and processes: There are many occasions where difficulties arise that may lead to failure of comprehension.

### ***Fluency***

The term fluency is defined as “freedom from word identification problems that might hinder comprehension” (Harris & Hodges, 1995, p.85). Fluency bridges the gap between word recognition skills and comprehension. In other words, fluent readers do not spend inordinate time and resources decoding words and can therefore concentrate on comprehension.

### **Factors Affecting Reading Comprehension**

According to Morgan (2003), there are two major factors that affect reading comprehension, they are vocabulary and prior knowledge.

### ***Vocabulary***

Vocabulary plays a vital role in reading comprehension. It has long been established that vocabulary knowledge is critical to successful reading comprehension. Nash and Snowling (2006) describe vocabulary as the knowledge of words and their meanings. To sum up, vocabulary is an essential element of reading and it will greatly influence the students’ reading comprehension ability. Clearly, vocabulary mastery and comprehension are closely connected skills.

### ***Prior Knowledge***

Similar to vocabulary mastery, prior or background knowledge also plays a crucial role in reading comprehension. Anderson and Pearson (1984) in Pearson (ed) (n.d.) propose three ways in which prior knowledge may affect comprehension. First, it enables students to make inferences about what they are reading. Second, it draws their attention to important information in a knowledge domain. And lastly, it can provide a plan for recall. These attributes are not mutually limiting. Indeed, prior knowledge affects comprehension in all of these ways. Since prior knowledge is different in different places and



different cultures, teachers should be sensitive to the types of prior knowledge that are needed by the readers to understand the text and to the types of prior knowledge that the students concerned can be expected to have.

## **RESEARCH METHODOLOGY**

This research focused on finding out the effect of using metacognitive strategies in teaching reading comprehension. For this purpose, the researcher used an experimental design. Surakhmad (1990) says that the aim of experimental research is not only to collect and to describe data but also to find out causes and effects.

This research was conducted at SMP Unggul, Pidie Jaya. The location of this school is in Cot Matang village, Pidie Jaya. The population of this research was all the second grade (year 8) students at Unggul Middle School in Pidie Jaya. There were three classes with a total of 75 students. The two classes chosen at random to be the samples for this research were Class VIII – 1 and Class VIII – 2; one class was chosen to be the Experimental Group (EG) and the other to be the Control Group (CG).

The researchers used two instruments to get data, viz: tests and a questionnaire. Tests were used to find out the students' ability in identifying and understanding the messages in reading passages before and after applying metacognitive strategies with the EG. Each of the tests consisted of three parts. First, questions based on the text were aimed at measuring the students' ability to find the main idea; second questions about word references and third questions to get specific information. Moreover, a questionnaire was distributed to the EG students in order to identify their perceptions of using the metacognitive strategies applied in teaching reading comprehension to them.

## **RESULTS AND DISCUSSIONS**

The teaching and implementation of metacognitive strategies in a reading comprehension language class was done in an effort to try to improve the reading comprehension of the EG sample students. The results from the teaching processes found that during the process of applying the metacognitive strategies, the EG students appeared more focussed on the reading materials. They were interested in planning and selecting other features that could help them formulate their

preliminary ideas. Furthermore, these students also tried to predict the correct answers, made outlines, identified the text structure, and so forth. The implementation of the metacognitive strategies with the EG in learning created some advantages for the EG students, for instance; increasing the students' motivation in learning and increasing their knowledge both in problem solving and in evaluation. As Deci and Ryan (1985) and Vermunt (1987) have said, motivation and metacognition are both related to academic achievement, little is known about how much of the relationship between metacognition and academic achievement is attributable to motivation. However, Memi and Bozkurt (2013) have emphasized that students, who learn and use metacognitive strategies are more successful than others in reading all kinds of materials; their problem-solving skills are better developed and they learn to organize knowledge better; as a result, their academic success is affected positively.

This first discussion deals with the improvement in the EG after using the metacognitive strategies in teaching reading comprehension. The results showed that the distribution of the scores of the EG and the CG in the pre-tests was normal and the variance in the scores of the two groups was homogeneous. The pre-test mean of the EG was 56 while that of the CG was 51. However, the mean of the EG post-test was 80 while that of the CG was only 58. When the two means were compared with an independent sample t-test, the result of the t-test was 6.03 while the result from the t-table at a confidence level of 0.05 was 2.01. Thus the differences between the two means was significant since t-value exceeded t-table ( $6.03 > 2.01$ ). Therefore, the null hypothesis ( $H_0$ ) was rejected and the alternative hypothesis ( $H_a$ ) was accepted. In other words there was a significant improvement in the reading comprehension scores of the EG students who were taught to use metacognitive strategies compared with the scores from the CG who were taught using traditional teaching methods and were not taught how to use metacognitive strategies.

The responses of the EG students to the questionnaire showed that they agreed that the use of the strategy created a better atmosphere in the classroom (60%). Besides that, because of the way that reading comprehension was taught, discussion was much more common (60%): And, because of the application of the metacognitive strategies the students were more engaged in the teaching-learning processes (68%). Also, because of these strategies, the students' felt that their motivation for learning was increased (72%), they had many more ways to get to

understand the material and even to find the correct answers. Additionally, by having good motivation, the students felt that they became more active in the teaching-learning processes (84%). Thus, they also strongly agreed that because of the implementation of these strategies, they had class discussions more often (60%). Almost all of the materials and the problems could be solved in the group discussions. Moreover, by using the metacognitive strategies, their knowledge in reading comprehension improved (64%).

Metacognitive strategies are one of the theories that offer many solutions to fix various problems, especially for those students who find it difficult to find the correct answers directly. Many of the students in the EG agreed that they were able to see the way that others students could pick out the correct answers from the material provided in the reading passage (84%). It can be assumed that these strategies provided a powerful alternative way for the students to answer the questions correctly (68%). Hence, the usefulness of these strategies helped the students understand the material easily (72%). Lastly, after they applied these strategies, the students were not only able to understand the material more clearly, but also they had the knowledge to apply these strategies in their future learning not only for learning reading comprehension but also for other subjects (76%). In conclusion, it can be said that, these strategies provided overall solutions for the students to improve their learning skills.

## **CONCLUSIONS AND SUGGESTIONS**

### **Conclusions**

There are several conclusions from this research, as follows: metacognitive strategies can improve students' reading comprehension achievements, this was proved by the results viz:  $t_{t_1} > t_{t_2}$  (6.03 > 2.01). Therefore, the alternative hypotheses ( $H_a$ ) was accepted. Further, the application of the strategies increased the students' awareness so that they became more engaged in the teaching-learning processes. Moreover, the strategies also created a better teaching-learning atmosphere in the classroom.

In addition, in regard to the students' responses, it can be concluded that the students were better motivated to learn reading comprehension by using these strategies. Next, these strategies also improved their knowledge and they learnt to use various ways to find the correct answers. In addition, during the application of these

strategies, the learning atmosphere in the classroom was more positive and the students became more active.

### **Suggestions**

From the results of this research, there are many suggestions especially for English teachers:

1. Teachers
  - (a) Teachers are expected to give the students material which can boost their motivation to learn more.
  - (b) Teachers are also expected to try to find better techniques, methods or strategies for teaching-learning, so that they can increase the students' motivation to learn and also create a better class environment.
2. Students
  - (a) Metacognitive strategies are one of the strategies that they can use in learning reading comprehension. It is good for them since these strategies provide several steps that they can use to learn better.
  - (b) Since metacognitive strategies can improve students' achievements in learning reading comprehension, it is expected that they can use these strategies not only in learning English but also for other subjects.
  - (c) Additional information and knowledge are needed to strengthen the students' background knowledge towards the material provided.

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