Improving The Eighth Grade Students' Reading Comprehension Achievement by Using Semantic Mapping Technique

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ABSTRACT

English is a foreign language (EFL) for Indonesian students. Therefore, many students still get difficulties to comprehend an English reading text that they read. To overcome the problem, this classroom action research investigated how to improve the students' active participation and their reading comprehension achievement by using Semantic Mapping technique. The research participants were the eighth-grade students at SMPN 8 Jember. Based on the results of the observation and a reading comprehension test, it can be concluded that the implementation of Semantic Mapping technique could improve the eighth-grade students' achievement in reading comprehension of descriptive text. The research results also showed that the students became more fun and more actively participated both individually and in a group during the teaching and learning process of reading comprehension.

INTRODUCTION]

Reading is one of the language skills that must be taught to English language learners. According to Biddulph (2002:3), reading is an interactive process in which readers are actively engaged with the reading texts and build their own understanding of the author's message. Through reading, readers can gain many kinds of information. It can be said that reading is the process of understanding or comprehending information from the text.

However, many students still get difficulties to comprehend an English reading text that they read. One of the problems is because they still find many unfamiliar words in the text. Due to those conditions, the use of appropriate technique is expected to help

them learning readin]g comprehension. Semantic Mapping technique–could help the students to explain how to categorize the word meanings. Zaid (1995) mentions semantic mapping is a visual representation of knowledge, a picture of conceptual relationship. Semantic mapping also helps the students develop their prior knowledge by seeing the relationship in a given topic. It means that Semantic Mapping is a technique to increase students' reading comprehension achievement by connecting words or phrases and also concepts to make it related to one another to comprehend a reading text.

This research was a classroom action research that focused on the implementation of Semantic Mapping technique to solve the students' problem dealing with reading comprehension achievement and active participation of the eighth-grade students at SMPN 8 Jember. This school was purposively chosen because the eighth-grade students had a common problem in reading comprehension. The students were found to have difficulty in understanding the material of reading comprehension.

Semantic Mapping was originally developed by Johnson and Pearson in 1976, which was first applied to teach vocabulary to children in their L1. Vaughn & Edmonds (2006) explain that semantic mapping offers an overview of key vocabulary and concepts providing a link between what students know and what they will learn when they read. To Brown (2001) the term was defined as "grouping ideas into meaningful clusters" which was represented as a kind of strategy in improving reading comprehension that can be worked through by the learners either individually or in a group.

Based on those definitions from the experts, it can be concluded that Semantic Mapping (graphic organizer) is a map of words that help struggling readers or students to identify, understand, and recall the meanings of words they read in the text. Students' ideas and thoughts will be drawn by using circles or squares and connecting links to show how main ideas and subordinate ideas are related to one another. According to Vacca & Vacca (2006:270), there are three components of Semantic Mapping Technique; (1) Core question or concept: this is the keyword or phrase which becomes the main focus of the map; (2) Strands: subordinate ideas that help explain or clarify the main concept and these can be generated by the stude]]nts; (3) Supports: details, inferences, and generalization that are related to each strand, then supports to clarify the strands and distinguish one strand from another.

According to Carrel, *et.al* (1988:250), Semantic Mapping technique has four organizational patterns covering (1) Time Order; this pattern is used to organize the information in a chronology or time sequence, (2) Comparison/Contrast; this type is organized to show the similarities, differences, advantages, and disadvantages, (3) Collection of Description; the information in this type is organized by a simple list of facts or ideas related to the topic, and (4) Cause and Effect; this type is organized by showing the causes of an event or situation, the effects of some events or situations, or both causes and effects. Based on the patterns above, the researcher used the Collection of Description pattern. The type is related to the topic of Descriptive text stated in the 2013 Curriculum that it is one of the genres needed to be taught to the eighth-grade students. Also, Larson & Longacre (1984) state that a descriptive text is a text that describes a particular person, place, or thing.

Reading is inseparable from comprehension. Bos & Vaughn (1991:144) state that comprehension is the main purpose of reading. By doing comprehension, the

readers can acquire the information, understand the meaning], and communicate the text effectively. Furthermore, readers need to use the knowledge they have already had to comprehend the text. Gillet & Temple (1990:260) point out that comprehension is the way how readers receive and process new information and relate what is new to what is already known, or we call it previous knowledge.

According to Olson and Diller (1982:42), what is meant by reading comprehension is a term used to identify those skills needed to understand and apply information contained in written material. This statement is supported by Harris and Sipay (1980:179), who say that reading comprehension is taught to be a set of generalized knowledge acquisition skill that permits people to acquire and exhibit information gained as a consequence of reading printed language. Briefly, reading comprehension is a process in which information from the text and the reader's knowledge possession act together to construct the meaning from the text.

According to Gillet & Temple (1990), there are four advantages of using Semantic Mapping as follows: (1) to access and activate background knowledge, (2) as a visual representation for the students' current understanding of the concepts, (3) as a blueprint for teaching, (4) to guide the teacher and the students in organizing information.

According to Heimlich and Pittelman (1986), other advantages of semantic mapping are motivating students of all grades, integrating thinking with reading, integrating assessment with teaching, and making judgments concerning the appropriate instruction needed. Based on those advantages above, it can be said that Semantic Mapping is very helpful for the students to visualize how the word meanings can be categorized. Semantic Mapping is also necessary to gain the students' creativity to create semantic mapping by themselves.

Besides having some advantages, Semantic Mapping technique also has a disadvantage in which Semantic mapping is time-consuming. Sometimes, creating Semantic Mapping can take a lot of time. To overcome the problem, the researcher provided the outline of Semantic Mapping to make students' Semantic Mapping look neat.

Reading comprehension means understanding what we have read. Comprehension involves understanding the vocabulary seeing the relationship between words and concepts, organizing ideas, recognizing authors' purpose, making a judgment, and evaluating. Snow and Sweet (2003, p.1) describe reading comprehension as the process of simultaneously extracting and constructing meaning. Reading comprehension achievement deals with the students' test scores achieved on their reading comprehension test.

Reading comprehension achievement covers several aspects that have to be mastered by students. Those are word comprehension, sentence comprehension, paragraph comprehension, and text comprehension, (Madsen, 1983:79). (1) word comprehension. According to Farbairn & Winch (1996:9) when the readers do not understand the meaning of all the words provided in a sentence, it means that they do not always thoroughly understand what they read. Understanding the words in a sentence is the best way to begin practicing for a reading comprehension test. The students are expected to find synonyms (the same meaning of words) or antonyms (the opposite meaning of words) in word comprehension questions. (2) Sentence Comprehension. Comprehending sentence means an understanding of what the sentence tells about and how the students can get the information of the text by connecting one word to another. As Grellet (1996:15) says that it is very important to conceive a

sentence at least from a simple sentence that consists of a subject and a verb. It can be said that involving the students' logical thinking in analyzing the sentence is necessary to be done to comprehend the sentence. (3) Paragraph Comprehension. According to McWhorter (2012) and Wong (1998), a paragraph is a group of related sentences that develop the main idea with a single or specific topic. It means that paragraph consists of some sentences that have one main topic in a text. Lunsford & O'Brien (2013:75) define a paragraph as a series of sentences that must have one focus as the controlling idea. Therefore, the information of each sentence must be connected to the idea. (4) Text Comprehension. Grellet (1996:15) states that a text is not made up of independent sentences or clauses, but it is related ideas throughout the passage.

Zaid (1995) states that there are five steps of Semantic Mapping technique that could be implemented in the classroom as follows: (a) *Introducing the topic*: The teacher studies a unit in the syllabus and determines whether semantic mapping can be useful. Then, the teacher tells about the topic of the unit by drawing a large oval on the board, (b) *Brainstorming*: The teacher asks students to think of ideas that might be related to the topic introduced. This brainstorming phase allows students to make use of their prior knowledge or experiences, attempting to explain how people integrate new information with their existing knowledge or framework (Alverman & Swafford, 1998; Kalgern, 1992), (c) *Categorization*: The teacher does his best to encourage students to see relationships among their suggestions in order to form what Antonacci (1991, p. 174) calls "category clusters". Zaid (1995) points out that the teacher can use different colored markers and records the words in a circle or connects them to the central circle. WH- questions, (who, what, when, where, why) can be used to encourage them to be involved in this process, (d) *Personalizing the map*: It is the major activity which the students start to read the text. Through reading, they will decide to add or eliminate from the information that they have written in pre-reading activity. The students try to include all information from the text, (e) *Post-assignment*: The last part of the class period is used to record students' suggestions from their personal maps on the pre-assignment, a chalkboard version of the map. The discussion will probably be the center on the total information acquired from the reading and how the original map has been modified.

There were several previous researches about the use of Semantic Mapping that had been conducted. The first research dealing with the implementation of Semantic Mapping to improve students' reading comprehension achievement was a classroom action research conducted by Krisnawati (2014) in SMP Negeri 1 Jetis entitled "Using Semantic Mapping to Improve 7th Grade Students' Reading Comprehension". It was conducted at VII-E. The research findings showed that the use of semantic mapping in teaching reading comprehension was appropriate to improve the students' reading comprehension ability. The students' mean score increased from 63.00 in the pre-test to 74.73 in the post-test of Cycle I and reached 81.93 in the post-test of Cycle II. It showed that Semantic Mapping technique was able to improve students' reading ability and they became more enthusiastic in reading texts.

Another research was conducted by Avrianti (2015) entitled "Improving Student's Reading Comprehension by Using Semantic Mapping in Pre-reading to the Tenth Grade Students". She conducted a Classroom Action Research in two cycles. The findings showed that students' reading comprehension of the tenth grade had improved. the

students' mean score in Cycle I was 64.52. From the mean score of 64.52 in Cycle 1 to the mean score of 74.84 in Cycle 2.

The next was a research entitled "Improving Reading Comprehension Achievement through Semantic Mapping Strategy for Indonesian Senior High School Students" conducted by Puspa (2016). The research findings clearly demonstrated that semantic mapping served as a useful graphic strategy to improve students' reading comprehension. The improvement of the students' reading comprehension was shown by the number of the students who passed the test improved from 43.75% at the baseline to 87.5% at the end of cycle II.

The last previous research was conducted by Akhadiyah (2015) entitled "The Use of Semantic Mapping and Thinking Aloud Strategy to Improve Students' Reading Comprehension in Narrative Text". The result of the research showed that the use of Semantic Mapping and Thinking Aloud Strategy could improve students' reading comprehension achievement in narrative text. The mean score improved from 63 in cycle I to 83 in cycle II. In addition, the students were enthusiastic in joining the teaching learning process of reading comprehension. It can be seen from the observation results. There was improvement from 50% of the students participated actively in the pre-cycle to 52% in the first cycle and 80% in the second cycle.

Based on the previous studies above, it could be reported that applying Semantic Mapping technique in teaching reading comprehension gave a positive effect on the students' reading comprehension achievement. In addition, Semantic Mapping was able to improve students' reading comprehension achievement. By conducting this research, it is expected that the result of this research fills the gap of the previous studies.

METHODOLOGY

The design of this research was a Classroom Action Research. The objective of this research was to improve the eighth-grade students' reading comprehension achievement by using Semantic Mapping technique at SMPN 8 Jember. According to Kemmis & McTaggart (1988), classroom action research uses the cycle model which consists of planning, acting, observing, and reflecting.

Planning; was the first stage of the action. In this stage, the lesson plans and the materials had been prepared by the researcher collaboratively with the English teacher. Acting; In this action, the researcher taught reading comprehension with a descriptive text by using Semantic Mapping technique to improve the students' reading comprehension achievement. This research was done in 1 Cycle consisted of 3 meetings. Observing; In the classroom observation stage, it was intended to gather the data about the whole process during the teaching and learning process of reading comprehension by using Semantic Mapping in the classroom. The researcher conducted an observation to collect data related to the students' participation in the teaching-learning process based on the indicators stated in the observation checklist. Reflecting; The aim of this stage was done to know whether the result of the teaching and learning process achieved the criteria or not. After analyzing the data from classroom observation and the reading comprehension test, the reflection was done by the researcher and the English teacher.

The research was intentionally conducted at SMPN 8 Jember due to some reasons based on the preliminary study. Firstly, the VIII-C students still got some difficulties in comprehending a reading text. Secondly, the Headmaster of SMPN 8 Jember permitted the researcher to conduct this classroom action research at the school. Moreover, the

English teacher agreed to conduct the research collaboratively to solve the problems of the students' reading comprehension achievement because the teacher has never applied Semantic Mapping technique during the teaching and learning process of reading comprehension. The last, the researcher had an experience of teaching at SMPN 8 Jember when she conducted teaching practicum at the school.

The participants of this research were VIII-C grade students of SMPN 8 Jember chosen purposively. According to Fraenkel and Wallen (2012:100), a purposive method is how the researcher uses personal judgement to choose samples that represent the research participants. In this research, VIII-C grade students of SMPN 8 Jember were chosen because they had a common problem in reading comprehension. Besides, they also had the lowest reading comprehension mean score among all the eighth-grade classes.

In this research, there were two kinds of data collection methods used. (1) Reading Comprehension Achievement Test; an achievement test is to establish how successful individual students, groups of students, or the courses themselves in achieving the objectives (Hughes, 2003:13). The objective test was given in the form of a multiple-choice by the researcher so that no judgment was required on the part of the scorer. As the multiple-choice items are undoubtedly one of the most used types of items in objective tests, it is very useful to consider the multiple-choice items to be used (Heaton, J.B, 1990: 27). Hughes (2003:76) also explains that the scoring of multiple-choice can be perfectly reliable. It also allows the test taker without requiring to produce written or spoken language. (2) Observation; Creswell (2012:213) states that observation is the process of gathering information by observing people and places at a research site. The observation checklist was used to record the students' whether they were active or passive in joining the teaching and learning process by using Semantic Mapping technique.

The researcher analyzed and reflected the result of the action by using two types of evaluation; process evaluation and product evaluation. The process evaluation was intended to know the percentage of the students' participation, while the product evaluation was intended to measure the students' reading comprehension achievement after the action was given.

a. Process Evaluation

At least 75% of the students actively participated in the teaching and learning process could increase the use of Semantic Mapping technique.

$$E = \frac{A}{N} \times 100\%$$

Notes:
E: the percentage of the students who participate actively during the teaching and learning process of reading by using Semantic Mapping
A: the number of students who participate actively
N: the total number of students in reading comprehension class

b. Product Evaluation

At least 75% of students in the research could reach the mean score of ≥ 75 in reading comprehension test in the use of Semantic Mapping technique.

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

Notes:
S: the percentage of the total number of students whose score is ≥ 75

R: the total number of students whose score is ≥ 75
N: the total number of students doing the test

RESULT AND DISCUSSION

The observation was done by the researcher during the teaching and learning process of reading a descriptive text by using Semantic Mapping. The result of the first meeting showed that 22 students or 68.75% of 32 students were categorized as active students. While for meeting 2, it showed that 26 students or 81.25% of students were categorized as active. It showed that there was an improvement of students' active participation in the teaching and learning process from Meeting 1 to Meeting 2. From the statement above, it can be seen that most of the students were active during the teaching and learning process of reading.

Table 1. The Percentages of Students' Participation

No.	Meeting	Percentages	
		Active	Passive
1	Meeting 1	68.75%	31.25%
2	Meeting 2	81.25%	18.75%
Average		75%	25%

Based on the result of the students' reading comprehension test, it can be concluded that Semantic Mapping technique could improve the students' reading comprehension achievement. It was proved by the significant improvement of the students who got score ≥75 in their reading test scores. There were only 15.62% who could achieve the standard score of reading before the students were taught by using Semantic Mapping technique. However, after they had been taught by using Semantic Mapping technique, the total number of the students who got score ≥75 on their reading comprehension test became 75%. Therefore, it can be said that the students' reading comprehension score already got the target that was expected in this research.

The purpose of this research was to improve the eighth-grade students' achievement in reading descriptive text by using Semantic Mapping technique. The use of Semantic Mapping technique for teaching descriptive text gave significant improvement to the students' ability in their reading score because by designing Semantic Mapping, the students are motivated themselves in the process of reading comprehension.

Based on the results of the implementation of the action, the students' active participation can be described as follows: the students' active participation in the first meeting was 68.75%. The next, in the second meeting, the percentage of the students' active participation was 81.25% and the average percentage for the first and the second meeting was 75%. This result proved that the action in Cycle 1 was successful due to an achievement research target criteria.

The result of students' reading comprehension achievement improved after applying Semantic Mapping technique. In the preliminary study, the data showed that only 15.62% (5 students out of 32 students) got score 75 or higher. After the implementation of the action in Cycle 1, there were 24 students of 32 students or 75% who got score ≥75. It means that the result of Cycle 1 had reached the research target because the researcher had revised one of the aspects in the process of teaching reading

which is the students are less motivated to contribute in the teaching and learning process that causes difficulty for the students to comprehend the text.

The result of Cycle 1 was relevant to the result of the previous research finding conducted by Krisnawati (2014) proved that semantic mapping technique could improve the class situation. As well as the result of this research showed that the class became more enjoyable and fun. Students also became more actively participated both individually and in a group during the learning process. Semantic Mapping helped the students to comprehend the reading text well and they were easy to answer the questions. It is one of the techniques that can be a supportive technique to be applied by the teacher.

CONCLUSION

Based on the results of the data analysis and the discussion from the previous chapter, it can be concluded that: (1) semantic Mapping technique could improve the students' active participation during the teaching and learning activities at SMPN 8 Jember. The result showed that the students' active participation improved from 68.75% in Meeting 1 to 81.25% in Meeting 2, (2) semantic Mapping technique could improve the students' reading comprehension achievement in descriptive text. It could be seen from the mean scores of the reading comprehension test conducted by the researcher. The percentage of the students' who got score 75 improved from 15.62% to 75.00% in Cycle 1.

Considering the results of the implementation of Semantic Mapping technique in teaching reading that successfully improved the students' active participation and students' reading comprehension achievement, some suggestions are proposed for the English teacher, the students, and the future researchers as follows: (1) the English Teacher. After analyzing the results of the reading comprehension test and the observation, it is suggested that the English teacher use Semantic Mapping technique as an alternative technique to teach reading comprehension. It is because Semantic Mapping is easy to implement and has various shapes that can be drawn to improve the students' active participation in the teaching and learning process. (2) the Students. The students are suggested to keep practicing reading by using Semantic Mapping technique as a guide that enables them to organize the ideas or information stated in the reading text. Then, the students are also suggested to be motivated and actively participated during the teaching and learning activity by using Semantic Mapping technique, especially in learning descriptive text. Thus, the students are able to understand English text better and get better comprehension by using Semantic Mapping technique. (3) Future Researchers. Future researchers are suggested to conduct relevant research dealing with the implementation of Semantic Mapping technique to improve the students' active participation and the students' reading comprehension achievement in descriptive text. Future researchers can apply a similar technique to solve problems dealing with improving the students' ability in reading comprehension by using not only Descriptive text, but also other text types, such as Narrative text, Expository text, and etc.

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