Promoting Students' Mastery of Vocabulary in Descriptive Text through the Implementation of Semantic Mapping Strategy

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Abstract:

The students in SMPN 1 Nglames had difficulties memorizing English vocabularies and their meaning, and the problem affects their motivation to follow the class. Thus, implementing the right strategy to teach vocabulary is needed to address the issues. Previous studies affirmed that semantic mapping becomes an effective strategy for teaching vocabulary; it helps students memorize, understand, and use vocabulary more quickly. Therefore, this study aimed at implementing a semantic mapping strategy to improve the eighth graders' vocabulary mastery at SMPN 1 Nglames in the academic year of 2019/2020. Classroom Action Research consisting of four steps; planning, implementing, observing, and reflecting was used. The implementation was conducted in two cycles since the criteria of success have not been achieved yet in cycle one. In cycle one, there were only 68% of students gained ten points on their vocabulary scores and only 60% actively engaged. However, in cycle two it improved. 88% students gained ten points on their vocabulary score, and 73% students were actively engaged during the implementation of semantic mapping. Therefore, it can be concluded that semantic mapping successfully improved the students' mastery of vocabulary and increased their involvement.

Keywords: *semantic mapping, students' involvement, vocabulary mastery.*

INTRODUCTION

Nation (2001) views vocabulary as the importance aspects of learning a language, since language consists of many vocabularies to understand forms, phrases, and sentences. When students' vocabulary is rich, it is easier for them to produce sentences, express ideas, and understand what they learn. Without having an adequate vocabulary, students often fail to fulfill their potential in learning a language. Besides, vocabulary helps them understand the other language skills such as reading, listening, speaking, and writing. Thus, students potentially need to have good vocabulary acquisition, which helps them learn a language better. The richest vocabulary the students have, the greater their ability to produce sentences, express ideas, and understand what they learn. Nation & Chung (2009) affirmed that the more students equip themselves with vocabulary, the greater their ability to express their thoughts efficiently and comprehensively.

Learning vocabulary is a cumulative process that must be consciously taught, learned, and recycled that is critical for some reasons (Nation, 2001:4). First, students need to encounter words in variety of context to understand and gradually improve their vocabulary mastery. Second, students might confuse to use the same vocabularies in other contexts, hence, it is important for teachers to provide variety of examples of words using. Third, student forget the words within 24

hours after they learn them. Thus, it is important to follow up the previous activities in vocabulary learning. These considerations must be consciously understood by not teacher.

Despite its vocabulary usefulness, previous studies proved that vocabulary becomes a problem for some students in the EFL classroom (Cahyono & Widiati, 2014; Indriarti, 2014; Kweldju, 2014; Priyono, 2004; Zahedi, 2014). The problem was the limit of vocabulary acquisition that leads to difficulties in mastering language skill, i.e. English. Abdi and Zahedi (2012) affirmed that vocabulary memorization was the main problem for language learners. In addition, a study conducted by Indriarti (2014) confirmed that primary learners faced vocabulary problems. The problems were such as memorizing English words and their meaning that affect students' understanding the English materials. In line with the vocabulary issue, a preliminary study conducted by the researcher in 2019 found that the eighth graders also had an issue related to vocabulary acquisition. The lack of vocabulary acquisition made them unmotivated to join English class due to the difficulties in understanding the learning materials.

In spite of primary students, students in higher level also faced the same problems. It is confirmed by Afzal (2019), who investigated the students' vocabulary problems faced by English undergraduate students in Arab. The results showed that students' vocabulary problems were difficulties in understanding words' meaning, using new words correctly, memorizing and spelling new words. As a consequences, students with low vocabulary knowledge tend to perform weak academically. Moreover, the problems deal with lower performance related to language skills, linguistics, literature, and translation faced by higher-level students. Thus, it affects also on the way students communicate in English (Rababah, 2005). However, lacking vocabulary is not only a students' problem, but also teachers. Some English teachers found it was challenging to find the appropriate strategy to be used in teaching vocabulary, as it was confirmed by Kebiel (2012) that teachers were not aware of the importance of vocabulary strategies. Thus, most teachers use a conventional teaching strategy to teach vocabulary.

Likewise, the results of preliminary study conducted in SMPN 1 Nglames found that most of English teachers tend to use the traditional method in teaching vocabulary, such as dictation. Another strategy to overcome the students' problems was by taking notes of difficult vocabulary. The students were asked to write down any difficult vocabularies, then find the meaning of the words. To make the students understand the meaning better, the teacher asked them to make a sentence of the difficult words. The task referred to a word bank in which it help students to enrich their vocabulary mastery. However, the strategy was not effective since the students were reluctant to do it independently and regularly. Students perceived the note taking as a boring activity. As it was confirmed by Rababah (2005), lacking of vocabulary also causes by the method of teaching and incompatible learning environment. Hence, teacher should provide an effective and exciting strategy to teach vocabulary to attract students' attention and motivation.

One of the alternative strategies to teach vocabulary is semantic mapping. According to Maggard (2000), as cited in Muhtar (2010), semantic mapping has been used in various ways; increasing the students' vocabulary, improving reading comprehension, used as a framework for identifying the structural organization of texts, and it helps the students in memorizing items or words in order. In addition, Graves (2008:56), confirmed that semantic mapping is one of the most powerful strategies to teach vocabulary because it engages the students to think about word relationships. Besides, Sharifafar (2013) stated that semantic mapping is a visual strategy for vocabulary expansion of knowledge by displaying words related to one another in categories Thus,

semantic mapping will help students learn vocabulary since vocabulary learning deals with words memorization and understanding.

Previous studies have used semantic mapping as one of teaching strategies to overcome problems related to vocabulary. A study conducted by Heimlich and Pittelman (2011), as cited in (Yuruk & Dilek, 2012) stated that semantic mapping displays words meanings that offer students a visual representation of how words and concepts are related. The visualization helps students who struggling in identifying, understanding, and recalling a concept and the meaning of words. Another study conducted by Indriarti (2014) proved that semantic mapping help students brainstorm the English words, so they were easier to be memorized. Besides, semantic mapping showed its effectiveness to improve students' vocabulary (Vadillah, 2011).

Another study conducted by Agustina, Ngadiso, and Rochsantiningsih (2013) found that semantic mapping successfully improved the students' vocabulary, impacting their reading comprehension ability. It was proved that actually vocabulary is linked and affected by others' English skills. By means, if the students have good vocabulary achievement, it is easier for them to master the other skills because learning language is about learning the words, too. The use of semantic mapping has been successfully improved the students' vocabulary achievement. Moreover, it is also impacted the students' involvement during the classroom activity. A study conducted by Yuruk & Dilek (2012) showed that the implementation of semantic mapping successfully impacted the students' involvement. It was proved that the students became active during the learning-teaching activity because the activity focused on the students centered. Besides, semantic mapping also promotes the students' attention and becomes more enthusiastic to follow classroom activities.

According to Nation (2001), teaching vocabulary using semantic mapping can be done through these sequence steps; (1) teacher decides a topic and keywords related to the topic, (2) students ask to relate the keywords with other similar words, (3) students discussing why certain words are related, (4) students present the keywords and related words in a mapping or word concept by categorizing the words. Based on the Basic Competence for SMP/ MTs 2013 curriculum, students should be able to use vocabulary both passively and actively to help them recognize and understand the learning materials. Refer to the 2013 curriculum, one of the learning materials they need to master is descriptive text. Hence, semantic mapping was implemented in teaching vocabulary of descriptive text. Figure 1 shows the example of the semantic mapping used in teaching vocabulary of descriptive text that was adapted from Nation (2001).

Figure 1. Semantic Mapping Example in Teaching Vocabulary
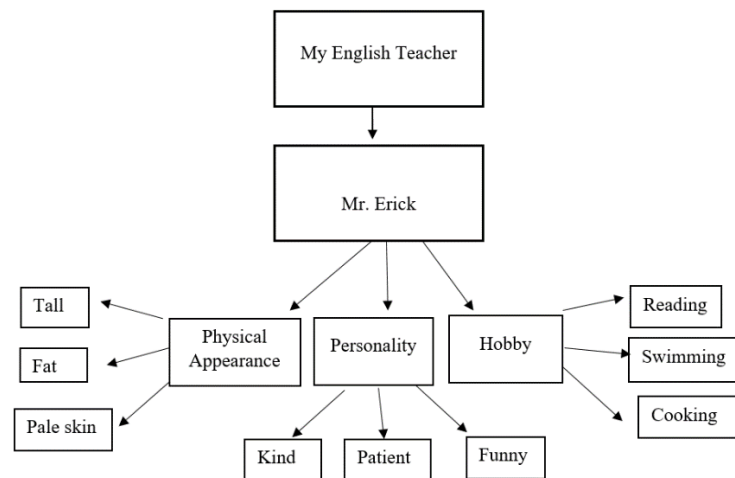
Adapted from Nation (2001)

The example of semantic mapping shown in figure 1 is used to teach vocabularies in descriptive text. The teacher needs to pick a descriptive topic, whether it describes people, things, or animals. Then, the teacher set some targeted words used to describe the object (e.g., physical appearance, personality, hobby), as shown in figure 1. After that, students add other related words to describe the object (e.g., tall, fat, pale skin), as shown in figure 1. During this process, students can discuss with their friends to gain more different words. By brainstorming each word, students will understand how each word is related. At the end of the class, the teacher should discuss the materials to remember the words on their long-term memory.

According to Kholi and Sharifafar (2013), semantic mapping presents a visual strategy of vocabulary expansion by displaying the related words in a category. Thus, keywords are important to define the category of words that help students relate to one another. In addition, Kholi and Sharifafar (2013) affirmed that semantic mapping shows classification, analysis, structures, attributes, and examples concisely and clearly. Hence, semantic mapping is ideal for any level of learners, even beginners.

Therefore, the semantic mapping in this study aims to improve the eighth graders' mastery of vocabulary in descriptive text. Implementing semantic mapping in vocabulary teaching will help eighth graders' overcome their problems related to the difficulty in memorizing words and their meaning. Besides, it was expected that students are eager to participate during the class activities by implementing semantic mapping. Based on the background of the study, this study aims to answer the following problems:

1. How can a semantic mapping strategy increase students' vocabulary mastery through descriptive text at the eighth graders of SMPN 1 Nglames?
2. How is the students' involvement during the implementation of the semantic mapping strategy?

The results of this study are expected to be useful for English teachers and future researchers. This study can become a reflection to have a betterment of vocabulary teaching. The teaching activities in implementing the semantic mapping can be a reference for the teacher to conduct the same or even better ways. For future researchers, this study can be used as a reference for conducting a similar study. Besides, it will give background knowledge of the materials related to vocabulary improvement.

METHOD

This study used Classroom Action Research as the design that consists of four stages; planning, implementing, observing, and reflecting. Classroom action research aims to find out what is best for the classroom to improve the learning-teaching activity, in which the researcher can learn from their own experience (Kemmis and Mc Taggart, 1988). In addition, according to (Latief, 2012: 144), classroom action research aims to develop an instructional strategy. This study aimed to improve the students' vocabulary achievement by implementing a semantic mapping strategy. The research procedures are elaborated below:

In this stage, the authors prepared the lesson plan, materials, and media used for the teaching activities. First, the lesson plan consists of core competence and basic competence 3.7 & 4.7 about a descriptive text adapted from Curriculum 2013. Second, the material is a descriptive text focuses on describing animal and person. Third, the learning materials were adapted from several online websites with the appropriate length is around 130-150 words. Third, the media used to support the learning-teaching activities were such as PowerPoint and paper pencils. The students used these media to make the semantic mapping.

The learning-teaching activity was conducted in 2x 40' for each meeting. There were four meetings; two meetings in cycle one and the other in cycle two. The learning activity included pre, main, and post activities. The teaching scenario was used as teaching guidance. Table 1 presents the teaching scenario in implementing semantic mapping techniques.

Table 1. Blue Print of Teaching Scenario

Meetings	Learning activities
1, cycle 1	- Giving background knowledge about descriptive text and semantic mapping - Grouping students in pairs - Introducing the topic and keywords - Asking students to compete semantic mapping format - Discussing the semantic mapping in pairs - Doing the vocabulary worksheets - Discussing the materials in class
2, cycle 2	- Reviewing the materials and vocabulary - Giving a descriptive text for each pair - Introducing the topic and keywords - Making the semantic mapping in pair - Giving worksheet to each pair - Discussing the worksheet in class

Observing

In this stage, the researcher gained empirical data using two instruments; vocabulary test and observation checklist. First, the vocabulary test was used to gain the students' vocabulary scores. Then, the scores were used to investigate the students' vocabulary improvement. Meanwhile, the observation checklist was used to gain data about students' involvement in implementing semantic mapping during the learning teaching activity.

Reflecting

In this stage, the data were compared with the criteria of success. There were two data; students' vocabulary score and students' involvement. The students' vocabulary score was analyzed using this formula:

$$Score = \frac{n}{N} \times 100$$

$$n = correct\ items, N = total\ items$$

After the score has been calculated, it was compared to the criteria of success. The implementation succeeds if 80% of the students gain 10 points at the end vocabulary test. Meanwhile, the student's involvement in the class activity was gained from the results of the observation checklist. It was analyzed using this formula:

$$Total = \frac{f}{x}$$

f= total of the percentage, x: total items

The observation checklist ranged between 0-25%, 26-50%, 51-75%, and 76-100%. After the data has been calculated, it was compared to the criteria of success. For example, the implementation was successful if 70% of the students participated actively during the learning activities. If those two success criteria were not achieved, the researcher evaluates the process and conducts the next cycle.

This study was conducted in the first semester of the eight graders of SMPN 1 Nglames, Madiun regency, East Java. The semantic mapping strategy was implemented to teach students in 8C class as they faced some vocabulary problems. There were 24 students involved in this study. In this study, the researcher role is the one who implemented the sematic mapping strategy in the proposed class and study subjects.

There were two kinds of data collection; students' vocabulary scores and involvement. These data were used to answer two research questions. Table 2 shows the elaboration of each data.

Table 2. Research Data and Instruments

No	Research Questions	Type of Data	Data Collection	Instruments
1	How can semantic mapping strategy be used to increase the eight graders' mastery of vocabulary in descriptive text?	Quantitative	Students' vocabulary scores	Vocabulary test
2	How is the students' involvement during the implementation of semantic mapping?	Quantitative	Students' involvement	Observation checklist

Research Instruments

There were two instruments used to collect the data; vocabulary test and observation checklist. The vocabulary test used to gain data of students' vocabulary scores. Meanwhile, the observation checklist used to gain data of students' involvement during the implementation.

Vocabulary Test

The vocabulary test used to measure the succeed of semantic mapping implementation during vocabulary teaching by measuring the vocabulary scores of the students. The vocabulary tests were employed at the end of the cycle. Table 3 presents the blue print of the vocabulary test.

Table 3 Blueprint of Vocabulary Test

Parts	Vocabulary Items				Total items
	Verbs	Nouns	Adjectives	Adverbs	
A	Build, teach, give, swim, keep	Food, body	Tall, helpful, brave, big	Round, very	13
B	Come, begin, wear, go	Flower, eyes, ears	Unique, active, small, smart	Sometimes, really	13

Observation Checklist

The observation checklist was used to record the situation in the classroom during the implementation of semantic mapping strategy. It aimed to know whether the students participated actively during the class activities. The observation checklist was filled out by the English teacher as the observer of during the learning teaching activities. The English teacher considered as the observer as her capability in assessing the appropriate learning teaching due to their specialized English teaching. Besides, the English teacher chosen was the teacher who taught another class to avoid bias views.

FINDINGS AND DISCUSSIONS

The findings of this study discussed two things: students' vocabulary mastery (1) and students' involvement during the implementation of semantic mapping strategy (2). The elaboration of each findings are discussed below.

The Students' Mastery of Vocabulary

The success of the strategy implemented could be seen from the students' scores at the end of the cycle. Based on the criteria of success, the implementation of the semantic mapping strategy is considered a success if 80% of the students gain ten points in the vocabulary test at the end of the cycle. Thus, the students who gain ten points on the vocabulary test will pass the test. In comparison, the students who did not reach ten points on the vocabulary test will not pass.

Students' Vocabulary Mastery in Cycle One

The implementation of the semantic mapping strategy was conducted in two meetings, 2x40' for each. The results showed that the student's mastery of vocabulary improved compared to before its implementation. However, the students' vocabulary test scores have not met the criteria of success. Only 68% of students gained ten points on their vocabulary score out of 80%. Graphic 2 shows the percentage of students' vocabulary scores in cycle 1.

Graphic 2
**Students Vocabulary Scores in Cycle 1**
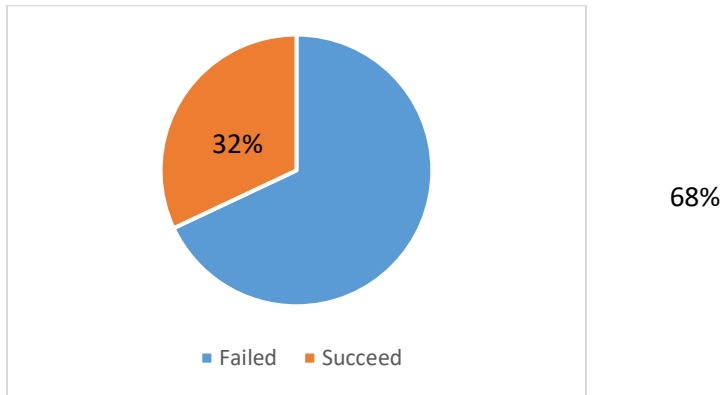
The implementation of semantic mapping in cycle one was not successful due to two reasons. First, the students still found difficulties in recalling the vocabulary and its meaning due to the missing concept in making the semantic mapping. Thus, they still could not understand how semantic mapping works. The second reason is, the students' vocabulary enrichment was not improved since they work in pairs. Working in pairs was not adequate to help students expand their vocabulary because of the limited ideas from each pair.

Since the criteria of success have not been achieved yet, the researcher conducted the next cycle with better preparation. In the next cycle, the learning teaching activity was improved to get better results. There were two aspects of improvements. First, the researcher gave more examples and explanations about semantic mapping to avoid students' confusion in making it. Second, the students were asked to work in a group rather than pairs to exchange more ideas with their classmates. According to Nation (2001), providing as much as examples is the best way to get students familiar with the materials.

Students' Vocabulary Mastery in Cycle Two

The implementation of semantic mapping in the cycle was conducted in two meetings, 2x40' for each. The results showed that the student's vocabulary mastery has improved and has reached the criteria of success. There were of 88% students who gained ten points on their vocabulary test. The succeed of the implementation was in line with Vadillah (2011) and Zamroni (2012), both concluded that students' vocabulary improvement increased after the implementation of semantic mapping. Graphic 3 shows the percentage of students' vocabulary scores in cycle 2.

Graphic 3
Students' Vocabulary Scores in Cycle 2

12%

88%

■ Failed ■ Succeed
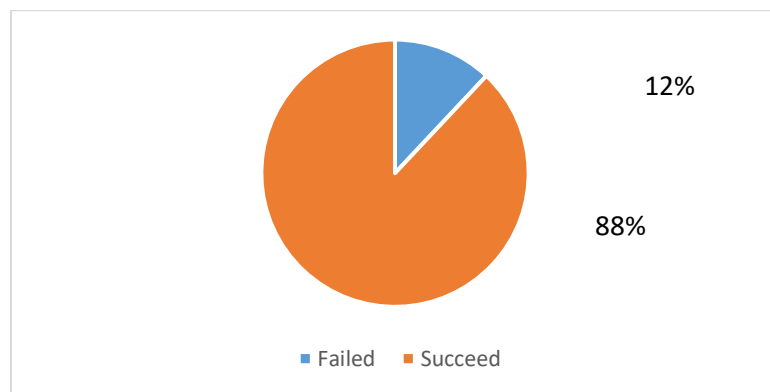
The students' vocabulary mastery has increased gradually after the implementation of the semantic mapping strategy. Before implementing the semantic mapping strategy, the student's vocabulary mastery was relatively low, in which only 24% of students passed the vocabulary test given by the researcher. After the second implementation, their vocabulary mastery has improved. In cycle one, the improvement was only 68%, and in cycle two, the improvement was 88%. This happens since semantic mapping help students memorize words in more structured way. The students could recalling the meaning easily. As stated by Graves (2008:56) that the words in semantic mapping are presented in form of graphic or concept, in which it is an easier way to recalling the words.

The success of semantic mapping implementation was due to the improvement of the learning teaching. Two aspects were being improved. First, by giving more examples of what semantic mapping looks like and explaining it to do it. By getting familiar with semantic mapping, it was easier for them to memorize the vocabulary they had learned during the implementation. Besides, students showed their enthusiasts in following the class activities. The findings was supported by Indriarti (2011) that semantic mapping promotes students' participation because of its students' centered approach. Second, the class activities were designed in group work to make the students improve their vocabulary enrichment. They wrote more vocabularies on their semantic mapping when they worked in groups rather than in pairs.

After conducting semantic mapping strategy in two cycles, it concluded that the semantic mapping strategy successfully increased the mastery of vocabulary. Semantic mapping helps students to memorize the English vocabulary and distinguish parts of speech. Amer (2002) has confirmed that semantic mapping provides students with ease in understanding the words based on its category. In addition, it also proven by Amer (2002) that semantic mapping help students differentiate parts of speech in a clear way through a graphic. Moreover, semantic mapping helps students understand the meaning of the words better, which affects their understanding of the descriptive text. As stated by Maggard (2002), semantic mapping is a technique for increasing vocabulary and improving reading comprehension.

Students' Involvement during the Implementation of Semantic Mapping Strategy
The students' involvement during the implementation of semantic mapping was validated from the results of the observation checklist. The involvements were regard to those students who were actively involved during the learning-teaching activities. There were eight aspects to measured students' involvement. The criteria of success regarding students' involvement were that

70% of the students should actively be involved in the class activities during the semantic mapping implementation.

Students' Involvement in Cycle 1

The results were presented based on the observation checklist instruments. Table 2 shows the percentage of students' involvement in cycle 1.

Table 2. Students' Involvement in Cycle 1

Aspects of Involvement	Percentage results
Students were actively involved when the researcher reviewed the previous materials	51-75%
Students were actively took note about the learning materials	51-75%
Students made their semantic mapping work with their pairs	76-100%
Students discuss the results of their work with their friends	51-75%
Students carefully read the descriptive text given and did the worksheets	76-100%
Students discuss their worksheets	51-75%
Students were actively engaged during the discussion time	51-75%
Students were actively involved during the vocabulary reviewing	51-75%

Based on the calculation of each minimum percentage of each score in table 2, only 62% of the students are actively involved in the class activities. Therefore, compared to the criteria of success, the student's involvement in cycle one has not met the criteria of success yet. Thus, the next cycle was conducted.

An informal interview was conducted before the next cycle was employed to improve the learning-teaching activities based on students' needs. The interview was conducted the some of the students in class VII C randomly to avoid bias answers. The results revealed two issues. First, they got difficulties in making the semantic mapping due to fewer examples given by the researcher. Second, they perceived that working in pairs limits them to enrich their vocabulary. They did not get enough chances to change ideas among their classmates. Thus, the students' difficulties became the consideration to improve teaching quality in the next cycle.

Students' Involvement in Cycle 2

The second cycle was conducted with some improvements to make a better result, and it was presented based on the observation checklist instruments. Table 3 shows the percentage of students' involvement in cycle 2.

Table 3. Students' Involvement in Cycle 2

Aspects of Involvement	Percentage results
Students were actively engage in reviewing the previous materials	76-100%
Students did teacher's instruction well in doing the semantic mapping	76-100
Students made the semantic mapping in groups	76-100
Students held an exhibition of their works; semantic mapping	76-100%
Students were presented their works; semantic mapping, in class	51-75%
Students were actively ask and give questions on their friends' presentation	76-100
Students were actively engaged when discussing the descriptive text worksheets	76-100

The students' involvement in cycle two improved due to the improvement of the teaching activities. Based on the minimum percentage of each score in table 3, 73% of the students have actively participated during the class activities. Compared to the involvement in cycle 1, the involvement in cycle 2 gained 11%, and it has met the criteria of success. Therefore, due to the involvement in cycle two has been successful, the cycle stopped.

DISCUSSION

Reflected form the results of the study, it was assumed that semantic mapping improve the students' mastery of vocabulary as well as enhance the students' involvement during the learning teaching activities. Semantic mapping assists the students' to cope their vocabulary problems. They gained much vocabularies due to the organized the words into a semantic mapping. What has been found in this study was in accordance with some previous studies (Indriarti 2011; Mamura, 2011). They affirmed that students' mastery of vocabulary improved due to semantic mapping. Besides, the precious studies also agreed that semantic mapping decrease the students' vocabulary issue such as difficulties in memorizing words and their meaning. Moreover, semantic mapping provides structured ideas that ease the students to understand the concept and content of descriptive paragraphs.

The advantages of semantic mapping was not only beneficial for vocabulary mastery but also students' involvement. It has proven in this study that the students became more active and eager to participate during the class due to the implementation of semantic mapping. Ibrahim (2017) confirmed that semantic mapping is a students centered based learning. The implementation of semantic mapping was less of teacher interaction since the teacher's role is a facilitator. Students were able to discuss ideas, exchange English vocabularies, and organize ideas. Pertinent to the learning activity, semantic mapping provide students to learn with their groups and it was proven to be more effective than individual work. Previous studies conducted by Ibrahim (2017) stated that students were eager to participate during the group work rather than individual work.

Another beneficial point of semantic mapping was the students' attention. Even though the students encourage to be more participated, it was undeniably that in some previous studies semantic mapping was not genuinely attractive to them (Mamura, 2011). Nonetheless, this study found the opposite. The eight graders students were excited and attracted by the existence of semantic mapping in their vocabulary learning. It was found that sematic mapping encouraged the students to be more creative in developing the mapping. As it was viewed by Abdi and Zahedi (2012) that semantic mapping provides more benefits that it ineffectiveness in the vocabulary learning teaching.

Despite the beneficial impacts of semantic mapping on the students' mastery of vocabulary and their active involvement in class, it should be well implemented to achieve its effectiveness. Dilek & Yuruk (2013) give some procedural steps to be successful in implementing semantic mapping. First, students need to be well acknowledge with the semantic mapping concept. Thus, it is required for teacher to well understand the key concept of it. Following this point, in the beginning teacher need to state the keywords that students will learn. Second, the students are assigned to list of related vocabularies to the given keywords. Afterwards, the students have to grouping the related vocabularies into each part of speech, whether the words belong to noun, verb, adjective, or adverb. Ultimately, the last activity is analyzing the relationship of the related words (Saed & Al-Omari, 2014). The final semantic mapping words can be presented in the class to gain teachers and classmates feedbacks.

CONCLUSION

Semantic mapping is seen as an effective strategy for vocabulary teaching since it has proved to improve students' mastery of vocabulary and increase students' motivation to be actively involved in the learning-teaching activity. Furthermore, since the semantic mapping strategy also helps the English teacher solve the students' difficulties in memorizing words, other vocabulary problems might be solved by implementing semantic mapping in vocabulary teaching.

This study considered have a limitation data in collecting evidence of the effectiveness results on semantic mapping strategy. Besides, this study's subject was limited in that the effect of semantic mapping in vocabulary teaching was investigated in junior high school students. Thus, it is suggested that future researchers conduct the study on semantic mapping in a more extensive subject to gain a broader perspective.

Several suggestions are presented for future researchers and English teachers. First, it is suggested to investigate the effect of semantic mapping on the other field despite ELT for future researchers. For English teachers, it is suggested to group the students when making the semantic mapping so that the more vocabulary they could gain. Second, have a review time at the end of the lesson, which strengthens the students' memorization of the words they have learned.

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