Improving Students' Vocabulary Mastery Using Mind Map

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Abstract: This article focuses on describing the use of Mind Map to increase students' vocabulary mastery. The objective of this research was to improve students' vocabulary mastery by applying Mind Map. It was descriptive qualitative research. The method used in this research is Classroom Action Research (CAR) which consists of Planning, Acting, Observing, and Reflecting. This research was managed in two cycles. The participants of this research were first semester students in one of the universities in North Maluku. The instruments used in this research were observation and test. From the data collection, it can be drawn a conclusion that the use of mind map was able to improve students' vocabulary mastery. After analyzing the data sources, it was found that there was improvement score from the pre-test and post-test. The mean score of pre-test was 54, 91 and the post-test was 83, 43. Thus, it can be concluded that Mind Map is an appropriate method to improve the students' vocabulary mastery.

Keywords: *Mind Map, Vocabulary, CAR*

INTRODUCTION

Vocabulary is crucial in all language acquisitions, whether the first language, second language or foreign language. Vocabulary is a core component of language proficiency which serves much of the basis for how learners listen, speak, read and write (Richards and Renandya, 2002). Vocabulary is the key in all language skills. In

foreign language learning, vocabulary learning is one of the essential parts as the meanings of new words are very often emphasized, especially in classroom. It is also central to language teaching and is strongly crucial to a language learner (Alqahtani, 2015). As one of the knowledge parts in language, vocabulary plays a great role for learners in acquiring a language (Cameron, 2001). The learners must have sufficient vocabulary when they are learning a new language (Wilkins in Thornbury, 2004). In learning English, if they have a lot of knowledge about English vocabulary, they can comprehend the language well. The more people master vocabulary the more they can speak, write, read and listen.

North Maluku is included in 3T province which is located at the border of Indonesia and Philippines. The province consists of many islands which are separated by the sea. The education facilities among the regions are different which most of them have very limited facilities. The students who study in Universities in Ternate come from different regions and islands around this city. They have different background knowledge of English mastery, especially vocabulary mastery. Some of them got English when they were at the kindergarten, the elementary school and the high schools, but some of them did not get it at all. In one class, it consists of variety students with their different background study. The lecturer needs to use the appropriate methods to cover all of them in the teaching and learning process, especially in teaching vocabulary mastery.

The success of teaching vocabulary is influenced by some factors. One of them is influenced by the methods. Teaching methods are needed in teaching and learning process, including in teaching vocabulary. Method is specific instructional design or system based on a particular theory of language learning; it contains detailed specifications of content, roles of teacher and learners, and teaching procedures and techniques (Richard and Rodger, 2001: 245). The teacher should be selective to use the appropriate method to teach. A method is very useful for teachers in their work to transfer knowledge to their students. Students also need teaching method as a tool to receive knowledge from their teacher (Sari, 2020).

Related to the importance of teaching methods in the teaching and learning process above, this research aims to describe the implementation of Mind Map to increase students' vocabulary mastery.

LITERATURE REVIEW

A. Vocabulary

Vocabulary refers to a list or set of words for a particular language or a list or set of words that individual speakers of language might use. It is the only system involved of alphabetical order (Hatch and Brown: 1995).Ur (1994: 60) views vocabulary as the words we teach in the foreign language. In addition, Brown (2001: 377) defines vocabulary items as a boring list of words that must be defined and memorized by the students, lexical forms are seen in their central role in contextualized, meaningful language. Richard in Schmitt (1997: 241) also defines that knowing a word meaning knowing how often it occurs, the company it keeps, its appropriateness in different situations, its syntactic behavior, its underlying form and derivations, its word associations, and its semantic features.

Vocabulary is used in all language skills; in listening, speaking, reading and writing. It is impossible for the people to understand what they have heard without knowing the meaning of the vocabulary used by the speaker. Vocabulary is central to English language teaching because without sufficient vocabulary students cannot understand others or express their own ideas; it is difficult for them to speak fluently, understand reading text, or write texts. But, if they have good vocabulary mastery, they can have good communication in all language skills, in speaking, listening, reading and writing.

In English as second language learning or foreign language learning, the learning of vocabulary needs more attention, especially for the eastern Indonesia learners who stay in 3T area. The varieties of vocabularies which consist of a lot of words need to be memorized by the learner. The differences of vocabularies between *Bahasa Indonesia* and English make the learners to have more effort to learn it. Thus, it needs method to

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make it easier to memorize and learn vocabulary. The appropriate method will help the learners and the teacher in conducting the teaching and learning process.

B. Mind Map

Mind Map is developed by a British psychologist, Tony Buzan, it was developed over 30 years ago as a note-taking and summarization method that maximized on the different functionalities of the two halves of the brain. The right brain carries out tasks that are associated with shapes, colors, emotion, and imagination while the left brain is responsible for words, sequences, logic, and analysis. Mind Map uses both parts of the brain and so processing productivity will be increased which translates into greater retention (Buzan, 1976).

In Mind Map, there is usually a single concept which is surrounded by ideas in the form of images and words. Major ideas are directly connected to the central concept and supporting ideas branch out from major ideas from this central theme (Eppler, 2006). Mind Maps are created by first placing the main topic in the center of a paper. Connecting lines that radiate from the central word creates branches. These are known as sub-topic branches and each represents a single idea that is directly related to the main topic. Users may find it useful to color code the sub-topic branches. Sub-branches can then be added to these branches to give more detailed explanations of the key ideas and concepts. Pictures and diagrams can be inserted to further expound upon ideas. The principle is that ideas should move from the abstract to the more concrete (Meier, 2007).

The students write the general topic in the central of Mind Map concept, and then the topic will be specified into some sub topics which are more specific than the topic. The sub topics will be elaborated into the most specific term. Thus, there will be a lot of words produced. The students can enrich their vocabulary easier by using this method. Besides, they will feel fun to join the teaching and learning process because they can explore their ideas through words and colorful pictures or diagrams of the Mind Map concept.

RESEARCH METHODOLOGY

This research used Classroom Action Research (CAR) with the aim of making a better teaching learning process and more effective. Bodgan & Biklen (1992: 223) stated that action research is the systematic collection of information that is designed to bring about social change. Allwright and Bailey (1991: 2) view that it is a research centers on the classroom, and simply tries to investigate what actually happens inside the classroom. It treats classroom interaction as virtually the only object worthy of investigation. Furthermore, Richards & Lockhart (2007) also added that action research involves small scale investigation projects in the teacher's own classroom consists of a number of phases which often recur in cycles: planning, action, observation.

The research brought into two cycles which each cycle contained pre-test and post-test. The subject study was first semester students which consisted of 35 students. There were seven meetings to do this research covered on those two cycles; three meetings were for tests, and the other four meeting were doing treatment. The treatment was teaching vocabulary by using Mind Map. The instruments used in this research were observation and test. The tests were used to test the students on pre-test, post-test 1 and post-test2. The results of the test are used to know the improvement of the students' English vocabulary mastery.

FINDING AND DISCUSSION

The meetings were conducted in seven times. The use of mind map was conducted in two cycles. Each cycle was done in four steps including (1) planning, (2) acting, (3) observing, and (4) reflecting.

1. **Cycle 1**

    This cycle covers four steps as follows:

    a. Planning

    The researchers prepared lesson plan to be implemented on the treatment contained some procedures of Mind Map for teaching and learning vocabulary.

b. Acting

The researcher conducted the meetings four times. In first meeting, pre-test was given to the students. The test consisted of 40 items to be done in the form of multiple choice questions. On the second meeting, the researcher explained about the concept of Mind Map, and then she applied Mind Map in teaching and learning vocabulary. The researcher gave the example and asked them to make Mind Map of some topics given. On the third meeting, the students finished and presented their Mind Map in front of the class. The last meeting in cycle 1, the researcher gave them post-test.

c. *Observing*

During the treatment the researcher monitored students' development and evaluated their progress.

d. Reflecting

The researcher made some notes to evaluate the result of the Mind Map implementation in teaching learning vocabulary.

Table 1. Meeting in Cycle 1

Meeting	Topic	Activity
1	Pre-Test	The researcher gave 40 multiple choice questions for the pre-test. The students did the test for 60 minutes.
2	Treatment 1	The researcher divided the students into small groups of three to five students. The researcher explained about the concept of Mind Map method. The researcher gave example how to develop vocabulary from a topic by using Mind Map method. The researcher monitored the students' activities in preparation on making Mind Map.
3	Treatment 2	The researcher gave some topics and asked the students to develop those topics into vocabulary by using the concept of Mind Map in group. Each group discussed and did the task with their partners in their group. The students made the concept of Mind Map based on the topic given by the researcher. They made it into the most specific words in order produce a lot of vocabularies. Then they presented their own Mind Map in front of the class. The researcher monitored the students' activities on their progress of developing vocabulary by using Mind Map.
4	Post Test	The Researcher gave the first post-test.

The results of teaching and learning English process in cycle one are as follows:

    a. There are 27 students who were not able to do the test optimally, so they got under B score (under 66). The mean score of pretest is 54, 91. The minimum score is 26,00.

    b. Most of the students were participated actively in the teaching learning process, but the students did not have much time to explore their concept of Mind Map.

    c. The students enjoyed the teaching learning process by using Mind Map because they could develop more vocabularies by using this method.

2. Cycle 2

In the second cycles, the activities were the same with the first cycle, the aim was to improve the mean score so can reach the minimum criteria score. This cycle covered four steps as follows:

a. Planning

The researchers made some revisions on the lesson plan. On previous treatment, some of students still confused about the steps to develop the vocabulary by using Mind Map, in the revision the researcher added guideline of the mind map.

b. Acting

The researcher conducted 3 meetings for the action and the post-test. The researcher gave 40 multiple choice questions to review the students' vocabulary mastery.

c. Observing

The researchers found that there were improvements in every treatment. Based on the data, there is an improvement from pre-test, post-test 1, and post-test (2).

d. Reflecting

Based on the data shown, the improvement of the score has met the researchers' expectation.

Table 2. Meeting in Cycle 2

Meeting	Topic	Activity
1	Treatment 3	The first cycle did not fulfill the researchers' expectation, so the researcher continued the research on the cycle 2. On this treatment, students still did the same treatment but they prepared with the guideline to make the Mind Map in developing vocabulary based on certain topics.
2	Treatment 4	The researcher assessed and evaluated the students' project. Each group presented their own Mind Map in front of the class. The researcher made the reflection about Mind Map project in learning vocabulary.
4	Post Test	The researcher gave the second post-test.

Table 3. Improvement on Students' Score

	Pre-test 1	**Post-test 1**	**Post-test 2**
Minimum Score	26	45	70
Maximum Score	86	90	100
Mean score	54, 91	65, 06	83, 43

Based on the findings above, it can be concluded that there were some improvements in Cycle two as follows:

a. The increasing of the students' score, the students' mean score of the post-test 2 increased, from 65, 06 in the post test one into83, 43 in the post test two. These scores showed that the students get better understanding after getting treatments by using Mind Map method in the teaching learning process.

b. In the teaching learning process, the use of Mind Map concept in developing the vocabulary made the students attracted to learn new vocabulary.

c. The students became more creative since they could design their Mind Map concept through colorful pictures or diagrams.

d. The students became more confident to express and deliver their ideas to their friends and lecturer, since the lecturer gave opportunities to present their group discussion's result in front of the class.

Based on the findings above, it can be concluded that the use of Mind Map method enabled students to improve their vocabulary mastery and helped them to generate and develop the vocabulary. In other hand, Mind Map also could develop drawing skill since the Mind Map concept was delivered through pictures or diagrams and words. By asking the students to present their Mind Map in front of the class could make the students became more confident and motivated to memorize the vocabulary they had resulted in the group discussion.

The researchers also had some problems faced in implementing Mind Map. The problems are:

1. The researcher should prepare many facilities for the use of Mind Map method; such as color pen, color blank paper, scissors, glue, and so on to make the Mind Map concept more attractive;

2. The class was noisier since there was group discussion in the teaching learning process;

3. The students still confused about Mind Map, how to make the Mind Map concept picture, and how to generate and develop the vocabulary related some topics. But, at the next cycle the students could overcome those problems.

4. The limited time. Drawing the Mind Map concept took a lot of time, the students needed more time to practice it in the classroom.

CONCLUSION

Based on the findings above, it can be concluded that the use of Mind Map improved students' vocabulary mastery. The students became more creative in designing and making Mind Map concept. By using Mind Map concept, the students could generate and developed their vocabulary mastery easier than before. They could develop the vocabulary from certain topics and from the most general into the most specific words. The students could discuss their Mind Map concept with their partners in group, so they could share their ideas each other. This part trained the students to be more cooperative with their friends. At the end of the treatment, the students were asked to present their vocabulary which produced through their Mind Map concept in front of the class. This part trained the students to be more confident to perform in front of many people. This research was conducted in two cycles with seven meetings; three meetings were for test, and four meeting were for treatments. In every cycle covered the step of planning, acting, observing, and reflecting. From the data collected by the researchers, it can be concluded that the use of Mind Map in teaching vocabulary could improve students' score. This indicates that Mind Map is one of good methods to be implemented in teaching and learning process, especially in teaching vocabulary. We can see students' score improvement on pre-test was 54, 91became65, 06 on post-test one, and became 83, 43 on post-test two. So, this method is strongly recommended to teach vocabulary.

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