

**APPLYING MIND MAPPING TO INCREASE
VOCABULARY MASTERY OF EFL LEARNERS AT THE
FACULTY OF ECONOMIC OF TADULAKO UNIVERSITY**

Iin Irawati

Economic Faculty Tadulako University

Abstract

The aims of the study were to improve the EFL learners' English vocabulary mastery through the implementation of mind mapping. The study employed the Classroom Action Research Design. The subject of the study was 49 undergraduate EFL learners at the Faculty of Economic at Tadulako University in the academic year of 2014/2015. The data was collected through three research instruments: 1) vocabulary test, 2) observation sheet, and 3) field notes. The result of study shows that using Mind Mapping technique can improve the EFL learners' vocabulary mastery. This is proved by the improvement of the EFL learners' vocabulary test score results. In the first cycle, the average of the learners' who fulfill the criteria of success is 55.1% which means that only 27 learners from 49 samples can pass the minimum standard score. In the second cycle, the result of the test is proved to increase into 85.7% which means that 42 of 49 learners have been successful to fulfill the criteria of success. Based on the result of the data analysis, it can be concluded that the EFL learners' vocabulary mastery has been improved through the application of Mind Mapping Technique in the teaching of English.

Keywords: Applying, Mind Mapping, Vocabulary Mastery

Background

English has been the main language for communication among countries in the world. It grows exceedingly necessary for any country in taking parts in international communication. Rapid development of information technology and communication has turned the world into a global village. Such development and changes have caused social life and interaction cannot be merely restricted by territorial boundaries of a country.

Growing as a social phenomenon, English then turns as one of the compulsory subjects in the area of education in most countries. In response to this, Indonesia has been enforcing

numerous efforts towards the use of English through education, where it is taught in every level of education in Indonesia.

Numerous studies and references reveal that the teaching of English at university level in Indonesia has not significantly showed a satisfactory result. While the curriculum demands the teaching of English should be taught intensively and in integrated ways, many English lecturer as well as the EFL learners has found out that mastering English vocabulary is difficult to acquire. Most of them have been confronted to various problems dealing with mastering the English words thus made the teaching and learning of vocabulary mastery becomes challenging.

Facts found in the fields based on some research on English education reveal that the real problems faced by EFL learners may differ to some conditions. Many EFL learners do not know the meaning most of the English words. Some EFL learners may have difficulty to pass on ideas, events and experiences in English because of a limited knowledge range of the language. Others may have problems with understanding short texts or building grammatical sentences. Further, most EFL learners will simply stand their problems on their lack of English vocabulary mastery which impede them in organizing and communicating their opinion and thoughts whether in spoken or written form.

Realizing the importance of English has put it as significant subject in almost all study programs at universities. In the curriculum of the Faculty of Economics at Tadulako University, English is considered as an MKU (*Mata Kuliah Umum*) which cover the subjects of English 1 and English 2. They are classified as a compulsory subject for every Economics Faculty students. The subjects are taught in all three study program at the faculty, they are: Jurusan Ilmu Ekonomi dan Studi Pembangunan, Jurusan Ekonomi Manajemen, and Jurusan Ekonomi Akuntansi and are offered in the first and second semester. Each subject has 2 SKS with 100 minute of duration for each meeting. At present, the subject English 2 is oriented to academic objectives which demand the graduates are able to communicate in English to face the competitive global market era and adeptly absorb information from

articles or written sources from the entire world. It emphasizes on developing However, learners' achievement has not yet been satisfied enough. It is indicated by the learners' achievement which still lies far below the standard.

Based on her previous experience of being an English lecturer of the second semester of EFL learners at the Faculty of Economic at Tadulako University, the researcher found out that EFL learners mostly faced difficulties in learning English. One of the factors which contributed to the problem was the poor mastery of vocabulary knowledge. The EFL learners are lack of stock of the words. The EFL learners who have little knowledge of vocabulary will face some difficulties to understand the written language and oral language. An English learners' competence will not improve very much when they are confronted with learning English grammar most of the time. They also argue that most improvement to it would be seen when the learners learn more words and expressions, since they can say very little with grammar, but they can say almost anything with word. The EFL learners may get some difficulties in learning a language if they have limited number of vocabularies. Some experts argue that the success in mastering a language is determined by the size of the vocabulary one has learned. It is further emphasized that learner needs not only to learn a lot of words, but to remember them. To master all the language skills, vocabulary knowledge are important that have to be known by the EFL learners and the teachers of English should have a technique that makes the EFL learners interesting in learning vocabulary. There are many techniques of making the EFL learners interested in what they are learning especially in learning vocabulary. Brown (1994) states that techniques are the specific activities manifested in the classroom that are consistent with a method and therefore in harmony with an approach as well.¹

¹Douglas H. Brown, *Teaching by Principles: An Interactive Approach to Language Paedagogy*, (San Francisco: Prentice-Hall, Inc., 1994) p. 48

Based on that condition the factor that influence in English ability is the factor of the EFL learners itself and the factor of the lecturer (who doubles as an English lecturer). The factor of the EFL learners at Faculty of Economics of Tadulako University is that EFL learners less imagine, express the ideas into English. EFL learners are not able to memorize vocabulary because EFL learners were less attention to spelling and meaning of the word what they know. While the factors EFL learners' vocabulary mastery of the lecturer factor is the lack of creativity of lecturers in using attractive media or techniques that can help EFL learners to be motivated to learn.

However, vocabulary learning which is combined with the use of media image is believed to be helpful to facilitate the EFL learners' mind. the media can help EFL learners' skills to improve and increase of vocabulary mastery. Experts assert that EFL learner needs not only to learn a lot of words but they have to remember them. To master all the language skills, vocabulary knowledge are important that have to known by the EFL learners and the lecturers of English should have a technique that makes the EFL learners interesting in learning vocabulary. There are many techniques of making the EFL learners interested in what they are learning especially in learning vocabulary. As Brown stated that techniques are the specific activities manifested in the classroom that are consistent with a method and therefore in harmony with approach as well."

Memory sensory has important value in learning vocabulary. The EFL learners need balancing in usage of the left brain and right brain. Whole brain is needed by the EFL learners to think perfectly. Right brain is for creativity and visualization. Left brain is for logical and rational. Mind mapping combines both and become whole-brained. It stimulates the brain by appealing to both the creative and logical side of the brain. De Potter and Hernacki (2008) explain that mind mapping use visual reminder and sensory into a pattern from the ideas which are related. Mind mapping

allows the EFL learners to clarify their thoughts by categorising and grouping into related ideas.²

They describes that vocabulary cannot be taught, it can be presented, explained, included in all kind of activities and experienced in all manner of associations which is ultimately it is learned by the individual. Related to it, thus mind mapping is believed to be one of the techniques or activities that can be used in teaching vocabulary which involve the essential idea and alleviate EFL learners' difficulties in vocabulary mastery. Based on the problems, then, the researcher formulated the research problem as follows: 1. How is Mind Mapping technique applied in English teaching to improve the vocabulary mastery of EFL learners at the Faculty of Economic at Tadulako University? 2. Can the implementation of Mind Mapping technique improve the vocabulary mastery of EFL learners at the Faculty of Economic at Tadulako University?

Research Methodology

The study was classified as classroom action research. The research design was planned and the structures were arranged that the researchers can obtain the answer to research questions (Muslich, 2011). Generally, the purpose of this study to improve learners' ability in vocabulary mastery in the EFL learners of the faculty of Economic at Tadulako University through the implementation of Mind Mapping technique.³

The data in the study were obtained from the actions of cycles given to the learners in class. Each action was conducted in the form of cyclical process referring to Kemmis and Mc. Taggart's model (in Arikunto, 2010). This research consisted of four steps: planning, acting, observing and reflecting.⁴

²Bobbi DePorter et al., *Quantum Learning: Membiasakan Belajar Nyaman dan Menyenangkan*. Jakarta: Kaifa, 2008) p. 39

³Masnur Muslich, *Melaksanakan PTK Penelitian Tindakan Kelas itu Mudah (Classroom Action Research)*, (Jakarta: Bumi Aksara, 2011) p. 14

⁴Suharsimi Arikunto, *Prosedur Penelitian Suatu Pendekatan Praktik*, (Jakarta: Rineka Cipta, 2010) p.101

The study involved one class of undergraduate ESL learners, whom registered in the second semester of the academic year 2014-2015. In fact, the class consisted of 57 learners, 22 male and 35 female learners. However, the data gathered in this study only analyzed the grades of 48 learners since the other 9 learners did not attend the sessions regularly thus affected the class total sum of vocabulary achievement.

Selection towards the sampled class was done because the researcher has been teaching as an English lecturer there since the first semester. There are two kinds of data served for the analysis of this study. They are: 1) the test score and 2) documents as the result of observation as well as field notes. In this research, score test was taken from the student individual work, and the documents were taken from the field notes gathered from learners' activities of implementing the mind mapping technique.

Data source is the subject where the data can be found. In this study sources of data are: Learners' works (this source is used to take learners' score), and research's documentation (taken from the field notes and observation sheet).

The data collection method used in this study was conducted through test and non-test instruments. Test is one of the methods of data collection that often to be used in collecting the data (Muslich, 2011). The test data is taken by administering the vocabulary test, and data collection method from the non-test is taken by doing observation and taking the field notes.⁵

There are some instruments which have been prepared in order to be easier in monitoring the implementation of Mind Mapping technique in the teaching and learning activities. All of those instruments are described as follows:

A test is used to evaluate something and to see how it works better (Wallace, 1993). A Test was given to learners in every

⁵Masnur Muslich, *Melaksanakan*, p. 146

ending of the cycle of this study.⁶ The test contained some questions from the learners related to the vocabulary in the theme.

Observation involved some form of observation of professional action or of learning process (Wallace, 1993). It means that the observation sheet is used to check whether all of activities during teaching and learning process.⁷

Field notes served as the supporting data for the research. It gave supplementary information which collected in the observation, phase. It provided additional description which somehow did not included in the observation.

The data were collected from the learners' vocabulary test in cycle are computed quantitatively by using percentage formula. The formula used to find the mean score was as follow:

$$\% X = \frac{X_1}{N} \times 100\%$$

% X : percentage of success

X₁ : number of the learners who passed the test

N : total of learners

Then, the results of the data analysis above would be classified qualitatively to answer research problem based on the classification of the score applied in the Economic Faculty of Tadulako University below:

Table 1: Score classification in economic Faculty

Final Score	Grade	Quality Digit	Classification of Passed
≥ 80	A	4.0	Passed
75 – < 80	B+	3.5	Passed
70 – < 75	B	3.0	Passed
65 – < 70	C+	2.5	Passed with requirements
55 – < 65	C	2.0	Passed with requirements
50 – < 55	D	1.0	Failed
< 50	E	0	Failed

⁶Michael J. Wallace, *Action Research for Language Teachers*, (New York: Cambridge University Press, 1993) p. 47

⁷*Ibid.*, p. 46

The collected data from observation were analyzed qualitatively. It was described based on the findings during the classroom observation. To execute the analysis of observation data, the researcher used field notes and the last, researcher transcribed the field notes to obtain more information on the activity during teaching of vocabulary process.

Research Findings

The data gathered by all research instruments during the observation on preliminary research, the implementation of Mind Mapping technique in the teaching of vocabulary, as well as the test result of first cycle and second cycle would be considered as the main findings in this classroom action research. The data then analyzed, interpreted and discussed as follows.

The preliminary study was conducted to get information about the real condition of the learners during teaching and learning process. By interviewing with two undergraduate EFL learners, the researcher revealed some problems faced by the learners especially in mastering English vocabulary. The problems were among others: they got difficulties with pronunciation of the word, they felt hard to understand the meaning of a short text and they also had difficulties in building a good sentence for they got problems dealing with sentence completion.

The research was conducted from March 26th, 2015 until May 15th, 2015. The preliminary study was taken place in the second week of April, from 6th to 10th, 2015. The researcher gave the learners a preliminary test of vocabulary. The test was comprised of 10 items of matching test, 7 items of completion test and 3 items of translation test. The test was intended to measure the learners' mastery of English vocabulary. There were fifty two learners joined this test.

The result of the test showed that the learners' vocabulary mastery was quite poor. It was found that among 52 learners who joined the vocabulary test, only 19 learners could get score 65 or more while others got the score less than 65. However, from all those 52 learners, only 49 learners who attended or joined the research in regular basis, thus the researcher only took those

numbers of 49 learners as the sample of her research. Subsequently, the percentage of success was: $(19:49) \times 100\% = 38,7\%$. From the formula, it is found that there were 38,7% learners passed the preliminary test while the other 61,3% were failed. The result was far below the criteria of success which was 80%, accordingly it depicted the learners' vocabulary mastery before the implementation.

The data taken in first cycle was carried out from procedure of classroom action research in covering planning, action, observing and reflecting. The procedure of the research is described as follow.

After analyzing the result in preliminary study, the researcher designed the SAP. It was hoped that the implementation of the mind map technique would run successfully. The SAP was arranged and developed based on the second semester program. Besides that, the researcher needed to prepare instruments of vocabulary test and get information of criteria of success from the English lecturer. There were 49 learners joined the class and all of them did the same vocabulary test which were comprised of completion test, matching test and translation.

In this part the researcher presented the description during the research in each meeting of first cycle. The first cycle was covered in four meetings. The first meeting was the introduction of implementing the mind map technique. The activities in the second and third meeting were used to involve the learners in the teaching of vocabulary based on their topic of learning material. The test for first cycle was conducted in the fourth meeting.

The first meeting was done on April 13th, 2015. This meeting was conducted to introduce the mind map technique. In pre activity of teaching and learning process the researcher began the class with greeting and checking the learners' attendance list. In main activity the researcher began with explain about the theme and the short of text. Then, the researcher explains about mind map, the steps of mind map and how to map in our mind. In post activity, before closing the class, the researcher evaluated the

teaching and learning process by asking the learners about the difficulties and responses toward the using of mind map technique.

The second meeting was done on April 23th, 2015. In pre activity, the researcher began the class with greeting and checking the learners' attendance list. In the main activity the researcher began with remind the learners the last lesson. Then, the researcher give example how to map their mind and write the key word than the learners mentions with other word that have relation with main themes on the thick branches. After that, the researcher asked the student to make small group consist of 7-8 members. Every group had to discuss the material and make mind map by groups. In the fourth meeting, the lecturer asked the learners to do vocabulary test individually. The type of test is completion test, matching tests and translation test related to mind map. In post activity, the researcher closed the class and greeting.

This stage was conducted by the researcher during the time of acting stage. The research used observation sheet to observe the learners' activities and responses during teaching and learning process. The researcher wrote the field notes to record all of activities in the classroom after finishing the class.

The vocabulary test of the first cycle, was done at the fourth meeting on April 20th, 2015. There was a difference of learners' result between the preliminary test and the first cycle test. In the first cycle test, some learners got better grade than in the preliminary test.

The reflecting was done by the researcher after the results of observation and the results of vocabulary test were collected. Based on the data from the observation, not all of the learners were involved actively during teaching and learning process of vocabulary mastery in this theme using mind map technique. Based on the percentage of success of the learners' vocabulary test of the first cycle was 55.1%. It means that the percentage of success of learners' vocabulary mastery in this cycle had not yet not fulfilled the criteria of success, which was 80% of all learners.

The result can be caused by some factors. First, from the observation in the first cycle, it was found that many learners still

had problems in mastering vocabulary. It could be seen from the learners answer in the vocabulary test. Second, from the observation that was done by the English lecturer, it was known when the learners did the exercise in a group some learners were passive and they did not join the discussion.

Therefore, improvement of action in the second cycle was needed to solve the problems found in the first cycle. The actions in the second cycle were conducted by the researcher by revising the SAP in the first cycle with also considering the learners weakness in the first cycle. Their weakness was related to the vocabulary mastery in the topic given.

The second cycle was started by revising the teaching strategy of vocabulary mastery using mind map technique applied in the first cycle. Planning Since the implementation in first cycle had not yet given significant change on the learners' vocabulary achievement in vocabulary mastery and the implementation of mind map technique was not satisfactory yet, the researcher revised the SAP. In this SAP, the researcher arranges the learners to discuss the task using mind map technique with individually. It is hope the learners more active because they done themselves.

The implementation during the first cycle had contributed some information for the researcher to develop better activities for the second cycle. Likewise the first cycle, the second cycle was also conducted in four meetings. The first meeting of second cycle was done on April 30th, 2015. In pre activity the researcher started the class with greeting and checked the learners' attendance. In main activity, the researcher explained more about the mind map and explained the vocabulary in the theme. After that, the researcher asked the learners to map their mind individually about the last theme. After the finished the lecturer asked some the learners to write the board, because the time is limited for the researcher to check all of the learners' works, so she continued to do it later. In post activity the researcher closed the class and greeting.

The second meeting and the third meeting of second cycle was conducted on May 4 and May 11, 2015. In every pre-activity

in each session, before continuing the lesson, the researcher began with greeting the class and checked the learners' attendance. In main activity, the researcher reviewed the lesson in first meeting and then discussed the result of discussion in the first meeting, than the lecturer directly asked the learners to make mind map again with other topic to remind their vocabulary by using mind map technique. After that, the researcher gave vocabulary test of the second cycle. The researcher gave a completion test, matching test and sentence translation. In post activity, the researcher closed the class and thanking the learners for their cooperative attitude during the research.

In this part, the researcher observed the learners' activity during the process of teaching and learning. It focused on the learners' activity in teaching vocabulary using mind map technique. Based on the research instruments used (observation sheet), it was found that the learners developed more active during teaching and learning process than in the previous cycle (first cycle). It could be seen from the learners who answered the researcher's questions in teaching and learning process.

The vocabulary mastery test in second cycle was conducted at the end of the fourth meeting. The test was done to measure the learners' vocabulary mastery after the implementation of mind map technique in the teaching of vocabulary.

The reflecting was done by the researcher after the results of observation and field notes and the results of vocabulary test of second cycle were collected. Based on the percentage of success of the learners' vocabulary test of second cycle was 85.7%, it declared that the percentage of success of the learners' vocabulary mastery in this cycle could fulfill the criteria of success that was 80% of all the learners.

There were some factors that influence the result. They were as follows:

1. Most of learners were active in teaching and vocabulary process by using mind map technique. It could be seen by the learners who answered the lecturer's questions in teaching and learning process.

2. Most of the learners could understand the meaning and memorize the vocabulary. The learners were also developed better in accomplishing the vocabulary tasks. It could be seen from the result of vocabulary test that increased from 55.1% in first cycle to 85.7% in the second cycle.

Since the result of the second cycle had fulfilled the criteria of success of the research target, then the action was ended.

Research Discussion

Related to the application of mind map technique in teaching and learning process of vocabulary mastery, it could be seen that teaching vocabulary using mind map technique was able to improve the learners' achievement in vocabulary mastery. In this case, mind map technique assisted the learners to master the English vocabulary which was learnt. It happened because in mind map technique, learners learnt how to imagine then expressed their mind, be more creative, have a good way to memorize the words in a simple and short time. The learners began this activity from classified the specific words (key word) in the central image then they could to continue with other words in some braces that related to the key word, however the learners had much word in their mind and write the other word in mind map.

The activity in second cycle was better than in first cycle, where the learners had less difficulty in vocabulary assignment given in the teaching learning process. The occurrence might have happened since all the activities conducted from the first cycle up to the second cycle had given the learners more experience and exploration of words. The revision done in the activities of the second cycle had made some improvements towards the learners' competence. The researcher arranged the learners to discuss with their partner only, not in a group of 7-8 members as in first cycle.

The revision of the activities in the second cycle could improve the learners' competence in vocabulary mastery. Moreover, it gave the learners more experience in vocabulary in their mind better since they did it with drawings, colors, and pictures so that it could assist them in memorizing the words, meaning and thing related to the topic of the learning materials. To

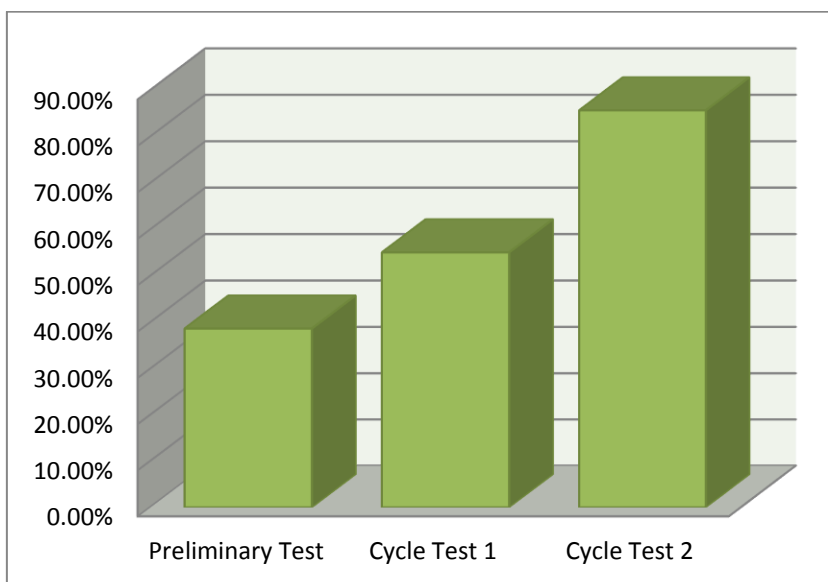
make it clearer in understanding the research result of the improvement of learners' vocabulary mastery in preliminary, first cycle and second cycle are stated in the following table.

Table 2: The Recapitulation of EFL Learners' Test Result

No.	Stage	Percentage of success
1.	Preliminary test	38.7%
2.	Cycle Test 1	55.1%
3.	Cycle Test 2	85.7%

The development of the EFL learners' achievement can be described in the next diagram:

Figure 1: EFL Learners' Test Score Development



The figure showed that the percentage of the learners' success in vocabulary mastery achievement had improved from 38.7% or "poor" in preliminary study to 55.1% or attributed as "fair" in the first cycle. Then, the percentage of the learners' success in vocabulary mastery had improved from 55.1 % or "fair" in first

cycle to 85.7% or attributed as “very good” in second cycle. In other words, the result of the test in the second cycle had achieved the criteria of success of this research. Thus, the action research was accomplished.

Based on the finding above, it could be concluded that the use of mind map technique could improve the learners’ vocabulary mastery. Hence, the results of this action research are the undergraduate EFL learners at the Faculty of Economics at Tadulako University’s vocabulary mastery can be improved by applying the Mind Mapping technique.

Conclusion

From the analysis data presented in chapter four, the researcher finds that after the implementation of the strategy, the students’ vocabulary mastery can be improved. Based on the students’ response, mind map technique is interesting and exciting. They enjoyed the activity during the course and worked out the activity seriously. So, it can be concluded that mind map technique can improve the students’ English lesson exactly vocabulary mastery.

Based on the students’ score in preliminary study, it is shown that the students’ vocabulary needs to be improved because their scores are low. There are just 38.7% or 19 of 49 students who passed the preliminary test. The success of this class is less than 80%, so the result could not achieve the criteria of success. It means that the vocabulary mastery before implementation of the strategy was quite weak. Therefore, the researcher implemented a classroom action research to improve the condition.

From the implementation of the first cycle on this study, the researcher found that the number of the students who passed the test increased. There were 27 of 49 students (55.1%) passed the test and there were 22 students who did not passed (44.9%). However the researcher had not been satisfied on this result because the percentage of the students’ score still below the criteria of success.

At the end of second cycle, the result of the test score analysis showed that there were 42 (85.75) students who were

successful completing the test with grade above the standard (65) while 7 other students still achieved the score below the standard.

Having analyzed all the result collected in this research, it is indicated that majority of the students could understand the learning materials and improved their English vocabulary. Subsequently, it can be concluded that the implementation of Mind Mapping in the teaching of vocabulary was proved to be effective in improving the EFL students at the Faculty of Economy at Tadulako University.

Suggestion

Based on the conclusion, the researcher would like to give some suggestion. They would be as follows:

1. For English lecturers

English lecturers could use mind map techniques references as a media in teaching vocabulary. Considers the advantage of mind mapping, it is hoped that this technique can stimulate the EFL students' interest and motivate them in learning vocabulary mastery. However, the material applied in this research was only limited for the second semester, so it is suggested for the lecturers to expand the material to improve other aspects or skill of English subject.

2. For the other researcher

It is suggested that other researchers might use the research results as information or a reference to conduct further research. Considering the limitation of this research, it is recommended to make some improvements on research design, learning material, and the process of implementation of Mind Mapping technique in different subject.

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