The Effect of Word Webs Technique on Students' Vocabulary Achievement at SMP Negeri 1 Kambowa

Widi Winurah Putri[1], La Miliha[2], Wawan Cahyadin[3]
widiwinurahputri01@gmail.com
[1,2,3]*Halu Oleo University, Indonesia*

ABSTRACT

This research aimed to investigate the effect of word webs technique on students' vocabulary achievement. Specifically, it attempted to determine whether the word webs techniques had a significant effect on students' vocabulary achievement. Subjects of this study were all students of class VIII from SMP Negeri 1 Kambowa which were divided into 2 classes. The study applied quantitative design. In particular, it used a quasi-experiment with nonequivalent-groups pretest-posttest model. The experimental class was given treatment with the word webs technique and the control class used conventional learning technique. The data were collected by employing the pretest and posttest. Analysis of data was performed by using SPSS as statistical analysis. The independent samples t-test showed that p (.000) < 0.05. As a result, the vocabulary achievement of students taught using the word webs technique was significantly different from the group taught using the conventional and then, the effect size is on the strong category. It means that word webs technique exerted a significant effect on students' vocabulary achievement. Therefore, word webs can be considered as a technique for teaching vocabulary.

Keywords:
Vocabulary Achievement, Word Webs Technique.

1. Introduction

Vocabulary is one of the foundational elements in language learning and use. According to McCarthy (1990), vocabulary is the basic and the highest element of any language learning according to language teachers. In English itself, some of the skills that must be mastered will be successful if someone has mastery of vocabulary. Halilah et al., (2013) stated that the trick to having speaking, writing, reading and listening skills is to master vocabulary. Furthermore, Baskarani (2016) explained that to make it easier for each student to understand the application of various activities in the field such as communicating in the study room, writing notes and reading books, they must have sufficient vocabulary.

Some of the researchers mentioned above show that vocabulary is one of the important points in learning English. Because vocabulary is the most basic thing in a language, one must learn vocabulary to master a language. It can also be said that the mastery of English which consists of several skills namely reading, writing, listening and speaking will be mastered if a person has sufficient knowledge and mastery of vocabulary.

In line with the importance of the vocabulary, the lack of vocabulary can affect students' language skills. For example, reading ability is of course strongly

related to vocabulary because the content of the reading itself contains words which eventually form sentences, paragraphs, to a complete text. Read (2000) in Pazhakh and Soltani (2010), emphasized that vocabulary mastery is closely related to understanding and fluency when reading. So, someone will have difficulty understanding a text without sufficient vocabulary mastery. Besides, based on Nation (2001), speaking uses a vocabulary that is no larger than the vocabulary used when writing. This indicates that the ability to speak and write requires vocabulary in its application and a lack of vocabulary will make it difficult for someone to master these language skills. Thus, language skills are low with minimal knowledge of vocabulary.

Collaborative learning is one of the learning methods that can be applied in education. Schools can use this method in their teaching and learning process. Pattanpichet (2011) notes that students do not feel any pressure in class and enjoy and establish closer friendships between them with one another. from several existing techniques in collaborative learning, word webs can be used as a technique in teaching vocabulary, Cooper (2011) in Naili (2016) states that word webs or conceptual maps are techniques that are useful for students in learning, the benefit is to helps students categorize thoughts on a subject so that the connections they feel among the many subtopics can be seen.

Then, students can create, organize, and convey their knowledge. In addition, based on Ashar (2019), M. Stone (2007) the word web is a tool for developing ideas and exchanging information. Diana (2020) shows that the application of word webs is by applying one idea to one medium, then students search for related ideas, from the results of this search new information is found which is then conveyed in vocabulary that is connected by web lines to the initial idea. In this case, word webs are used as a learning technique that stimulates students to find information at the same time as understanding more vocabulary and increasing students' vocabulary through deeper searches. Thus, teaching student vocabulary can be done by applying collaborative learning methods with the Word Webs technique in learning.

Several studies have examined the effect of the word webs technique in relation to English skills. For example, Suryaningsih (2020) examines the effect of using the Word Web technique on teaching reading comprehension. The results of the study revealed that there were significant differences in students' reading comprehension after being taught with the word webs technique. Besides, it was also found that students who were taught with word webs had an increase in achievement. The researcher then concluded that word webs were very useful in improving students' reading skills. In addition, Afghari and Khayatan (2017) revealed that Iranian EFL students who used the snowball and word webs techniques in collaborative learning in increasing vocabulary were superior to those who did not use the technique. Subsequently, it was found that the snowball technique and word webs can increase students' vocabulary. What's more, students who at first seemed normal and not very enthusiastic, became very enthusiastic and interested after being taught the snowball technique collaborative learning and word webs technique.

Previous research has revealed how word webs influence. Regarding its relation to reading skills and vocabulary. previous research applied two different

techniques at once in the learning process in the experimental class. The snowball technique and the word webs technique, so that there was a significant influence due to the interference of the snowball technique apart from the word webs themselves. However, research that really focuses on only examining the effect of word webs on students' vocabulary achievement with two different groups has not been fully carried out. Accordingly, in this study will use only the word webs technique, a technique in collaborative learning to see its effect on students' vocabulary achievement. On the whole, this study will investigate the effect of the word webs technique on students' vocabulary achievement at SMP Negeri 1 Kambowa.

It is hoped that the results of this study will provide more benefits and perspectives in teaching vocabulary, namely teaching vocabulary in groups using the word webs technique. Practically, It is also hoped that the findings Can increase students' vocabulary mastery and knowledge. Teachers are expected to be able to apply word webs as collaborative learning technique in the learning process. Also, teachers can help students improve their vocabulary mastery and create a fun vocabulary learning atmosphere by using word webs.

2. Methods

Quasi-experiment with nonequivalent-groups pretest-posttest design was applied in this study. The entire population was used in this study namely class 8 A students with a total of 21 students as the experimental class and as many as 21 students from class 8 B as the control class. Test instrument was a vocabulary test in the form of multiple choice. The vocabulary test was applied at the pretest and after treatment, the vocabulary test was carried out again at the posttest. The instrument was used to see the results of students' vocabulary before and after being given the word webs technique. Data were collected from pre-test and post-test results related to treatment. Then, statistical analysis was carried out using SPSS with paired samples test analysis and continued with independent samples T test analysis.

3. Result

The results are presented in the following explanation which includes pre-test and post-test scores of students in the experimental and control classes. First, differences between student scores during the pre-test and post-test in the experimental class. The presentation of the data is compared through the distribution of previous scores to see how the distance or comparison is.

Table 1. *Distribution of Students' Pre-Test and Post-Test Scores on The Experimental Class*

No.	Criteria	Score	Pre-Test		Post-Test	
			Frequency	Percentage	Frequency	Percentage
1.	Very good	89 – 100	0	0	1	4.8 %
2.	Good	77 – 88	0	0	4	19 %
3.	Average	64 – 76	1	4.8 %	8	38.1 %
4.	Poor	< 64	20	95.2 %	8	38.1 %
	Total		21	100%	21	100%

Table 15 shows that there is a significant difference between the pre-test and post-test scores of students in the experimental class. Overall, it can be seen that

most of the students' scores during the pre-test were in the range of poor criteria. In fact, almost all of the students scored in the range < 64. On the other hand, in the post-test results the students showed a variety of vocabulary achievements, where all the criteria were achieved by students even though the highest score was only achieved by one student. To find the progress of the comparison of these two data, it can be seen in the Figure 1.

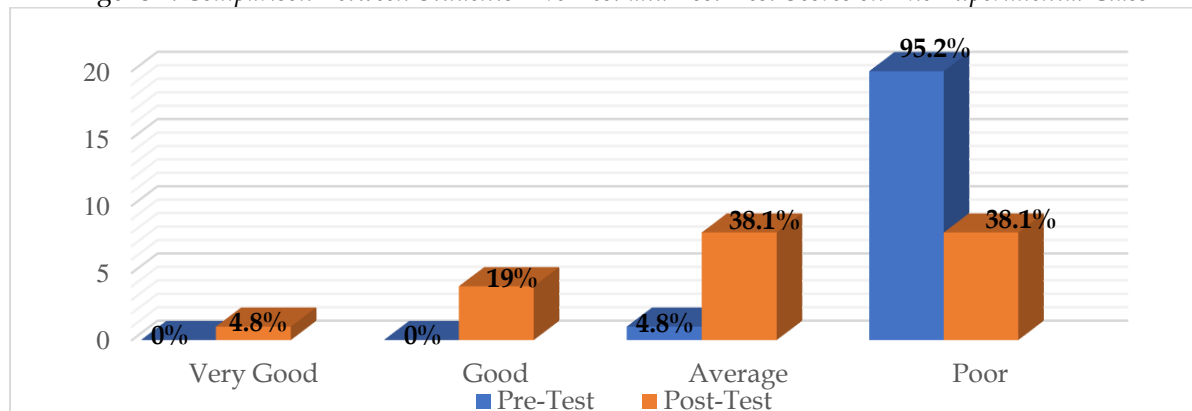Figure 1. *Comparison Between Students' Pre-Test and Post-Test Scores on The Experimental Class*

Figure 1 shows that almost all students are in the poor category on the pre-test. However, after being given treatment or taught using the word webs technique, the number of students in the poor category decreased by 57.1% (the gain score). Next, in the average category there was an increase in the number of students by 33.3% (the gain score) from the pre-test to the post-test. Similar to the average category, the good category also showed an increase in the percentage of 19% (the gain score) from the pre-test to the posttest. Even though it was small, the increase in the percentage also occurred in the very good category. Thus, the percentage scores in Figure 5 show a significant increase in the scores of students in the treated class.

Next is the distribution of pre-test and post-test data in the control class. Distribution comparison data can be found in table 2.

Table 2. *Distribution of Students' Pre-Test and Post-Test Scores on The Control Class*

No.	Criteria	Score	Pre-Test		Post-Test	
			Frequency	Percentage	Frequency	Percentage
1.	Very good	89 – 100	0	0	0	0
2.	Good	77 – 88	0	0	2	9.5 %
3.	Average	64 – 76	2	9.5 %	5	23.8 %
4.	Poor	< 64	19	90.5 %	14	66.7 %
	Total		**21**	**100%**	**21**	**100%**

Table 2 shows a change in the frequency and percentage of student scores in the control class. Student scores in the pre-test were around the criteria of poor and average. The majority of students, amounting to 90.5%, were in the criteria of poor scores and the rest were in the average criteria. Meanwhile, the posttest scores were between good, average and poor criteria, but no students achieved very good score criteria in this control class, both on pre-test scores and post-test scores. More

clearly regarding the comparison of pre-test and post-test data of students in the control class can be seen in Figure 2.

Figure 2. *Comparison Between Students' Pre-Test and Post-Test Scores on The Control Class*
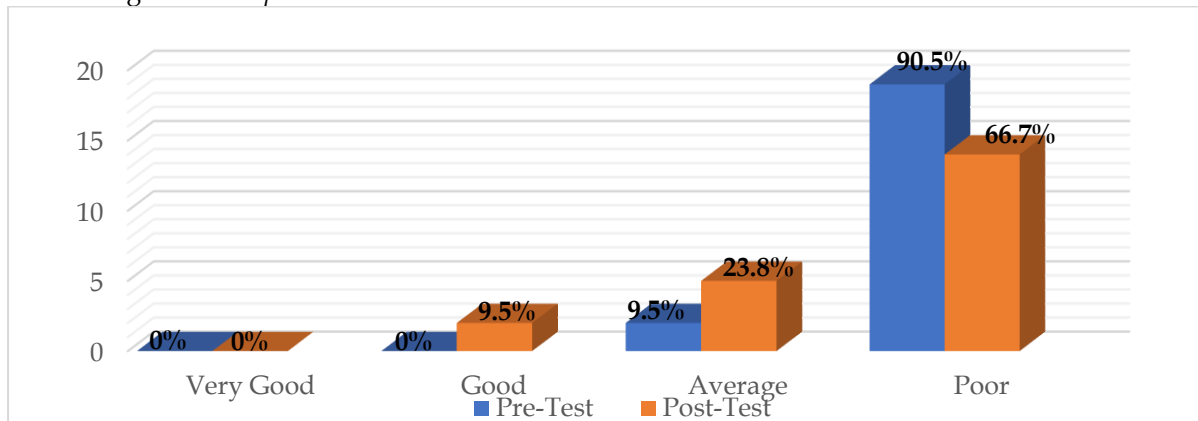
Based on Figure 2, the percentage shows that the majority of students in the control class are in the poor category. There is a deviation of 28% which indicates a decrease in the number of students from the pre-test to the post-test in the poor category. Then, other students are on the average and good criteria, they experienced an increase in percentage from pre-test to post-test. The increase was 14.3% (the gain score) and 9.5% (the gain score) respectively. While the very good criteria did not show any increase at all. So, students experienced an increase in post-test scores, except for the very good category. Thus, students who are not taught using the word webs technique mostly occupy the poor category.

The next is within group analysis, it was carried out in the control class and experimental class respectively. This analysis uses SPSS with the paired samples test to find out how the pretest and posttest influence each class on student's vocabulary achievements. One of these influences can be seen through the average value of the pretest and posttest. The mean value in the control class and the experimental class both have an increased average when compared to the pretest and posttest values. However, even though both of them increased, the average score in the experimental group had a higher score difference than the control class, there were 7.76 score differences in the control class and 20.19 points difference between the pretest and posttest in the experimental class. So, there is a difference in the value of 12.43 in the difference in the value of the control and experimental classes.

The Independent Samples t-test was carried out on the mean scores of students' vocabulary to test whether there was a significant difference in student vocabulary achievement between students taught using the word webs technique and students taught using conventional techniques. The results of the Independent Samples t-test showed that t (40) = -4.45, p (.000) < 0.05. On the whole, the vocabulary achievement of students taught using the word webs technique (M = .3919 SD = .1673) was significantly different from the mean N-Gain of the group taught using the conventional technique (M = .1632, SD = .1656). Lastly, it was found that the mean score of students' vocabulary achievement in the experimental group was higher than the mean score of the control group's N-Gain. As a result, the H0 is rejected and H1 is accepted or there are significant differences in achievement

between students who study with word webs techniques and students who study without word webs techniques.

4. Discussion

This study shows an increase in vocabulary achievement of students who have been taught using the word webs technique. The results of this study support the findings of Agustini and Sianipar (2013) and Mochammad (2021). In their research, they found that the word webs technique is an effective technique in increasing vocabulary and can increase student vocabulary. In addition, this study said that the results showing significant scores on the vocabulary of students taught using the word webs technique, could not only be found through qualitative methods and action research. Other research methods can also be used, by using a quasi-experimental design that is carried out by comparing two different groups.

Several factors may influence the results of this study. One example is time. Students experience an increase in vocabulary ownership when they have the opportunity to understand one by one the words received. Reisi and Saniei (2016) state that the word web provides time for learners to carefully consider the relationship of the words they have learned with learning terms to describe them through semantics, then learn them with meaning. The techniques are also one of the influential factors. Nasution (2015) says that word webs are a useful technique for students who want to add knowledge or words to the words given.

Third, the factor of working in groups or collaboration. Pattanpichet (2011) sees that students who study in groups do not feel any pressure in class and enjoy and forge closer friendships. Fourth is student learning outcomes or students' achievement. Students' achievement certainly greatly affects the results of this study. Afghari and Khayatan (2017). They found that word webs can increase students' vocabulary.

Then, the results of this research show an increase in the vocabulary achievement of students who study using the word web technique. So, based on the research results, the advantages of this technique can be identified from the factors that influence it. Among other things, the learning process using this technique is packaged interestingly so that students feel enjoy while learning. Also, Stahl and Vancil (1986) in Celce-Murcia and McIntosh (1991) show that the word web technique makes it easier for someone to realize the relationship between words in the text. In contrast, apart from finding the advantages of the word web technique, after it was implemented, several shortcomings were found in the field. Because in applying it, Barkley et al., (2005) explained that the word web technique is a sub-technique of collaborative learning. So the practice emphasizes students working together, but there are students who show discomfort when studying in groups, this then becomes a consideration which shows that there are deficiencies in the Word Web technique for some people. Apart from that, in research conducted by Yuliani et al., (2005) said that some students felt that this technique caused waste in the use of paper and did not last long or could be torn or lost.

Summing up the interpretation presented in this discussion is that there is an increase in student vocabulary. There is a significant difference in the vocabulary scores of students who are taught with word webs and not taught with that

technique. Students at SMP Negeri 1 Kambowa who were taught using the word webs technique experienced an increase in vocabulary achievement. so, when compared to the scores of students in the control class, the scores of students in the experimental class experienced a significant increase in value.

5. Conclusion

This research was to find out whether the word webs technique can affect students' vocabulary achievement at SMP Negeri 1 Kambowa. From the data analysis, the experimental class taught using the word webs technique experienced an increase compared to the control class. That are students in the experimental class (Class 8 A) had higher mean scores (M = 0.3919) than those in the control class (Class 8 B) is low (M = 0.1632). Then, this research also found that the effect size was in the strong category. This means that teaching vocabulary using word webs technique was effective. Therefore, this technique can be applied to increase students' vocabulary achievement. This study has seen the increase in students' vocabulary score because of the treatment using word web technique. However, the results should be carefully treated. First, there is no randomization in this study. Second, the standard deviation of students' score after the treatment was quite high which means that there is an expansion of the range of data variation or the range of student scores that are quite different from each other. This situation indicates that there is variation in the effectiveness of the word webs technique because no randomization is carried out on subjects, so it may give biased results.

On that basis, the researcher presents several recommendations. First, after seeing that this technique has a good effect on students, the teacher can apply this technique to improve students' vocabulary mastery and increase their creativity in conveying learning to students. Second, the limitation of this study is the method used, because the studied class was not randomized or there was no distribution, the results could be biased. Thus, future researchers can also try to apply better methods such as true experiments which can guarantee statistical similarities in different classes. So, it can provide guaranteed and more certain results.

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