

USING SEMANTIC MAPPING STRATEGY IN STUDENTS' VOCABULARY MASTERY AT THE SEVENTH GRADE OF SMP YP PGRI 4 MAKASSAR

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ABSTRACT

*This study aimed to determine whether the semantic mapping strategy can improve the mastery of understanding of seventh grade students of SMP YP PGRI 4 Makassar. This study was conducted using a pre-experimental method. The population was students of SMP YP PGRI 4 Makassar. The sample of this study was 20 students, using a total sampling technique. The research instrument was a pre-test and post-test in the form of multiple choice with a total of 20 questions, while in the treatment the researcher used a semantic mapping strategy. The results of data analysis showed that there was a significant difference in students' vocabulary mastery before and after implementing the semantic mapping strategy, where the post-test score was higher than the average pre-test score ($80 > 50$) and the *t*-test result score was higher than the *t*-table ($6.807 > 2.093$). Based on the results of this study, it can be concluded that the semantic mapping strategy improves the understanding of seventh grade students of SMP YP PGRI 4 Makassar.*

Keywords: *Vocabulary Mastery. Strategy Semantic Mapping*

INTRODUCTION

Language is the fundamental ability required for effective interpersonal communication. People use language to express their thoughts and feelings. They can communicate with other people throughout the world. People not only communicate through their voices, but they also employ body language to inform interlocutors about something. Natural languages are spoken or written, but any language can be expressed in secondary media using auditory, visual, or tactile inputs. This is because human language is modality independent.

Baskarani (2016) vocabulary is one very important aspect in teaching English. Another aspect that teachers need to know is to be creative and patient in searching, selecting, and simplifying material to make students master vocabulary. mastering vocabulary is not easy, especially considering other aspects of the language such as; sound, and structure.

Vocabulary is the most important aspect of learning English. Vocabulary is one of the significant components that support the four language skills; namely speaking, listening, reading and writing. Since vocabulary is necessary in daily activities, it should be learned first by students. Without understanding vocabulary, people cannot communicate and share information with others. According to (Jack C. Richard, et.all, 2022), vocabulary is a core component of language skills and provides much of the basis for how well learners speak, listen, read and write.

In addition, vocabulary mastery is one of some factors to master English as a foreign language. This means that students already have the ability to understand and use words and meanings. Thus, students' vocabulary must be improved. If students build their vocabulary mastery, they can communicate their

ideas effectively and easily carry out the worksheets given by the teacher.

Semantic mapping is one of the strategies in teaching vocabulary to make students recognize the relationship between words. According to Khoii and Shariffiar (2013), “semantic maps are a visual strategy for the expansion and extension of vocabulary knowledge by displaying in categories words that are related to each other”. This means that semantics are used by teachers to show how words group together.

The semantic mapping strategy using visual diagrams to connect related words. The application of the semantic mapping strategy as follows: first, introduce the topic or choose a word as the main topic, second categorizing words into similar categories and looking at their relationships will encourage students to form a word between them.

This means that semantic mapping is an effective way of teaching and learning vocabulary. Therefore, the researcher conducted research with the title "Use of Semantic Mapping Strategy in Students' Vocabulary Mastery". At the seventh grade of SMP YP PGRI 4 Makassar.

Aksyah (2017) conducted research entitled "The Implementation of Semantic Mapping Strategy in Mastering English Vocabulary ". Research used semantic mapping strategy to teach vocabulary of 9th grade in MTs Negeri Tungkop Darussalam, Aceh Besar, because this learning strategy is one of strategy that is hoped to be used in improving students' vocabulary mastery.

Al-Khasawneh, F, M et al (2023) conducted research entitled” The Potential of Semantic Mapping Strategy to Enhance Vocabulary Learning”. The results of this study suggest that the semantic mapping strategy played a significant role in improving the students” vocabulary learning, and their involvement during teaching activities.

Saragih.E (2019) conducted research entitled “The Effect of Semantic Mapping Technique on Technical Vocabulary Mastery for Midwifery Students ”. Researchers used the Semantic Mapping Technique to teach technical vocabulary to midwifery students. Researchers concluded that the Semantic Mapping Technique had a significant impact on midwifery students' technical vocabulary knowledge.

Therefore, the researcher conducted research entitled Semantic Mapping to improve students' vocabulary Mastery was conducted at the Seventh Grade of SMP YP PGRI 4 Makassar

RESEARCH METHOD

The research in study used of quantitative research, where the design of this study uses the pre-experimental method. This study’s design consists of three steps: pre-test, treatment, and post-test use in collecting data from students learning activity.

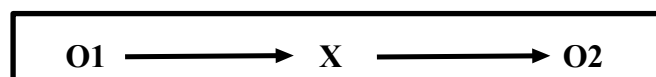


Figure 1. The Design Described (Creswell, 2023)

This research used two variables, namely independent or free variables and dependent or bound variables. These two variables include: The independent variable is the variable that is suspected to cause the emergence of another variable. The independent variable in this research is the use of semantic mapping strategy. The dependent variable is the variable that arises as a direct result of the influence of the independent variable. The dependent variable in this research is students' vocabulary mastery.

The population in this study is the seventh-grade students of SMP YP PGRI 4 Makassar. It consists of 1 class with the total population of 20 students. The researcher employed a total sampling technique. The researcher chose 1 class as the sample. The total number of samples was 20 students.

The data analysis technique used follows the procedure to calculate the average of the pre-test and post-

test with the following systematics:

1. Scoring the students' answer
2. Classify the students' raw score into seven levels as follows on the Table 1.

Table 1. Classify the students' raw score

No	Mastery Level	Category
1	96-100	Excellent
2	86-96	Very good
3	76-85	Good
4	66-75	Fairly good
5	56-65	Fair
6	36-55	Fairly poor
7	0-35	Poor

(Sukirman in Savitri and Rahman, 2016)

3. Calculate mean score, median and modus, gain score, square of gain, minimum and maximum score, normality test, frequency, and percentage by using the SPSS Analysis version 25.
4. Calculate standard deviation T-table and T-test by using the SPSS analysis version 25.

FINDINGS AND DISCUSSION

FINDINGS

This chapter describes the data collected on students' vocabulary proficiency before and after they were taught using semantic mapping. The offered data comprises of research findings and a commentary.

It would be more beneficial to integrate peer teaching with the semantic mapping into the learning process because certain students would find it easier to absorb the content when they worked with peers. Students studying with peers were actually more productive because they were more willing to ask question

The study sought to assess if seventh grade students at SMP YP PGRI 4 Makassar would benefit from a mix of peer teaching and the semantic mapping to improve their vocabulary proficiency. The assessment was given twice: as a pre-test and a post-test. It consisted of twenty multiple-choice to determine their vocabulary.

The English adjective noun and verb was the primary focus of this investigation. Prior to the test, the researcher observed that the students' lack of vocabulary, grammatical illiteracy, and mispronunciation made them feel insecure about answering the researcher's question

The students' score in Pre-test and Post-test

Past to providing treatment to students, the researcher administered a pre-test to establish their past vocabulary skills. According to table 4.1 above, only three students received the highest score of 70, two students received 60 score, two students got 65 scores, two students received 45 scores, two students received 45 scores, three students received 50 scores, two students received 55. The overall pre-test score collected from 20 students is $\sum X_1 = 1.070$. According to the data, students' vocabulary is still weak, as seen by the large number of students who received scores below 50.

The classification and the students' data statistic of pre-test and post-test

Pre-test

The pre-test was carried out before to integrating the Semantic Mapping Strategy. The pre-test was carried out on Thursday, April 10, 2025. The emphasis here is on filing in the banks with the correct answer based on the name of the object or location in the multiple choice with a duration of 90 minutes. The pre-test includes 20 questions.

Table 2. Score classification and rate percentage of students' score of Pre-Test

Pre-test				
No	Score	Classifications	Frequency	Percentage
1	96-100	Excellent	0	0
2	86-96	Very good	0	0
3	76-85	Good	0	0
4	66-75	Fairly good	3	15%
5	56-65	Fairly	4	20%
6	36-55	Fairly poor	9	45%
7	0-35	Poor	4	20%
Total			20	100%

Based on the results of students' scores on the pre-test above, the researcher presented the following Figure 2:

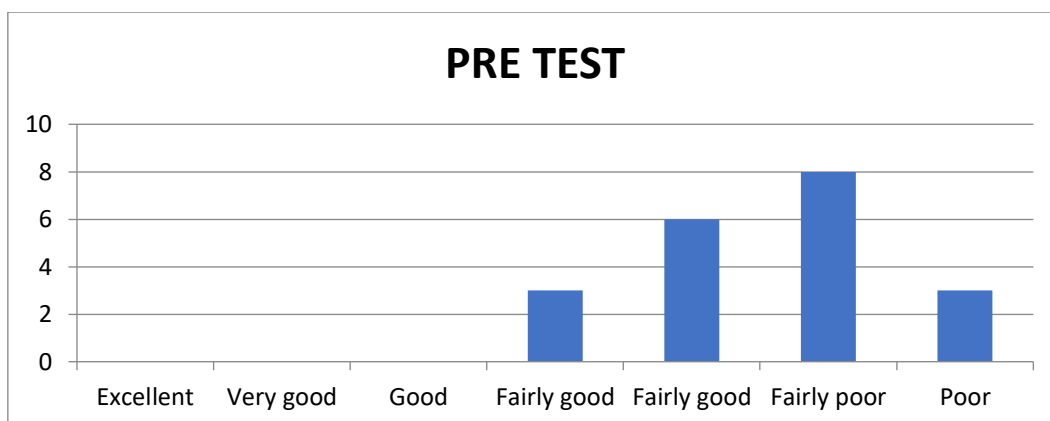


Figure 2. The classification of the students' score in pre-test

The data from the Figure 2, percentages and frequency of students' post-test scores revealed that the majority of students were in the "fairly poor" group, while some were in the "poor" category. The frequency above shows that only a few students were in both the "fair" and "fairly good" categories.

The students' data statistic of pre-test

Table 3. The Students' Data Statistics of Pre-test

N	Valid	20
	Missing	0
Mean		50.75
Std. Error of Mean		3.084
Median		50.00
Mode		50 ^a
Std. Deviation		13.791
Variance		190.197
Range		45
Minimum		25
Maximum		70
Sum		1015

According to table 3 above, the learning outcome of 20 students who took the pre-test in improving students' vocabulary using the Semantic Mapping was an average pre-test score of 50.75, the minimum score on the pre-test was 25, and the maximum was 70, the variance defined as the spread between the scores on the pre-test was 190.197, and the standard deviation of the square root of the variance of a set

of scores in the pre-test was 13.791. Meanwhile, the most common pre-test value was 50.

Post-test

The post-test was given after including the Semantic Mapping, a peer teaching strategy, into the learning process. The post-test was held on Tuesday, May 10, 2025, and consisted of 90 minutes of filling in the blanks with answers or names of items that match those illustrated in the question. The post-test contains 20 questions. All twenty student who took the post-test increased their scores. One student achieved the highest score of 95, while one student received a 90 the students were considered very good. Four students scored an 85, and four received a 75, indicating that they performed well. Seven students scored a 70, three received a 65 all of which were considered fairly good.

Table 4. Score classification and rate percentage of Students' score of Post-Test

Post-test				
No	Score	Classifications	Frequency	Percentage
1	96-100	Excellent	0	0
2	86-96	Very good	2	10%
3	76-85	Good	4	20%
4	66-75	Fairly good	11	55%
5	56-65	Fairly	3	15%
6	36-55	Fairly poor	0	0
7	0-35	Poor	0	0
Total			20	100%

Table 4. shows the classification and percentage of post-test scores of students who received therapy utilizing a fly Semantic Mapping that used a peer teaching technique to boost students' vocabulary. The classification percentage levels are very good (10%), good (20%), fairly good (55%), fair (15%), and fairly poor (0%). As a result, categorization has the greatest post-test percentage (55%).

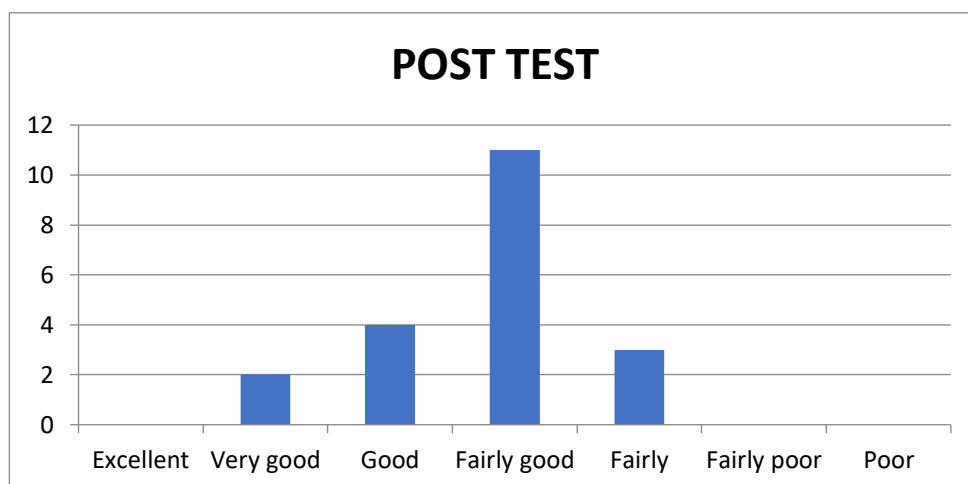


Figure 3. The classification of the students' score in post-test

According to the statistics in Figure 3 above, students scored much higher on the post-test. This demonstrates that there are no students with extremely low-class classifications. Class classification was very good with two students, good with eleven students, fair with three students, and fairly low with none.

The students' data statistic of post-test

Table 5 The Students' Data Statistics of Post-Test

N	Valid	20
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	Missing	0
Mean		75.50
Std. Error of Mean		1.983
Median		72.50
Mode		70
Std. Deviation		8.870
Variance		78.684
Range		30
Minimum		65
Maximum		95
Sum		1510

According to table 5 above, the learning outcomes of 20 students who took the pre-test in improving students' vocabulary using Semantic Mapping and a peer teaching technique. The mean post-test score was 75.50, the minimum score a student received was 65, and the maximum score was 95, while the median post-test score was 72.50, the range of difference between the highest and lowest values was 30, and the variance, defined as the spread between the scores on the post-test, was 78.684. The standard deviation for the post-test was 8.870. The median score on the post-test was 72.50. In contrast, the most commonly used value was 70.

The comparison of students' score in pre-test and post-test

Table 6. The comparison of rate percentage between pre-test and post-test

No	Classification	Score	Rate percentage	
			pre-test	post-test
1	0	Excellent	0	0
2	0	Very good	0	10%
3	0	Good	0	20%
4	15%	Fairly good	15%	55%
5	30%	Fairly	30%	15%
6	40%	Fairly poor	40%	0
7	15%	Poor	15%	0
Total			100%	100

Based on the data in table 6, it is possible to conclude that students' scores improved after learning how to use the Semantic Mapping. In the pre-test, no students had extremely good, much alone excellent, scores; yet, in the post-test, no students received great scores, but some did. There were no good scores on the pre-test, but four on the post-test. Only three student received fairly good results on the pretest, while eleven pupils did so on the posttest.

Based on the table 4.6 above, it can be concluded that students' score has increased after learning to use the Semantic Mapping. In the pre-test.

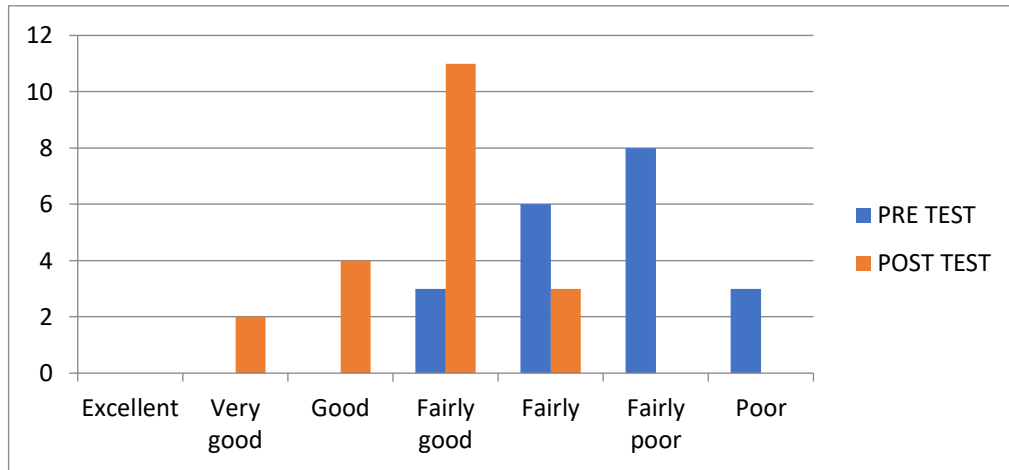


Figure 4. The comparison of students' score in pre-test and post-test

The results in Figure 4 above demonstrate a considerable difference between the pre-test and post-test, with two students earning a very good categorization on the post-test. There were no students that obtained a high classification on the pretest, but 2 did on the posttest. Only three students received a fairly good categorization in the pre-test, but eleven students did so in the post-test.

The mean score and standard deviation

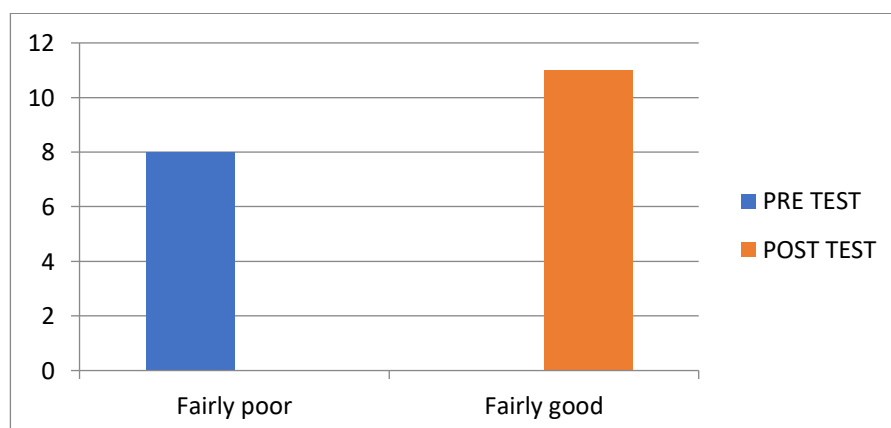
The mean score

The following table shows the difference between the mean scores on the pre-test and post-test paired tests.

Table 7. The Difference Mean Score in Pre-test and Post-test

Test	Mean Score
Pre-test	50.75
Post-test	75.50
Paired-test	24.75

The students' pre- and post-test mean scores are shown in table 7 above. The students' pre-test mean score was 50.75. While the average post-test score of 75.50 falls into the moderately outstanding category, the classification was fairly poor. The table above shows how using the Semantic Mapping in conjunction with peer teaching enhanced students' vocabulary. There was a 24.75 increase between the pre- and post-tests. The computation was done using SPSS version 25.



Graph 5. The difference of mean score in pre-test and post-test

The standard deviation in pre-test and post-test

Standard deviation in pre-test and post-test given to the tenth-grade students of SMP YP PGRI Makassar could be seen from the table below:

Table 8. The standard deviation of students' score

Variable	Std. Deviation
Pre-test	13.791
Post-test	8.870
Paired-test	4.921

Table 8 above shows that the standard deviation in the pre-test was 13.791, whereas the standard deviation in the post-test was 8.870.

T-test value

The researcher using SPSS version 25 to find the result of T-test value as shown on the table 9.

Table 9. T-test value Paired sample test

	Paired Differences				t	Df	2-tailed)	
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower				Upper
Pair Pretest - 1 Post test	-24.750	16.261	3.636	-32.360	-17.140	-6.807	19	.000

The researcher used SPSS version 25 to obtain a T-test result of 6.807. In this study, the t-test was utilized to assess whether there was a significant difference in improving students' vocabulary before and after the researcher employed the Semantic Mapping during the learning process. The level of significance pre-test and post-test was 0.05, with a degree of freedom (Df) of N-1, where N is the number of respondents. In this study, no students responded. So, the degrees of freedom are 19.

Hypothesis testing

Calculating the degree of freedom (Df), the researcher used the following formula:

$$\begin{aligned} \text{Df} &= \text{N}-1 \\ &= 20-1 \\ &= 19 \end{aligned}$$

After calculating the t-test, the t-table value of 2.045 with a degree of freedom (Df) of 29 is compared to the t-test of 6.807 at a significant level (α) of 0.05. This shows that the t-test outperforms the t-table, with t-test and t-table values of 6.807 and 2.093 respectively.

The result of the students vocabulary test have increased could be seen in the following table 10:

Table 10. Test of Significant

Df	Level Significant	t-test value	t-table
29	0,05	6.807	2.093

The researcher determined that there were substantial differences between the students' pre-test and post-test scores in vocabulary utilizing the Semantic Mapping based on the data in the table above.

DISCUSSION

This section of the study investigates the effectiveness of using semantic mapping as a teaching strategy to improve students' vocabulary mastery. To collect data for their study, tenth grade students from SMP YP PGRI 4 Makassar were chosen. past to teaching the students the semantic mapping that the researcher uses, the students were given a pre-test during their first meeting in order for the researcher to ascertain their past knowledge and to improve their vocabulary.

The findings revealed that the students' semantic mapping method increased their vocabulary understanding more before treatment, as evidenced by the frequency and rate percentage of their pre-test and post-test scores when the information was provided. The researcher discovered that the students' results improved after being treated with the semantic mapping method compared to previously.

The study's findings are consistent with previous research on vocabulary mastery and semantic mapping strategies. It can be shown that out of 20 students, the minimum pre-test score was lower than the minimum post-test score. Meanwhile, both the pretest and post-test maximum scores were impressive.

CONCLUSION

Semantic mapping is a media that greatly improves the English vocabulary of tenth grade students at SMP YP PGRI 4 Makassar. It can be noticed in the pre-test results. The students' post-test was higher than their pre-test. Use the Semantic Mapping in class to educate and learn vocabulary so that kids can grasp and memorize it while having fun. The students were highly motivated to study English despite the difficulty of the Semantic Mapping.

Furthermore, the seventh-grade students at SMP YP PGRI 4 Makassar were only in the "very poor" group in the pre-test, and their mean score on the vocabulary exam was 50. Furthermore, the seventh-grade students at SMP YP PGRI 4 Makassar received only "excellent" ratings on the post-test, with a mean vocabulary test score of 90.

Finally, the adoption of the Semantic Mapping for teaching English vocabulary could engage students in the learning process, indicating that it was appropriate and effective, particularly for improving students' English vocabulary.

REFERENCES

- Al-Khasawneh, F, M et al. (2023). "The Potential of Semantic Mapping Strategy to Enhance Vocabulary Learning". *Journal of Southwest Jiaotong University*, 58(1), DOI: <http://dx.doi.org/10.35741/issn.0258-2724.58.1.77>
- Aksyah, C. M. B. A. (2017). *The Implementation of Semantic Mapping Strategy in Mastering English Vocabulary* (Doctoral dissertation, UIN Ar-Raniry Banda Aceh)
- Baskarani. SN, (2016). *The Teaching of English Vocabulary*.
- Creswell, J. W. (2023). *Research design: Qualitative, quantitative, and mixed methods approach* (5th ed.). SAGE Publications.
- Jack C. Richad, et.all. 2022. Teacher strategies in implementing English medium instruction. *ELT Journal*, 76(2), 227-237.
- Saragih, E. (2019). The effect of Semantic Mapping Technique on technical vocabulary mastery for midwifery students. *Studies in English Language and Education*, 6(2), 333-342. Received June 13, 2019; Revised August 28,2019; Accepted August 30, 2019 <https://doi.org/10.24815/siele.v6i2.14786>