



An Analysis of The Effectiveness of Word Attack Strategy in Boosting Students' Reading Comprehension in Indonesian Secondary School

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Abstract: The research was aimed at determining how was application of word attack strategy impacts on students' reading comprehension skills in class VIII SMP Negeri 2 Enrekang. The background of this research was based on the preliminary observation which showed that many students had difficulty in understanding English reading texts. This was due to limited vocabulary and less effective learning approaches to help students read better. This research applied quasi-experimental method with pretest-posttest control group design. The populations of the research were all VIII grade students of SMP Negeri 2 Enrekang. The sampling was taken by simple random sampling technique. Based on the pretest results, the mean value was 47 for the experimental group and 40 for the control group. After giving treatment in the form of applying the Word Attack strategy, the mean value of the experimental group increased to 80, while the control group increased to 53. To test the hypothesis, the data were analyzed using an independent sample t-test. The result showed significance value of 0.000, which indicated that the Word Attack strategy had a significant effects on the students' reading ability of grade VIII at SMP Negeri 2 Enrekang. It is therefore, it could be determined that the Word Attack strategy was effective in enhancing students' reading ability.

Keyword; *Word Attack Strategy, Reading Comprehension, Students' Reading Comprehension*

INTRODUCTION

One of the most important skills that should be mastering in teaching and learning English is reading. Reading skill not only used to learn in class but also to gain experience, knowledge, and everything else that can help education in collage (Linuwih, 2020). It offers a good model for writing and provides an opportunity to learn language and makes reading become an important part of language teaching and learning.

Reading is an English language skill that contributes to providing a huge amount of input to learners (Januarty, 2018). It also helps readers develop analytical and critical understanding skills. According to Ayu et al., (2017), reading comprehension is the process by which the reader and the text interact to determine the meaning of the text. This process involves world knowledge, word knowledge, and the complex processes involved in reading text. All reading instruction aims to help readers understand texts. In other words, readers can only read meaningless words if they cannot create meaning from the text (Melsandi, 2018). As a result, understanding reading is the process of creating meaning in the text so that it makes it easier for us to understand the written text.

Low reading scores indicate that students face the difficulty of not understanding some of what they have read. The main reasons are lack of vocabulary and difficulty understanding new or unfamiliar words. Spencer et al., (2019), say that the observed vocabulary weakness is also shown as a developmental delay, which suggests that it is more appropriate to classify this as a correlate rather than a cause of children's reading comprehension problems. Students who face reading difficulties have comprehension problems, and for some students, these comprehension problems may be caused by inappropriate or ineffective word recognition and decoding methods (Al-jarrah et al., 2018). Therefore, strategies are needed to enrich students' reading comprehension.

Maximizing the process of understanding a reading text requires several strategies, such as scanning, skimming, and word attack strategy. The use of strategies in the learning process is crucial thing because it can affect students' reading comprehension. By applying methods or strategies in the learning process, it will facilitate students' reading instruction (Brown, H. D., & Lee, 2015). Also Yulia Enggar, (2020) notes that a teacher's success in teaching reading can be achieved by using teaching strategies.

Word Attack Strategy is a valuable approach that can assist students in decoding, pronouncing, and understanding foreign words by attacking them gradually or from different angles (Harahap, 2024)." It also teaches students to identify, memorize, and read words more effectively. Furthermore, the strategy help students to develop skills in analyzing the meaning of words contextually, expanding vocabulary, and improving overall reading comprehension. Thus, this strategy strengthens students' language skills and improves their ability to think critically and analyze texts well. This is particularly beneficial for students who struggle with vocabulary and reading comprehension, as it gives them a structured approach to deciphering and understanding new words.

Given the potential of the Word Attack Strategy to improve students' reading comprehension, as discussed above, the researcher aims to address the specific challenges faced by students at SMP Negeri 2 Enrekang. The researcher also had a three-month internship experience at the school, where on average the students taught had difficulty in understanding the material because several factors, such as the lack of foreign vocabulary and the use of less effective learning methods. In addition, the researcher has made initial observations by conducting a reading test in class VIII of SMP N 2 Enrekang. The result showed that the students' average score was 60, which is under the minimum mastery criterion (KKM). Based on the findings of several previous studies that showed a significant effect of word attack strategy, the researcher assumed that word attack can improve students' reading ability. Therefore, the researcher intended to conduct the study because the problem under study was found in the school. This strategy is chosen because of its potential to improve students' reading comprehension skills and encourage students to be more active in the learning process.

Several studies in line with this research have been conducted; however most of them mostly focus on students' reading comprehension by using other method. It is therefore the researcher intended to applied word attack strategy to find out the effectiveness

of using word attack strategy in boosting students' reading comprehension in Indonesian secondary school.

RESEARCH METHOD

The research applied Quasi Experimental Design; with experimental and control class. One group was treated as the experimental class and other group was treated as the controlled class. In experimental class, researcher applied Word Attack strategy as method in teaching while in controlled class used conventional teaching method. The researcher used pre-test and post-test design in both experimental and controlled class.

The population of the research was the eighth grade students of SMP Negeri 2 Enrekang in academic year 2024/2025. Then, the researcher used purposive sampling technique to take the sample and it was class VIII.A that consisted of 30 students. The instrument of the research was test which had purpose to figure out a number of students' reading comprehension. The test would give through pre-test and post-test. The test was focused on recount texts, consisted of 20 multiple-choice questions with four answer options (A, B, C, and D). Finally, the data was analyzed by using statistical analysis on SPSS VS.25 t-test.

FINDINGS AND DISCUSSION

A. Findings

The finding presented here deals with the result of students' descriptive analyze statistics test and students' score in pre-test and post-test, the students score classification, mean score, the significant differences between the score of pre-test and post- test, and hypothesis testing of the faired samples. These findings are described as follows:

1. Descriptive Analyze Statistics

Descriptive analysis was carried out using SPSS version 25.0. The aim was to find out the maximum, minimum, and standard deviation values, as well as the average value of the data.

a) Experimental Group Pre-Test and Post-Test Data

The following data was collected from the experimental group:

Table 1 <i>Frequency of Experimental Group Pre-Test Result</i>			
Classification	Score	Score Frequency of Pre-Test	Percentage of Pre-Test
Excellent	90-100	0	0%
Good	70-89	0	0%
Average	50-69	15	50%
Fair	<30-49	15	50%

Based on the data analysis before the treatment, there were no students in the excellent and good categories. The scores of 15 students were in the average

category with a percentage of 50%. While the scores of the other 15 students fall into the fair category with a percentage of 50%. Based on the data, it showed overall that students in the experimental group had low reading comprehension.

Table 2 *Frequency of Experimental Group Post-Test Result*

Classification	Score	Score Frequency of Post-Test	Percentage of Post-Test
Excellent	90-100	10	33.33%
Good	70-89	17	56.67%
Average	50-69	3	10%
Fair	<30-49	0	0%

Based on the data analysis after students used word attack strategy to improve reading comprehension, the scores of 10 students were included in the excellent category with a percentage of 33.33%. Then, the scores of 17 students were included in the good category with a percentage of 56.67%. While the three other students were included in average category with a percentage of 10%. There was no students were in the fair category. Based on this data, most students in the experimental group experienced improve significantly in their reading ability.

Table 3 *Standard Deviation of Pre-Test and Post-Test Experimental Group*

Data	Pre-Test	Post-Test
N	30	30
Minimum Value	25	55
Maximum Value	65	95
Mean Value	47	80.67
Standard deviation	9.532	10.646

Based on the data, the pre-test and post-test scores for 30 students in the experimental group ranged from a minimum of 25 and 55, while the maximum scores were 65 and 95. The pre-test standard deviation showed that student scores varied around 9.532 from the mean value of 47. Meanwhile, in the post-test, student scores varied around 10.646 from the mean value of 80.67. This change indicated that the distribution of student scores became more spread out during the learning process. So, it could be said that there was a greater difference in improvement after the strategy was implemented.

b) Control Group Pre-Test and Post-Test Data

The following data was collected from the experimental and control groups:

Table 4 *Frequency of Control Group Pretest Result*

Classification	Score	Score Frequency of Pre-Test	Percentage of Pre-Test
Excellent	90-100	0	0%

	70-89	1	3.33%
Average	50-69	6	20%
Fair	<30-49	23	76.67%

Based on the pretest analysis data of the control class, there was no student in excellent. The scores of one student were in the good category with a percentage of 3.33%. Then, the scores of six students were in the average category with a percentage of 20%. While 23 other students were in the fair category with a percentage of 76.67%. Based on the data, it showed overall that students in the control group had low reading comprehension.

Table 5 Frequency of Control Group Post-Test Result

Classification	Score	Score Frequency of Post-Test	Percentage of Post-Test
Excellent	90-100	0	0%
Good	70-89	4	13.33%
Average	50-69	24	80%
Fair	<30-49	2	6.67%

Based on the posttest analysis data of the control class, there was no student in excellent category. The scores of 4 students were in the good category with a percentage of 13.33%. Then the scores of 24 students were in the average category with a percentage of 80%. In addition, there were two students were in the fair category with a percentage of 6.67%. Based on the data the control class did not show a significant improvement in students' reading comprehension.

Table 6 Standard Deviation of Pre-Test and Post-Test Control Group

	Pre-Test	Post-Test
N	30	30
Minimum Value	20	30
Maximum Value	70	80
Mean Value	40	53.50
Standard deviation	11.142	11.755

Based on the data, the pre-test and post-test scores for the 30 students in the control group ranged from a minimum of 20 and 30, while the maximum scores were 70 and 80. The pre-test standard deviation showed that student scores varied around 11.142 from the mean value of 40. Meanwhile, in the post-test, student scores varied around 11.755 from the mean value of 53.50. This change indicated that the distribution of student scores in the control group was fairly consistent and that the variation in student scores increased slightly after the learning process.

2. Inferential Statistic

Inferential statistics was an approach used to develop inferences about a broader population based on the analysis of data taken from a sample. This method includes a variety of tests, including normality tests, homogeneity tests, and hypothesis tests.

a) Normality Test

The Kolmogorov-Smirnov normality test was used to determine whether the residual values were normally distributed or not. If the resulting value was <0.05 , then the data was normally distributed. Whereas if the resulting value was >0.05 , then the data was not normally distributed.

Table 7 *Experimental Normality Test*

One-Sample Kolmogorov-Smirnov Test		Unstandardized Residual
N		30
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	8.71532739
Most Extreme Differences	Absolute	.098
	Positive	.098
	Negative	-.069
Test Statistic		.098
Asymp. Sig. (2-tailed)		.200 ^{c,d}

The results of the normality test in the experimental group were greater than 0.05 or $0.200 > 0.05$. Then the data was normally distributed.

Table 8 *Control Normality Test*

One-Sample Kolmogorov-Smirnov Test		Unstandardized Residual
N		30
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	8.92210599
Most Extreme Differences	Absolute	.081
	Positive	.081
	Negative	-.062
Test Statistic		.081
Asymp. Sig. (2-tailed)		.200 ^{c,d}

The results of the normality test in the control group were greater than

0.05 or $0.200 > 0.05$. Then the data was normally distributed.

b) Homogeneity Test

The homogeneity test was carried out to ensure that the data from the experimental group and the control group had the same variance before proceeding to hypothesis testing. If the significant value (Based on Mean) > 0.05 , it could be said that the data was homogeneous. Whereas, if the significant value (Based on Mean) < 0.05 , it could be said that the data was not homogeneous.

Table 9 Homogeneity Test of Pre-Test Experiment and Control

		Test of Homogeneity of Variances			
		Levene			
		Statistic	df1	df2	Sig.
Hasil_Belajar	Based on Mean	.306	1	58	.582
	Based on Median	.306	1	58	.583
	Based on Median and with adjusted df	.306	1	56.180	.583
	Based on trimmed mean	.348	1	58	.557

Based on the data, the results of the homogeneity test on the pretest for both the experimental and control groups resulted in a significance value based on the mean of 0.582 or $0.582 > 0.05$. These results indicated that the population had a homogeneous variant.

Table 10 Homogeneity Test of Post-Test Experiment and Control

		Test of Homogeneity of Variances			
		Levene			
		Statistic	df1	df2	Sig.
Hasil_Belajar	Based on Mean	.729	1	58	.397
	Based on Median	.685	1	58	.411
	Based on Median and with adjusted df	.685	1	55.383	.411

Based on the data, the results of the homogeneity test on the pretest for both the experimental and control groups resulted in a significance value based on the mean of 0.397 or $0.397 > 0.05$. These results indicated that the population has a homogeneous variant.

c) Hypothesis Test

Hypothesis testing on student learning outcomes was analyzed using SPSS version 25.0. If the significance value obtained was greater than 0.05 or > 0.05 , then it indicated there was no significant difference between the two treatments,

which meant H_1 was rejected. Meanwhile, if the significance value was smaller than 0.05 or <0.05 , it meant there was a significant difference between the two treatments, or H_1 is accepted. This showed that the learning outcomes of the experimental group using the word attack strategy were better than the control group using conventional methods.

Table 11 *Student Learning Outcomes Hypothesis Test*

Independent Samples Test										
		Levene's Test for Equality of Variances				t-test for Equality of Means				
								95% Confidence Interval of the Difference		
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Hasil_Belajar	Equal variances assumed	.729	.397	8.235	58	.000	25.333	3.076	19.175	31.491
	Equal variances not assumed			8.235	55.734	.000	25.333	3.076	19.170	31.497

Based on the data, the resulting significance value was 0.000, which meant the value was less than 0.05. Thus, H_0 was rejected and H_1 was accepted. This result showed that there was a significant difference between the group that used the Word Attack strategy and the group that did not. Therefore, it could be concluded that the use of Word Attack strategy has a significant influence on students' reading comprehension.

B. Discussion

Based on the results of the data that had been conducted, the application of the Word Attack strategy had a significant influence on the reading comprehension of class VIII students at SMP Negeri 2 Enrekang. From the results of pretest and posttest data, it showed a significant improvement in the experimental group used the Word Attack strategy compared to the control group used conventional methods. To understand how the strategy was implemented, the following is an overview of the teaching and learning activities carried out during the study.

During the research, the researcher conducted six meetings, with the first meeting dedicated to the pretest. In the second meeting, visual analysis was used. Students guessed the vocabulary by analyzing the pictures in the text. Each group

discussed by analyzing how the picture connected to the content of the text. The use of picture would facilitate the students in understanding the text. This was in line with Efendi (2021) beliefs, he claimed that showing pictures could provide clear and interesting illustrations and could make it easier for students to understand the content of the text because it activates their visual sensory. In addition, visualization helps students find the meaning of the text by connecting images with the content of the text, thus improving their reading comprehension (Rodríguez Sua, 2021). In practice, students were given a short text with pictures and they were asked to mark words they did not know. At the end, they worked together to guess the meaning of the words based on the visual context, and then discuss them in groups.

In the third meeting, the researcher focused on the application of prefix, suffix, and root word. Students were guided to parse basic words that had prefixes and suffixes to make it easier for them to understand and use vocabulary in reading contexts. In this regard, Hien & Nhan (2022), found that the understanding of affixes (prefixes and suffixes) was very important to improve vocabulary and grammar knowledge. Also, Amanda Goodwin (2012), in their work, explained that understanding of affixes and root words could strengthen reading comprehension and vocabulary for English language learners. To implement this, students completed structured exercises identifying affixes in selected words from the recount text, then broke down each word into its root and affix components. They practiced creating new words using different affixes and used these words in contextual sentences.

During the fourth meeting, vocabulary knowledge and using context was applied. In practice, students read the recount text and mark difficult words. After that, they guess the meaning of the words based on the surrounding context. This is followed by a teacher-guided group discussion to validate or correct their understanding based on contextual clues. With vocabulary knowledge and using context, it was easier for students to understand the reading text. Context clues, which surrounded words in a sentence and gave them special meanings, helped readers understand words they were familiar or unfamiliar with without using a dictionary (Jomocan & Legaspi, 2021). Also Khairani (2022), understanding context helped students improve their understanding of what they read. It also made it easier for them to find the meaning of words they don't know, messages, and details contained in the text. During the fifth meeting, the teacher provided practice questions that required students to apply several types of word attacks that had been taught. This aimed to determine whether the students could apply word attack effectively to understand the content or main idea of the recount text.

There were some stages in the learning process in applying word attack strategies were as follow. First, the researcher as a teacher explained about recount text and word attack. After that, the teacher mentioned the types of word attack strategies and explained the definition, how to apply it, and gave examples. Then

students were divided into 4-5 groups to discussion. Then the teacher distributed worksheets to discussion and one of the members presented the results of the discussion.

During the pretest stage, the average score of the experimental group was 47 which was categorized as fair. While the control group was 40, also categorized as fair. This showed that both groups had almost the same initial ability before treatment. However, after the Word Attack strategy was applied, the mean score of the experimental group increased to 80.67 and was categorized as good. In contrast with the mean score of the control group, it was only 53.50 which were categorized as average. This significant difference showed that the Word Attack strategy has the ability to improve the reading comprehension of grade VIII students. However, the standard deviation for the experimental group in the pre-test was 11.142 and in the post-test was 11.755, indicating that although most students experienced an increase in reading ability, there was variation in their level of success. Not all students achieved the same improvement, indicating that there were individual factors that influenced the students' learning process. To support the validity of the data, a normality test was conducted using Kolmogorov Smirnov method. The experimental group obtained a result of 0.200 or > 0.05 , so it was considered normally distributed. Likewise, the control group obtained results of 0.200 or > 0.05 so it was considered normally distributed.

When the data generated normally distributed, a homogeneity test was carried out to determine whether the two samples came from the same variation. In the pretest of the experimental and control groups, the result was 0.582 or > 0.05 so it was considered homogeneous. Likewise, in the posttest of the experimental and control groups, the result was $0.397 > 0.05$ so it was considered homogeneous.

The final test was conducted after confirming that the data were both normally distributed and homogeneous. Then hypothesis testing was carried out. Based on the t test results, the significance value was 0.000 or < 0.05 , indicating that the null hypothesis (H_0) was rejected and the alternative hypothesis (H_1) was accepted. Therefore, the difference in group that used Word Attack strategy was different from those that did not was significant. This showed that there was an influence of word attack strategy toward students' reading comprehension of the eight-grade at SMP Negeri 2 Enrekang. Although the results of this research indicated a significant influence of word attack strategy on students' reading comprehension, this research had a research gap in that it focused only on visual attack and meaning attack, while sound attack was also part of word attack strategy. This occurred due to time constraints during the research process. This research also had a limited sample and was conducted in only one school, so the results cannot be generalized widely.

The application of Word Attack strategy helped students in identify difficult words through visual analysis, the use of prefixes and suffixes, and the utilization of reading context. This approach allowed students to develop

independent strategies for understanding the meaning of new words, which indirectly improved their comprehension of the text as a whole. As Enyew (2024) stated that the use of word attack strategies in reading lessons could benefit students' reading ability and their overall reading experience.

CONCLUSION

The results showed that the word attack strategy had a significant effect on students' reading comprehension of grade VIII students at SMP Negeri 2 Enrekang. Through the use of reading context, the use of prefixes and suffixes, and visual analysis, this method was proven to help students find and understand difficult words. In addition, the Word Attack strategy also contributes to enhancing students' vocabulary knowledge, as they are encouraged to explore and understand new words independently. With a t-test value with a significance value of 0.000 or ($p < 0.05$), the t-test results show that this strategy significantly helps students in understanding the reading content of recount text.

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