The Effect of *Word Formation Strategy* on Eighth-grade Students' Vocabulary Learning

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Abstract

This study principally aims to find out whether there is or no effect of Word Formation Strategy on eighth-grade students' vocabulary learning. The research samples were taken using purposive sampling, with the total number of samples being 113 students. The research was conducted at SMP Negeri 2 Sirenja. The research methodology adopted was a quasi-experimental research design. To collect the data, the students were given a pretest and posttest, numbering 30 items. The research data were analyzed using the Mann-Whitney U Test (SPSS 24). The result showed that the test statistic was 0.001, which is less than 0.05, which indicates that the null hypothesis was rejected and the alternative hypothesis was accepted. The findings suggest a significant difference in learning outcomes between the experimental and control groups. This means that the Word Formation Strategy has a significant effect on students' vocabulary learning.

The key words: Word Formation, Strategy, Vocabulary,

INTRODUCTION

Learning vocabulary is a key aspect of learning any language, including English. This is a major aspect of learning a foreign language (Ambarwati & Mandasari, 2020; Viera, 2017). It provides many basics for how well learners speak, listen, read, and write. Without much vocabulary, learners of English as a foreign language (EFL) cannot send and receive information and messages well. It also aids in the comprehension of written and spoken texts. Simamora and Oktaviani (2020) claim if students want to be proficient in English, they must learn as much vocabulary as possible. Not only does it contribute to the comprehension and production of the language, but it also works as a good indicator of the performance and acquisition of any language skills.

In the 2013 Junior High School Curriculum, learning English is not only in class but also at home and in society. Students must be active in exploring many sources to increase their knowledge. As stated in the guidelines of the junior high school curriculum for an English subject, students are expected to master vocabulary to support them in communicating both in spoken and written form. The most important component of language that should be mastered in learning English is vocabulary. So, the student's lack of vocabulary also affects the students learning English. While, developing students' language skills in reading, listening, speaking, and writing, the learners must master the vocabulary. This indicates that there is a gap or discrepancy between the ideal and real condition.

However, many students struggle to learn English vocabulary. There are several issues why some EFL learners find it difficult to learn English vocabulary. Rohmatillah (2014) revealed that kinds of difficulties faced by the students in vocabulary learning were (1) almost all of the students have difficulties in pronouncing the words, (2) how to write and spell, (3) the different grammatical form of a word known as inflections was one of the causes of student difficulties in learning

vocabulary. Therefore, EFL teachers should find effective strategies to enhance students' vocabulary mastery. Some experts believe that vocabulary learning strategies are a conscious effort by learners to control their vocabulary learning. Students should know and be familiar with vocabulary learning strategies that will help them learn vocabulary (Ngalawi & Zainal, 2020). There are many ways to enhance students' vocabulary mastery. One of the ways to do this is through the Word Formation Strategy.

Word Formation processes are ways of creating new words in English. According to Hacken and Thomas (2013), the word formation process is how to produce new words based on some rules. Plag (2003) states that the word formation process creates new words from other words. Becker & Bieswanger (2006:86) said "The Word Formation process is the way to creating new words by adding affixes and using existing words". O'Grady and Archibald (2016) divide types of Word Formation into "Inflection, Derivation, Cliticization, Suppletion, Compounding, Conversion, Blending, Clipping, Acronyms, and Initialism". The forms of words are varied depending on how we are used in sentences. We need to know how to make new words. We also recognize and understand new words we have never heard before. Tankersley (2005) and Nation (2001) stated that one of the essential strategies for learning vocabulary is using the word formation strategy.

The forms of words are varied depending on how we are used in sentences. We need to know how to make new words. We also recognize and understand new words we have never heard before. As language develops every time, new languages and terms emerge every day in society. A new language and term use new words that we can relate to one of the linguistic branches of the morphological aspect namely the Word Formation process.

Some studies are relevant to vocabulary and teaching through word formation strategy. The first research was conducted by Anggraini and Fajaria (2018). The findings indicated that there was a significant difference in post-test scores between the students who received Word Formation Strategy and students who did not receive Word Formation Strategy. The second researcher who has a topic similar to this research is Bhatti and Mukhtar (2020). The findings of the study revealed a significant improvement in vocabulary. The third research was conducted by Suezdi and Susanti (2017). The results rejected the null hypothesis. This means that learning vocabulary through word formation strategy positively affected the vocabulary learning results of SMPN 20 Bekasi students.

This study specially applied a word formation strategy designed to enhance students' understanding of how words are constructed, and how to change word classes and their meanings. This approach allows students to understand the process of word formation and the creation of new word classes through the addition of affixes to base words. While the process may look easy, students will face challenges with new vocabulary as they have to follow specific rules before applying affixes to base words.

METHODS

This research was conducted at SMP Negeri 2 Sirenja and used a quantitative approach with a quasi-experimental design to answer the research question to prove the research hypothesis test. The data was collected using pretests and posttests. In addition, this study focused on investigating the effect of word formation strategy on grade-eighth students' vocabulary learning.

Research design

This research utilized a quasi-experimental research design. The design included a pre-test, treatment, and post-test. It aimed to examine vocabulary teaching through the word formation process, focusing on derivational affixes (prefixes and suffixes). The research objects were divided into two groups: one experimental group that received the treatment and one control group. Both

groups took a pre-test, but only the experimental group underwent the treatment involving the word formation process (Derivational affixes strategy), while the control group was taught using conventional methods. The research model was designed according to Cohen, Manion, and Morrison (2007:283)

Experimental	O1	X	O2
Control	O3		O4

Explanation:
O1: Pretest for experimental group
O2: Posttest for experimental group
O3: Pretest for control group
O4: Posttest for control group
X: Treatment

Research Participants, Sampling, and Procedures

The population of this research was eighth-grade students at SMP Negeri 2 Sirenja consisting of 113 students who were divided into 4 classes.

Table 2: Class Distribution

No	Classes	Students
1	VIII A	31
2	VIII B	26
3	VIII C	26
4	VIII D	30
	Total	**113**

The researcher applied a purposive sampling technique to take the sample. According to Cohen (2007:103), in purposive sampling, the researchers handpicked the cases to be included in the sample based on their judgment of their typicality. A purposive sample was a type of non-probability sampling that was chosen according to specific traits of a population and the goals of the research. From this viewpoint, the background knowledge criteria of students in both the experimental and control groups were comparable. Consequently, the researcher chose class VIII A as the experimental group and class VIII B as the control group. Additionally, class VIII A comprised 31 students, while class VIII B included 26 students.

Data Collection

For data collection, a pretest was administered to students in both the experimental and control groups. This occurred before the treatment to assess the students' existing vocabulary skills. The research offered the same type of tasks to both groups. The researcher taught vocabulary using a word formation strategy and provided the treatment only to the experimental class. The activities and learning materials were aligned with the curriculum for eighth-grade students. The treatment took place over six sessions, with each session lasting approximately 80 minutes (2 x 40 minutes). A posttest was administered after the researcher provided treatment, to the students in both the

experimental and control groups. The posttest aimed to assess the students' vocabulary skills following the treatment. It also sought to determine the significant differences in the students' vocabulary abilities before and after the treatment, particularly for those in the experimental group.

Table 3: The Scoring System of the Test

No	Kinds of Test	Number of Items	Score of Each Item	Total Score
1	Multiple Choice	10	1	10
2	Matching Words	10	1	10
3	Fill-in-the-blank	10	1	10
	Total	**30**		**30**

Procedures

1. **Planning**. The planning phase of this research involves preparing and arranging the research design to collect the research data. Before conducting the research, the writer formulates the hypothesis based on some related theories and designs a teaching plan using a summarization strategy in teaching vocabulary.
2. **Collecting Data.** The data were collected by giving post-tests to the students in the experimental class and control class.
3. **Data Analysis**. The data collected from the sample classes were analyzed by using the SPSS 24 version
4. **Reporting**. The research finding is reported and written based on the formal frame of vocabulary.

RESULTS, FINDINGS, AND DISCUSSIONS

The research data were analyzed descriptively. The descriptive statistics can be seen in the following table.

Table 4: Descriptive Statistics of Pre-test Results

No	Class	Mean	Minimum	Maximum	Std. Deviation
1	Experimental	57.90	43	73	6,554
2	Control	59.59	37	73	9.661

Based on the table above**,** the descriptive statistics presented the pretest results for the experimental and the control groups. The mean score of the pretest in the experimental group was 57.90. The maximum score of the experimental group was 73 and the minimum score was 43. Then the standard deviation of the experimental group was 6.554. Meanwhile, the mean score of the pre-test in the control group was 59.59. The maximum score of the control group was the same as that of the experimental group 73 and the minimum score was 37. Then the standard deviation of the control group was 9.661. Overall, the control group has a better average pretest score than the experimental group. However, the experimental group shows more variation in their scores,

meaning that some do much better than average, while others do much worse. These differences in how well they do and how much they vary might help to explain the effects of the different things that are done to each group. This could be useful for more research into what affects student learning outcomes.

Table 5: Descriptive Statistics of Posttest Result

No	Class	Mean	Minimum	Maximum	Std. Deviation
1	Experimental	71.13	53	83	9.265
2	Control	60.11	37	80	12.014

The table shows the mean score of posttest in the experimental group was 71.13. The maximum score of the experimental group was 83 and the minimum score was 53. Then the standard deviation of the group was 9.256. Meanwhile, the mean score of posttest in the control group was 60.11. The maximum score of posttest in control group was 80 and the minimum score was 37. Then the standard deviation of the control group was 12.014.

Overall, the experimental group performed significantly better than the control group on the post-test, with higher mean scores. This suggests that experimental intervention may have had a positive impact on students' performance. The higher mean score in the experimental group suggests that most students in this group showed marked improvement compared to their pre-test results, while the control group did not make significant progress.

Furthermore, the findings also showed that appropriate instruction of a strategy could increase the students' vocabulary achievement. In experimental class that taught by using Word Formation Strategy, the students learn vocabularies by analyzing words to their functional and grammatical affixes. Students are led to relate the faced words to their relative groups, compare and contrast the similarities and differences between words. It helps them in learning vocabularies. In the other hand, the students in control class feel so bored and feel hard to answer the questions because they did not understand of the text they read. It was caused by they lack in vocabulary.

After the experimental class got the treatment using Word Formation Strategy. Most of the students in the experimental class got higher scores than students in control class who were taught by using conventional strategies. However, in experimental class there were some students who got lower scores than those in the control class. It happens because students who got low scores in the experimental class have a low motivation in learning English. So, they did not focus during the class. On the other hand, in control class which did not get the treatment like experimental class, most of the students got lower scores. There were some students in control class who obtained higher scores and could perform well better than those in experimental class. It happens because students who got high scores in the control class have a good intelligence. So, they could do the test better than the others.

However, the students in experimental class performed much better than those who were in control class. This better performance was largely caused by the treatment using Word Formation Strategy that was given to the experimental class. Empirically, the result of the research showed that there is significant effect of using Word Formation Strategy on students' vocabulary achievement

Table 6: Test of Normality

No	Class	Indicator	Sig	Normality	
				Yes	no
1	Pre-test Experimental	Sig > 0.05	0.610	✓	
2	Post-test Experimental	Sig < 0.05	0.032		✓
3	Pre-test Control	Sig > 0.05	0.058	✓	
4	Post-test Control	Sig < 0.05	0.038		✓

Based on the result of the normality test using SPSS 24, it can be seen that the significant value (Sig) for the pre-test experimental was 0,610. Since the sig value was 0,610 > 0.05, the data was normally distributed. The sig value for the post-test experimental was 0.032, and since the sig value was 0.032 < 0.05, the data was not normally distributed. Then, in the control class, the sig value for the pre-test was 0.058, since the sig value was 0.058 > 0.05, the data was normally distributed. The sig value for post-test control was 0.038, since the sig value was 0.038 < 0.05, the data was not normally distributed. Based on the Shapiro-Wilk test result above, it can be concluded that the research data were normally distributed except for both the post-test experimental and control groups. This happened because of the problem of data transformation. If there was a large change in scores between the pre-test and post-test, this could have an abnormal shift in distribution.

Table 7: Test of Homogeneity

No	Class	Indicator	Sig	Homogeneity	
				Yes	no
1	Post-test of Experimental and Control groups	Sig > 0.05	0.457	✓	

In this research, Levene's test for the post-test scores yields a significant value of 0.457. Since this value is greater (>) than the alpha (α) level threshold of 0.05, it indicates that the variance between the experimental and control groups is equal. This result confirms the assumptions of homogeneity, meaning the data across both groups is consistent in variance.

In this research, the researcher used the Mann-Whitney U test for data analysis. The Mann-Whitney U test was used to compare two independent groups of ordinal or interval data that were not normally distributed. The result of the Mann-Whitney U test can be seen in the following table:

Table 8: Test Statistics

No	Class	Indicator	Asymp. Sig (2-tailed)
1	Pretest and posttest of Experimental and control groups	Sig < 0.05	0.001

Based on the "Test Statistics" output in the Mann-Whitney U test above, the Asymp was found. Sig (2-tailed) value was 0.001, which was less than 0.05. Therefore, based on the Mann-Whitney U test decision, it can be concluded that the null hypothesis was rejected and the alternative hypothesis was accepted. Thus, it can be said that there was a difference in learning outcomes between class A (experimental) and class B (control). Because there was a significant difference, the research question could also be answered, namely "There was a significant effect in implementation of the word formation strategy on eighth-grade students' vocabulary learning at SMPN 3 Sirenja.

After ensuring that the data fulfilled the assumptions of normality and homogeneity, the researcher proceeded with hypothesis testing. Hypothesis testing aimed to determine whether the word formation strategy has a significant effect on the eighth-grade students' vocabulary learning or not. The result of the data analysis showed that the test statistics output in the Mann-Whitney U was 0.001, which was less than 0.05. it means that the null hypothesis (H_0) was rejected and the alternative hypothesis (H_a) was accepted.

This study aims to investigate the effect of implementing the word formation strategy in vocabulary teaching, especially on affixation. The findings show that word formation is an effective strategy that significantly improves students' vocabulary learning. The experimental group, which implements the word formation strategy, shows higher mean posttest scores compared to the control group, which relies on a conventional teaching strategy. Based on the result of the posttest, there is a difference in the mean score between the experimental group and the control group.

This study showed that the word formation strategy was a proven method for the effectiveness of students' vocabulary learning. The result of this research helps the eighth-grade students of SMP Negeri 2 Sirenja in vocabulary learning. This result has verified and supported the previous relevant research conducted by Sadeghi, Nasrolllahi, Mazandarani, and Mesgar (2011), which proved that students who received the treatment by using word formation strategy performed much better than the students who were instructed with conventional strategies in the posttest. Thus, applying word formation strategies enables students to create new words and develop a deeper understanding of these strategies. This understanding aids in vocabulary expansion and enhances language fluency. This research enhances students' understanding of the material, resulting in improved vocabulary knowledge during their learning process. This finding aligns with the research by Bhatti and Mukhtar (2020), who report that word formation strategy plays an important role in enabling students to grasp vocabulary. It creates interest in the students and they are eager to learn new words, and it helps in maintaining the interest and active participation of students.

However, there were also some challenges encountered. The first challenge encountered during the research was that students had a lack of vocabulary. The lack of vocabulary hinders their understanding of the material, making oral and written expression difficult. This challenge was supported by the findings of Rohmatillah (2014) who stated that students with a small vocabulary are unable to understand the content of English texts and engage in meaningful communication

In the discussion here, relevant studies also pointed to the same positive effect of word formation strategy on students' vocabulary learning results. The first research was done by Soraya M, & Mohammad Taghi H (2014) the result of the research was affixation, as one of the most essential and effective ways of word formation provides us with a good perspective to enlarge vocabulary. Second, similar research was done by Mohammad Taghi, Soraya M, & Abbas Ali Zarei (2014) the result of this research is that there is a significant effect of the number of affixes on vocabulary learning. The third research was done by Nakayama (2008) the results of the study show that using systematic teaching of prefix knowledge is effective for learners who do not have prefix knowledge at the beginning. This research also proved that the implementation of word formation strategy affects students' vocabulary learning among eighth-grade students of SMP Negeri 2 Sirenja. Based on these findings, it can be concluded that word formation strategy is an effective method for the teaching and learning process.

CONCLUSION

The study found that the Word Formation Strategy works well for teaching English vocabulary to eighth-grade students at SMP Negeri 2 Sirenja. This approach helps students create new words by adding affixes, making learning more interactive and enjoyable. Students benefit from giving and receiving feedback during the process. Statistical analysis (Mann-Whitney U test with a value of $0.001 < 0.05$) confirms that this method significantly improves vocabulary learning outcomes compared to traditional approaches. Despite the effectiveness of the word formation strategy, the research faces two main challenges: students' limited vocabulary hinders their ability to express ideas clearly, and their difficulty distinguishing between word classes (nouns, verbs, etc.) impacts text comprehension. Nevertheless, the strategy proves beneficial by teaching students how to create new words using prefixes, suffixes, and root words, which helps them understand and figure out the meanings of unfamiliar words.

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