



The Effect of Using Anagram in Learning Vocabulary in SMPN 1 Teluk Mengkudu

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Article Info	Abstract
Article History Received: 2024-04-09 Revised: 2024-05-27 Published: 2024-06-06 Keywords: <i>Effect; Anagram; Learning Vocabulary.</i>	This research aimed to find out the effect of using anagram in learning vocabulary in SMP N 1 Teluk Mengkudu during the 2023/2024 academic year. The subjects of this study were two second-semester classes, each with 32 students. The research employed a quantitative method with an experimental design. The data collection procedures were divided into three parts: pre-test, treatment, and post-test. The data were analyzed by scoring each of the two groups' papers, with each correct answer from 20 questions receiving one point. The hypothesis was confirmed as the t-observation value was higher than the t-table value ($2.046 > 1.670$) at a significance level of alpha 0.05 and a degree of freedom (df) = 62. It can be concluded that teaching students using anagram significantly affects their vocabulary learning.
Artikel Info	Abstrak
Sejarah Artikel Diterima: 2024-04-09 Direvisi: 2024-05-27 Dipublikasi: 2024-06-06 Kata kunci: <i>Memengaruhi; Anagram; Belajar Kosakata.</i>	Penelitian ini bertujuan untuk mengetahui pengaruh penggunaan anagram dalam pembelajaran kosakata di SMP N 1 Teluk Mengkudu pada tahun ajaran 2023/2024. Subyek penelitian ini adalah dua kelas semester dua yang masing-masing berjumlah 32 siswa. Penelitian ini menggunakan metode kuantitatif dengan desain eksperimen. Prosedur pengumpulan data dibagi menjadi tiga bagian: pre-test, treatment, dan post-test. Data dianalisis dengan menilai masing-masing makalah kedua kelompok, dengan setiap jawaban benar dari 20 pertanyaan mendapat satu poin. Hipotesis terkonfirmasi karena nilai t-observasi lebih tinggi dari nilai t-tabel ($2,046 > 1,670$) pada taraf signifikansi alpha 0,05 dan derajat kebebasan (df) = 62. Dapat disimpulkan bahwa pengajaran siswa menggunakan anagram secara signifikan mempengaruhi pembelajaran kosakata mereka.

I. INTRODUCTION

As an international language, English plays a crucial role in formal education at all levels in Indonesia, from kindergarten through senior high school and university. The teaching of English language focuses on four key skills: writing, listening, reading, and speaking. Once proficiency in these skills is attained, it becomes clear that vocabulary is intricately intertwined with language skills. The ability to comprehend spoken language in the listening skill necessitates a rich vocabulary to grasp the words spoken by the speaker. Similarly, the speaking skill relies on the use of words to effectively communicate with others. When it comes to the reading skill, a robust vocabulary is essential for comprehending written text found in books, magazines, newspapers, and various other sources. Finally, in the domain of writing skill, vocabulary plays a crucial role in our capacity to construct and arrange words effectively. Learning can be described as an effort to transform and shape the intellectual, attitudinal, and spiritual aspects of students as individuals. It involves learning activities organized by teachers to enhance

students' potential and fulfill various competencies, such as thinking skills, creativity, knowledge reconstruction, problem-solving, and etc (Angga et al, 2022) in (Alhayat Amsal et al, 2023:107).

The term "vocabulary" encompasses various perspectives. Traditionally, it is defined as knowledge about words and their meanings, often presented in alphabetical order. However, a word's essence goes beyond mere definitions. According to Meyer and Schmitt (2002) in (Asranida Wa Ode Lulu and Nur Melansari; 2019:117), mastering vocabulary involves understanding not only its meaning but also its form and usage. This comprehensive knowledge comprises three main components: the form aspects (word parts, write, and speak), the meaning aspects (associations, concepts and referents, and form and meaning), and the use aspects (collocations, grammatical functions, and contextual constraints). Together, these components form what is known as word knowledge. Additionally, Zhou (2010:15) in Wero Yuliana (2021:24) the importance of understanding both productive and receptive

vocabulary comprehension as a vital component of vocabulary awareness was highlighted. Receptive vocabulary knowledge involves the capacity to understand a word when encountered aurally or visually, while productive knowledge pertains to the skill of generating a word in spoken or written form. Commonly, it is believed that receptive knowledge is initially acquired and, through deliberate study, becomes accessible for productive use. Consequently, one should view vocabulary knowledge as a continuum, where a word progresses from a receptive to a productive state (Wero Yuliana 2021:24). This idea is supported by research findings indicating that students generally possess a significantly larger receptive vocabulary size compared to their productive vocabulary size. The size of one's vocabulary can also serve as a predictor for morphological awareness, meaning the comprehension of principles that dictate how morphemes are assembled to create words (Moody Stephanie et al, 2018:1). This, in turn, plays a role in the enlargement of one's vocabulary. Ultimately, the interconnection between vocabulary and morphological awareness is mutually influential.

Language skills are inherently dependent on a robust vocabulary (Wilkins in Thorn, 2002:13) in (Gultom, Rodolfo Josafat et al 2022: 10). The importance of vocabulary cannot be overstated in language, especially for conventional language learners. Insufficient vocabulary poses a significant challenge, hindering effective communication and the expression of ideas in both spoken and written contexts. Additionally, a restricted vocabulary acts as a hindrance for individuals attempting to acquire proficiency in a foreign language (Fauziati, 2008:149) in (Gultom, Rodolfo Josafat et al, 2022: 10)

Based on the practical experience of researchers at SMP SWASTA DWIWARNA MEDAN, it was observed that many students lacked interest in English learning activities, leading to boredom in the classroom. Some students were uninterested in participating in English classes and often disrupted the learning process by being noisy and disturbing their peers due to their lack of understanding of the lessons being taught. Nevertheless, there are effective strategies to create an enjoyable learning environment in the classroom, one of which involves incorporating games. Games, defined as entertaining and engaging activities that challenge learners and encourage interaction with others, are inherently enjoyable. By integrating games into the learning process, it is

anticipated that students will remain motivated and attentive. Educators have explored ways to integrate formal education with gaming to create a more enjoyable learning experience for students, enabling them to gain the necessary knowledge and academic skills in a relaxed manner. It is now acknowledged that games must be entertaining to play while also fulfilling their educational purposes.

There are some games exercises that can be used in classroom learning such as mixing words, Scattergories, estafet words, crosswords, index card, fast vocabularies, word search and anagrams. The researcher is interested in using the anagram game among various teaching techniques to enhance students' vocabulary. Anagram games can motivate and engage students, encouraging their interest in learning vocabulary. This game enables students to focus on the significance of letter positions in relation to word meanings. Some historians believe that the Greek poet Lycophron created the first anagram in 260 B.C. In 1925, a collection of approximately 5,000 English anagrams was published under the title "Anagrammasia." in (Wallwalk, Adrian; 2018:3). An anagram involves rearranging letters to form a new word and can pertain to individual words, phrases, or even people's names. For example, the term "smile" can be transformed into "miles." The fundamental principle dictates that the letters from the original word or phrase must be utilized exactly once in the resulting anagram. The process begins by listing a word or words in one column and their corresponding anagrams in the other column. The words in the second column not only serve as anagrams but also offer a (often humorous) description, explanation, or commentary on the words in the first column.

The use of methods employing anagrams can have an effect on nurturing interest in each word among students. Consequently, this curiosity drives students to seek additional information about those vocabulary words. This is also depicted by other researchers, indicating that vocabulary has a significant impact on language learning. In a study conducted (Sinaga Heppy et al, 2020: 51-60) titled "The Influence of Anagram Games on Students' Vocabulary Achievement," the researchers stated that engaging and creative methods in teaching English can influence the improvement of students' English vocabulary. Mastering vocabulary is undoubtedly a gradual and profound lifelong journey. Students frequently encounter obstacles in learning English as a Foreign Language because of

vocabulary-related challenges. Therefore, this research aims to investigate "The Effect of Using Anagram in Learning Vocabulary in SMP N 1 Teluk Mengkudu"

II. METHOD

1. Type of the Research

This study employs a quantitative approach and utilizes an experimental design. According to Creswell (2018:34), quantitative research is a method used to assess objective theories by investigating the connections between variables.

Furthermore, data is collected using an experimental design with a pre-test and a post-test. An experimental design is a plan or set of steps prepared to collect data in a research Setiyadi Bambang (2018:107). In conducting experimental study, the sample is divided into experimental and control groups to determine whether there is a significant effect of using anagrams in improving students' vocabulary in SMP N 1 Teluk Mengkudu. The research formulated it in the following figure.

Table 1. The Design of the Research

Names of Sample	Step 1	Step 2 (Treatment)	Step 3
Control Group	Pre-Test	Without using anagram	Post-Test
Experimental Group	Pre-Test	By using anagram	Post-Test

2. Population and Sample

The term "population" denotes the complete set of subjects under investigation. When a researcher aims to study all elements within a specific research area, it qualifies as a population study according to Arikunto (2013:173). In this particular investigation, the population comprises eighth-grade students from SMP N 1 Teluk Mengkudu. The school has seven classes, each class contains of 30 to 32 students with totals 220 students.

Sample refers to a portion or representative of the population being studied. It is termed a sample study when the intention is to generalize the results of the study to the population Arikunto (2013:174). The research sample consists of two classes: The stratified research sample consists of two classes, namely Class VIII-1 and VIII-2. The sample is obtained by finding a similar number of students how to make the data equal and valid. Both class VIII-1 and class VIII-2 are designated as a control group and

experimental group, comprising 32 students. The minimum passing grade (KKM) for the English subject at SMP N 1 Teluk Mengkudu School is set at 75. Therefore, the total sample size for this study is 64 students.

3. The Instrument of Collecting Data

a) Test

The instrument of this research is a test. A test is a standardized and objective method or tool employed to assess a particular variable. In this study, a fill-in-the-blank test is utilized to gauge the writing ability of students. The data collection involves two types of tests: a pre-test and a post-test. The researcher has opted for a fill-in-the-blank format for both the pre-test and post-test, each consisting of 20 questions.

b) Scoring The Test

Scoring is the assessment activity on respondent answer in the list question based on predetermined scoring criteria. The researcher conducted the test consist of 20 questions, with the score as follows:

$$\text{Students' score} = \frac{\text{Accepted score}}{\text{Maximal score}} \times 100$$

(Arikunto, 2009:236 in Sinaga Heppy et al; 2020:55)

Table 2. The criteria of the score

No	Items	Criteria
1	81-100	Very good
2	75-80	Good
3	61-74	Fair
4	0-60	Fail

c) Media

In this study, various tools are employed by the researcher, including:

- 1) Flashcard
- 2) Showing the student of how anagram is.
- 3) Worksheet
- 4) Testing the students' ability in improving students' vocabulary.
- 5) Internet connection
- 6) Searching some data, showing the student of how the vocabulary improved.

4. Technique of Data Collection

The researcher uses objective tests employing pre-test and post-test instruments. The researcher asks students to answer anagrams by filling in the blank test. When

preparing the test, the researcher must know the appropriate material. In this case, the experimental and control groups are given the equivalent test. This study employs pre-tests and post-tests administered to the experimental and control groups. The researcher utilizes these pre-tests and post-tests to observe changes between the two groups. Pre-tests are administered to measure student homogeneity. After providing treatment to the experimental group, students from each group are given post-tests to determine the teaching presentation outcomes for both groups. In this research, the experimental group uses the anagram strategy, specifically flashcards, while the control group is taught without using the anagram strategy. The data collection procedure is divided into three parts: pre-test, treatment, and post-test.

5. The Technique for Analysis Data

In this research, data obtained from the experimental group and control group. After the treatment, the data are analysed by comparing the mean of the experimental group and control group.

According to Arikunto (2014:354), in testing the difference in the mean between the groups, the t-test formula is as follows:

$$t = \frac{M_X - M_Y}{\sqrt{\left[\frac{X^2 - Y^2}{N_X + N_Y - 2} \right] \left[\frac{1}{N_X} + \frac{1}{N_Y} \right]}}$$

Where:

T = Total score

Mx = Means of experimental group

My = Means of control group

Nx = Number of students in experimental group

Ny = Number of students in control group

X = Standard deviation of experimental group

Y = Standard deviation of control group

III. RESULT AND DISCUSSION

1. Data Analysis

The research data comprises students' responses to vocabulary comprehension strategy questions. Scores from pre-tests and post-tests were conducted to the experimental and control groups. The experimental group is the group that receives the treatment or is taught using anagram flashcards, while the control group is taught without using anagram. Both groups are given

the same fill-in-the-blank tests consisting of 20 items. The time given for the pretest and post-test is 60 minutes. There are 32 students in the experimental group and 32 students in the control group. In the experimental group, the lowest pre-test score was 20, and the highest was 70. The lowest post-test score was 70, and the highest was 100. The total pre-test score for the 32 students in the experimental group was 1820, with a mean of 56.875, and the total post-test score was 2980, with a mean of 93.125. In the control group, the lowest pre-test score was 15, and the highest was 45. The lowest post-test score was 35, and the highest was 85. The total pre-test score for the 32 students in the control group was 980, with a mean of 30.62, and the total post-test score was 1930, with a mean of 60.31.

2. Discussion and Finding

This research aimed to find out the cause-and-effect relationship between two variables. The t-test formula was utilized to assess whether there was a significant difference in vocabulary between students in the experimental and control classes. Before applying the t-test, the researcher computed the mean and deviation of the experimental group.

The means of experimental groups as following:

$$\begin{aligned} Mx &= \frac{\sum d}{N} \\ &= \frac{1160}{32} \\ &= 36.25 \end{aligned}$$

The deviation of experimental group is:

$$\begin{aligned} DX^2 &= \left(\sum d^2 \right) - \frac{(\sum d)^2}{N_x} \\ &= 45150 - \frac{1345600}{32} \\ &= 45150 - 42050 \\ &= 3100 \end{aligned}$$

From calculating result, it is obtained that mean of experimental group is 36,25 and the deviation of experimental group is 3100. The researcher calculated the mean and deviation of control group before calculate the t-test.

The means of control groups as following:

$$\begin{aligned} My &= \frac{\sum d}{N} \\ &= \frac{950}{32} \\ &= 29,68 \end{aligned}$$

The deviation of control group is:

$$\begin{aligned} Dy^2 &= \left(\sum d^2 \right) - \frac{(\sum d)^2}{Ny} \\ &= 35100 - \frac{902500}{32} \\ &= 35100 - 28203,12 \\ &= 6896,88 \end{aligned}$$

From calculating result, it is obtained that mean of control group is 29,68 and the deviation of control group is 6896,88

After calculated the result of both of that group above, it is obtained that the T-test as the following:

$$\begin{aligned} t &= \frac{M_X - M_Y}{\sqrt{\left(\frac{X^2 + Y^2}{N_X + N_Y - 2} \right) \left(\frac{1}{N_X} + \frac{1}{N_Y} \right)}} \\ t &= \frac{36.25 - 29.68}{\sqrt{\left(\frac{3100 + 6896.88}{32 + 32 - 2} \right) \left(\frac{1}{32} + \frac{1}{32} \right)}} \\ t &= \frac{6.57}{\sqrt{\left(\frac{9996.88}{62} \right) \left(\frac{2}{32} \right)}} \\ t &= \frac{6.57}{\sqrt{(166.61)(0.062)}} \\ t &= \frac{6.57}{\sqrt{10.329}} \\ t &= \frac{6.57}{3.21} \\ t &= 2,046 \end{aligned}$$

Hikmawati Fenti (2020:52) states that there are two hypotheses: Ho, which indicates that there is no significant difference between the two variables, and Ha, which states that there is a substantial difference between the two variables.

According to Prawerti, Ringgi Candraning (2015:261), T-observation must be greater than T-table to determine significance. Thus,

the researcher interprets the calculated t-test value. It is explained that degrees of freedom (DF) represent the number of values that are free to vary without affecting the outcome of a statistical calculation. In this study, DF is calculated using the formula $DF = n_1 + n_2 - k$, where n is the number of samples in each group and k is the number of variables. Once the T value is calculated, it is compared to the critical value from the t-table corresponding to the degrees of freedom (DF) and the significance level (Alpha level) 0.05. In this study, the t-test score was calculated for Degrees of Freedom (DF) = 32 + 32 - 2 = 62 at a significance level of 0.05 or 5%, with a value of 1.670.

Based on the explanation provided earlier, the researcher applied the data to the t-test formula, which showed that the T-observation was 2.046 and the T-table was 1.670. That means T-observation > T-table. According to the calculations, the t-test formula for the students' vocabulary test scores indicates that the T-observation value is 2.046. At a significance level of 0.05, the T-table value is 1.670. That means the t-test statistic value is higher than the T-table value (2.046 > 1.670). In hypothesis testing, Ha is accepted if T-observation > T-table. The t-test results show that T-observation is higher than T-table as follows: T-observation > T-table (P=0.05) with DF 62 (2.046 > 1.670). The hypothesis is accepted because the t-test results indicate a positive effect of using anagrams on students' vocabulary learning.

IV. CONCLUSION AND SUGGESTION

A. Conclusion

The research results indicate a significant difference in English vocabulary between the eighth grade students of SMPN 1 TELUK MENGKUDU in the academic year 2023-2024 who receive instruction using Anagrams flashcard and without using anagrams. The research yielded a significant post-test for the experimental group that used Anagram. The T-test, with a significant level of 5% or 0.05, revealed that 2,406 was greater than 1,670, leading to its rejection and acceptance. To summarize, Anagram is effective in improving students' vocabulary because the value of the t-test > t-table. Finally, Anagram is effective for learning vocabulary.

B. Suggestion

The discussion regarding this research is still very limited and requires a lot of input. The suggestion for future authors is to study it more deeply and comprehensively about The Effect of Using Anagram in Learning Vocabulary.

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