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# Improving English Vocabulary through the Use of Flashcards in Learning English as a Foreign Language In Seventh Grade at Junior High School

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**Abstract**

The objective of this research is to find out if using flashcards can improve the student's vocabulary mastery in junior high school. This research used a quasi-experimental research design. The population of this research was the seventh grade students of SMPN 1 Lore Timur. The sample was selected using the purposive sampling technique. The sample of this research were 53 students, which were divided into 27 the students of class D as an experimental group and 26 students of class A as a control group. The data were collected through the test that consisted of pre-test and post-test. By applying the independent t-test, the researcher found there is no significant difference between the experimental and control groups ($p = 0.147$, $p > 0.05$). Thus, the hypothesis was rejected, using flashcards can't improve the student vocabulary mastery in seventh grade at junior high school.

**Keywords**: Improving, Vocabulary mastery, Flashcards


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## INTRODUCTION

Vocabulary is one of the fundamental aspects that must be mastered by students to be able to communicate effectively. Adequate vocabulary mastery allows students to read, write, speak, and listen better. According to (Atmaja and Sonia 2020) vocabulary is one of the keys to learning English. By learning vocabulary, students have an easier time learning English. In other words that vocabulary is a crucial component of language proficiency, necessary for effective communication. Therefore, vocabulary learning must be given special attention so that students can improve their English skills as a whole. (Muchyidin, 2025)

Teaching English at the junior high school level requires a comprehensive approach that covers various aspects of language learning, including listening, speaking, reading, and writing. To be specific, teaching vocabulary for seventh grade students at junior high schools as mention in the syllabus of Curriculum 2013, students are expected to be able to understand the meaning of words, as well as the context of using the words in sentences related to everyday life. Additionally, students' vocabulary skills are assessed through different forms of evaluation to ensure they not only memorize but also apply the learned vocabulary in daily life. The Curriculum emphasizes more active, creative, and enjoyable learning, so it is hoped that students will be more enthusiastic and interested in the learning process. Thus, the curriculum aims to equip students with sufficient vocabulary to support their English language proficiency in both academic and everyday contexts. (Rachmadi et al., 2023)

In fact, the effort to learn vocabulary at the secondary level or in secondary school has been identified as one of the biggest challenges. Various studies have found that many students graduate with minimal English proficiency. (Muhyiddin, 2020) A research by Abuhabil et al. (2021), found that a lack of vocabulary is a major contributing factor. Their research indicated that students faced difficulties with pronunciation, spelling, memorizing long syllables, and understanding word meanings. Similarly, research by Rachmadi et al. (2023), revealed that students struggled with vocabulary mastery. Some students had trouble remembering vocabulary, lose interest and motivation in learning English, and found it challenging to understand vocabulary within sentence structures. (Muchyidin, 2025)

This issue corresponds with the challenges identified by the researcher during several days of observation at SMPN 1 Lore Timur. The researcher found that many

seventh-grade students had limited knowledge of English vocabulary, students only knew a few verbs and nouns, had difficulty remembering simple English words, and they also had difficulty in answering simple questions in verbal communication. These limitations can be attributed to several factors. First, students often lack interest in learning English, leading to reduced attention in class. Second, the difficulty of learning vocabulary from textbooks, compounded by traditional teaching methods, hinders students' ability to grasp new words. Lastly, students frequently lose interest, causing distractions and a noisy classroom environment.

Given these challenges, it is crucial to explore more engaging methods for teaching vocabulary. One promising approach is the use of flashcards, which have been shown to be effective in enhancing students' vocabulary knowledge. Dual Coding Theory by (Rachmadi et al., 2023) serves as the foundational theory for this research. According to Dual Coding Theory, flashcards aid memory retrieval by linking a word with its corresponding image, and vice versa. Additionally, the Picture Superiority Effect supports the inclusion of images on flashcards, positing that images are more memorable than words. In this research, flashcards feature both pictures and words, with one side displaying an image and the other side a word. (Urrea et al., 2024)

Furthermore, the use of flashcards has been proven effective in enhancing students' English vocabulary skills.(Hasibuan & Depalina, 2025) According to suggested that flashcards are not only beneficial but also highly effective for teaching English vocabulary, particularly to young learners. The effectiveness of flashcards in improving vocabulary acquisition was demonstrated in a research by Amiruddin and Razaq (2022), which found that flashcard instruction was successful to teach vocabulary. Based on the explanation, to overcome the problems that the researcher found at SMPN 1 Lore Timur, the researcher is interested in using flashcards to improve students' vocabulary.

This study aims to investigate the effectiveness of using flashcards in enhancing English vocabulary acquisition among seventh-grade students in junior high schools in Indonesia. It seeks to analyze students' engagement and motivation in learning vocabulary through flashcard-based activities, as well as identify the challenges and benefits of implementing this method in an English as a Foreign Language (EFL) classroom. Additionally, the research evaluates students' vocabulary retention and recall abilities after using flashcards in their learning process. The findings of this study are expected to provide

valuable insights and recommendations for optimizing the use of flashcards as an instructional tool to improve vocabulary learning in EFL contexts.

## METHODS

### 1. Research Design

This research was conducted through quantitative research. According to (Barmo et al., 2020), to conduct quantitative research, the researcher selects questions, finds and develops tools to collect data and analyzes figures from these tools using statistics. In this research, a quasi-experimental research design was employed, incorporating both pre-tests and post-tests. The research included a control and an experimental class with the objective of enhancing vocabulary teaching mastery using flashcards. Participants were divided into two groups: the experimental class, which received the intervention, and the control class, which was instructed using conventional methods. The research was conducted from November 18 to November 30, covering a period of 12 days. (Nursanjaya, 2021) Both groups took the pre-test and post-test, but only the experimental class received instruction through flashcards. The research design was illustrated below:

**Table 1 Research design**

| Group | Pre test | Independent Variable | Post test |
|---|---|---|---|
| D | T1 | X | T2 |
| A | T1 | - | T2 |

Where:

D : Experimental Group

A : Control Group

T1 : Pre test

T2 : Post test

X : Treatment

- : No treatment

(Hatch and Farhady, 1982)

## 2. Population and Sample of the Research

### a. Population

The research population encompasses all the subjects from the data source. Specifically, this research targets all seventh-grade students at SMPN 1 Lore Timur. The total number of students across the four classes amounts to 106 students. The detailed population specifications were present in the table below:

**Table 2 The Total Population of the Seventh Grade at SMPN 1 Lore Timur**

| Classes | Total |
|---|---|
| A | 26 students |
| B | 26 students |
| C | 27 students |
| D | 27 students |
| **Total** | **106 students** |

### b. Sample

In this research, the researcher applied purposive sampling as the sampling technique.(Dityasari et al., 2022) This method was chosen because it allows for the selection of participants based on specific characteristics relevant to the research. Specifically, the researcher selected classes based on their midterm scores: class A, with the highest average midterm score, was chosen as the control group, while class D, with the lowest average midterm score, was selected as the experimental group. The characteristic of this research was the intentional selection of classes based on their midterm scores to ensure the groups represent different levels of academic performance.(Nursanjaya, 2021) The research was conducted across eight sessions: one session for the pre-test, six sessions for the treatment, and one session for the post-test.(Sultan et al., 2024)

**Table 3 The distribution of the samples**

| No | Classes | Number of students |
|---|---|---|
| 1. | VII A | 26 Students |
| 2. | VII D | 27 Students |

### 3. Research Variables

In this research, the variables divided into dependent variable and independent variable. The dependent variable is students vocabulary and the use of flashcards is the independent variable.

## RESULTS

In this research, the variables divided into dependent variable and independent variable. The dependent variable is students vocabulary and the use of flashcards is the independent variable.

### 1. Descriptive Statistics

After collecting the scores from the pre-test and post-test, the researcher conducted a descriptive statistical analysis using SPSS 24.0. Through this analysis, the mean, minimum, maximum, and standard deviation for the experimental group and control group were obtained. The results of this descriptive statistical test are presented as follows:

**Table 4 Descriptive Statistic of the pre-test and post-test Experimental Group and Control Group**

**Descriptive Statistic**

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| Pre-test Experimental Group | 27 | 14 | 67 | 33.74 | 14.330 |
| Post-test Experimental Group | 27 | 14 | 96 | 63.37 | 20.925 |
| Pre-test Control Group | 26 | 14 | 67 | 44.46 | 15.111 |
| Post-test Control Group | 26 | 28 | 96 | 55.69 | 16.757 |
| Valid N (listwise) | 1 | | | | |

Table 4 shows the descriptive statistical analysis for both the experimental and control groups. In the experimental class, which consisted of 27 students, the pre-test results showed a minimum score of 14 and a maximum score of 67, with an average of 33.74 and a standard deviation of 14.330. After the intervention, the post-test results indicated improvement, as the maximum score increased significantly to 96 while the minimum remained at 14, leading to a higher mean score of 63.37 with standard deviation

of 20.925. Similarly, in the control group of 26 students, the pre-test scores ranged from 14 to 67, with an average of 44.46 and a standard deviation of 15.111. In the post-test, the lowest score increased to 28, and the highest reached 96, resulting in a mean score of 55.69 with a standard deviation of 16.757. These findings highlight the performance changes in both groups over the course of the study.

## 2. Normality Test

After conducting a descriptive statistical analysis, the researcher then performed a normality test. The normality test was conducted to identify whether the data distribution followed a normal distribution. This process was important because most statistical methods, particularly parametric tests, assumed that the data being analyzed followed a normal distribution.(Nursanjaya, 2021) By conducting a normality test, researchers ensured the validity and accuracy of the analysis results, as deviations from normal distribution could affect the precision of statistical analysis.(Huda & Kusumawanti, 2024) Therefore, the normality test was a crucial step in determining whether parametric statistical methods could be applied if the data was normally distributed or whether an alternative non-parametric approach was necessary when the data did not meet the normality assumption. The results of the normality test were presented in the table.

**Table 5 The Result of Normality Test**

**Tests of Normality**

| | | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|---|
| | Class | Statistic | df | Sig. | Statistic | df | Sig. |
| The Learning Outcomes of students vocabulary | Pre-test Experimental Group | .178 | 27 | .028 | .930 | 27 | .070 |
| | Post-test Experimental Group | .161 | 27 | .069 | .928 | 27 | .060 |
| | Pre-test Control Group | .117 | 26 | .200* | .959 | 26 | .381 |
| | Post-test Control Group | .161 | 26 | .080 | .961 | 26 | .410 |

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

*reference : SPSS 24.0*

Based on the output from table 5, the significance value (Sig) from the Shapiro-Wilk Test for both the experimental and control groups is greater than 0.05. (Samad, 2021)Specifically, the normality test result for the pre-test in the experimental group shows

a Sig value of 0.070, which is greater than 0.05, indicating that the pre-test data in the experimental group follows a normal distribution. Similarly, the pre-test normality result for the control group shows a Sig value of 0.381, which also exceeds 0.05, suggesting that the control group's pre-test data is normally distributed. (Muchyidin, 2025)

As for the post-test, the Sig value for the experimental group is 0.060, and for the control group, it is 0.410, both exceeding 0.05, confirming that the post-test data in both groups are normally distributed as well. Therefore, it can be concluded that the data from both groups, both in the pre-test and post-test, are normally distributed.

### 3. Homogeneity test

The homogeneity test was conducted to examine the equality of variance across groups being compared. This test played a significant role in statistical analysis, particularly because many parametric methods assumed that variance across groups was homogeneous. (Azahra et al., 2024) Meeting this assumption allowed for a more accurate application of parametric methods. However, if variance was not homogeneous, alternative approaches, such as non-parametric tests or specific correction techniques, were required. The result of the homogeneity test was presented in the table:

**Table 6 The Result of Homogeneity Test**

**Test of Homogeneity of Variance**

| | | Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|---|---|
| The Learning Outcomes of students vocabulary | Based on Mean | 2.406 | 1 | 51 | .127 |
| | Based on Median | 1.597 | 1 | 51 | .212 |
| | Based on Median and with adjusted df | 1.597 | 1 | 49.925 | .212 |
| | Based on trimmed mean | 2.126 | 1 | 51 | .151 |

Based on the outcome of table 6 the homogeneity test, based on Mean shows a Sig value of 0.127. Since the probability value (Sig. value) is greater than 0.05, it can be concluded that the test results are homogeneous.

The results of Levene's test were used to examine the homogeneity of variances across groups. If the p-value was greater than 0.05, the variances across groups were homogeneous. If the p-value was less than 0.05, the variances were not homogeneous. This

result was important for determining whether the assumption of homogeneity of variances had been met before applying parametric statistical methods.

**Table 7 The Result of Homogeneity Levene Test**

**Levene's Test of Equality of Error Variances**

| Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|
| 2.406 | 1 | 51 | .127 |

Table 7 showed the results of Levene's test, a p-value greater than 0.05, indicating that the variances across groups are homogeneous. Therefore, the assumption of homogeneity of variances is met, and parametric statistical methods can be applied to the data analysis.

## 4. Testing the Hypothesis

The last step was conducting a hypothesis test by examining the statistical significance obtained from the SPSS 24.0 analysis. The table below used to compare the treatment outcomes scores of the experimental and control classes after the implementation of flashcards. Since the data were normally distributed and homogeneous, parametric test were applied to analyze the results.

**Table 8 The Result of Independent Samples Statistics**

**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 |
| Nilai | Equal variances assumed | 2.406 | .127 | 1.471 | 51 | .147 | 7.678 | 5.220 | -2.801 | 18.157 |
| | Equal variances not assumed | | | 1.477 | 49.383 | .146 | 7.678 | 5.198 | -2.765 | 18.121 |

Table 8 showed the results of the Independent Samples t-test with significance value (Sig.) of 0.127, which was greater than 0.05. The t-value obtained was 1.471 with 51 degrees of freedom (df), and the two-tailed significance value (Sig. 2-tailed) was 0.147. The mean score difference between the experimental and control groups was 7.678, with a 95% confidence interval for the mean difference ranging from -2.801 to 18.157. Since this interval included zero, it indicated that the observed score difference was not statistically significant.

Given these results, with a significance value sig of 0.127 greater than 0.05 ($p = 0.127$, $p > 0.05$), it could be concluded that there was no significant difference between the experimental and control groups. Therefore, the alternative hypothesis (Hi) was rejected, and the null hypothesis (Ho) was accepted. This meant using flashcards can't improve the students' vocabulary mastery in seventh grade at junior high school.

## DISCUSSION

This research aimed to examine whether the use of flashcards can improve the vocabulary mastery of seventh-grade students in junior high school. Based on the results of the Independent Samples t-test, the analysis showed no significant difference between the experimental group that used flashcards and the control group. The significance value (sig.) of 0.127, which was greater than 0.05, indicated that the use of flashcards did not have a significant effect on improving students' vocabulary mastery.

Compared to previous studies, the findings of this research differed from several previous studies that reported a significant improvement in vocabulary mastery through the use of flashcards. The research by Samad (2021), in a study using Classroom Action Research at SD Hafizh Al-Qurbah Parepare, reported a significant increase in students' scores after using flashcards. Similarly, Azahra et al. (2024) found a substantial improvement in students' vocabulary mastery at SDN Pondok Jagung Timur. In addition, Muhyiddin (2020) stated that flashcards were highly effective in teaching English vocabulary, particularly to young learners. A similar conclusion was confirmed by Amiruddin and Razaq (2022), who reported that instruction using flashcards successfully enhanced vocabulary acquisition.

Moreover, the findings of this research rejected the theory Dual Coding Theory, proposed by Jared. This theory stated that information was easier to understand and remember when presented in both visual and verbal forms. Thus, the use of flashcards that combined text and images should have improved vocabulary comprehension. However, in this research, no significant effect was found, even though the flashcards incorporated both elements. This can be influenced by the limitations of the research, particularly the small size of the flashcards, which may have hindered students from clearly seeing the images and text. This limitation could have reduced the effectiveness of the visual component,

thereby affecting the overall impact of the flashcards on vocabulary mastery.(Rachmadi et al., 2023)

additionally, the size of teaching media can influence its effectiveness in facilitating learning. According to Eliyanti (2017), the size of instructional media should be appropriate for students' physical proportions; it should neither be too large nor too small. The media should be easily visible and observable by all students, whether seated at the front or the back of the classroom. This means that flashcards that were too small might have made it difficult for students to read or clearly see the images.(Rachmadi et al., 2023) Therefore, adjusting the size of flashcards to a more suitable dimension could enhance their effectiveness by ensuring that all students can easily access and comprehend the visual and textual information presented. (Samad, 2021)This could be achieved by displaying flashcards in a larger format or creating bigger flashcards that allow students to clearly see the words and images from any position in the classroom.

Furthermore, the use of larger teaching media is also supported by Cognitive Load Theory, proposed by Sweller. (Azahra et al., 2024)This theory stated that extraneous cognitive load depended on how learning materials were presented. Properly designed materials could reduce extraneous cognitive load, while poorly structured materials could lead to inefficient and irrelevant cognitive processing.(Yao et al., 2024) In other words, if the flashcards had been designed more effectively, such as by using PowerPoint to help display the flashcards, their use might have been more effective in enhancing students' vocabulary mastery. By combining flashcards with PowerPoint, teachers could present vocabulary visually while ensuring that all students could clearly see the images and text, thereby maximizing the effectiveness of the learning process.

## CONCLUSION

Based on the findings of this research, it can be concluded that the use of flashcards as a learning medium did not significantly improve students' vocabulary mastery, particularly in content words such as nouns, verbs, adjectives, and adverbs. The statistical analysis indicates that the hypothesis was rejected, as there was no significant difference between the experimental group and control groups. The reason for this result was the small size of the flashcards, which may have made it difficult for students to clearly see the images and text

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