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# UTILIZING HIDDEN OBJECT GAMES TO ENHANCE EFL LEARNERS' VOCABULARY ACQUISITION

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#### **ABSTRACT**

Vocabulary mastery is a fundamental component of language proficiency, enabling learners to comprehend and produce language effectively. In English as a Foreign Language (EFL) contexts, game-based learning has been recognized for its potential to enhance learner engagement and retention. This study aims to investigate the effectiveness of a Hidden Object Game in enhancing the vocabulary mastery of eighth-grade students at SMP Negeri 2 Bungku Timur. Adopting a pre-experimental design, the research involved a single group of 21 students from the eighth grade who underwent a vocabulary pre-test and post-test. A total population sampling technique was applied to select the participants. The data were collected using a vocabulary test and analyzed using a paired sample t-test in SPSS version 24. The results revealed a significant improvement in students' vocabulary scores after the treatment, as indicated by a p-value of less than 0.05. These findings suggest that the use of a Hidden Object Game can serve as an effective medium for vocabulary development in EFL contexts.

Keywords: EFL, Hidden Object Game, Vocabulary Acquisition, Vocabulary Enhancement

#### A. INTRODUCTION

Vocabulary can be understood as the comprehensive array of lexical elements that an individual has acquired and deploys in a particular language. According to Alqahtani (2015), the significance of vocabulary is evident both inside and outside the classroom. In academic settings, successful learners often possess a richer vocabulary, which encompasses not only words themselves but also their meanings, functions, and interrelationships. An extensive vocabulary fosters effective communication, enhances reading comprehension, and facilitates the expression of complex ideas and emotions. Building a strong vocabulary is essential for achievement in academics, professional advancement, and personal growth.

Vocabulary can be classified into different categories. Moreover, Abmanan et al. (2017) explained that active or productive vocabulary refers to the ability of a person to recall and appropriately use words from memory in both oral and written communication. In contrast, Miyazaki (2019) described passive vocabulary as consisting of words that are recognized and understood by learners but are not yet actively used. Developing both types of vocabulary is crucial for language acquisition. Furthermore, Yudha and Mandasari (2021) emphasized that vocabulary development represents the initial and most critical phase in learning any language. Students who wish to acquire knowledge in a particular subject or discipline must first develop a strong foundation in vocabulary. English language learners, in particular, must first gain proficiency in vocabulary, as it underpins all four language skills: writing, speaking, listening, and reading.

In addition, Akdogan (2017) stated that teaching and learning vocabulary is an ongoing challenge for both educators and learners, largely because vocabulary instruction has traditionally been underemphasized in English as a Second Language (ESL) classrooms. According to the English teacher from SMP Negeri 2 Bungku Timur, students have difficulty improving and remembering the vocabulary, the reason is that students are often unmotivated to learn English, feeling a sense of laziness, and the learning experience itself is not engaging enough for them. They rarely consult a dictionary or do not have one, they have no interest or motivation to learn English, They have limited English proficiency, and outside influences like inadequate classroom resources and pressure from classmates also have an impact. According to Umasugi et al. (2018), several factors contributed to their difficulties. Some junior high school students had a limited vocabulary. At times, they struggled to comprehend what the teacher was saying. Additionally, these students found it challenging to communicate in English. This can lead to a lack of motivation to learn the language. The students often do not pay attention during the teacher's explanations in class. Furthermore, they tend to remain quiet when the teacher poses questions in English. As a result, most students only learn a small amount of vocabulary. Recognizing these challenges, teachers are encouraged to use effective and engaging strategies such as Hidden Object Games to help students improve their vocabulary in a fun and interactive way.

In learning vocabulary in junior high school students, Merdeka Curriculum occupies a prominent position by virtue of its emphasis on student-centered learning and innovative teaching methodologies. Mudhakomala (2022) emphasizes the goal of introducing the Merdeka Curriculum as a means of humanization, with the intention of promoting open expression and critical thinking in education. Moreover, Tirtanawati and Prastiwi (2024) stated that a significant feature of the Merdeka Curriculum is its focus on adaptability, enabling educators and educational institutions to customize instruction according to the unique demands and situations of their local areas. Furthermore, Puspita and Sabigoh (2017) emphasize that educators must select and implement various teaching methods and resources that align with the students' requirements as outlined in the curriculum. The Merdeka Curriculum is conceptualized as a flexible framework, enabling individual students to actualize their potential. This adaptability allows teachers to tailor lessons and approaches to meet the varied requirements of their learners, particularly in the domain of vocabulary instruction. Consequently, the Merdeka Curriculum empowers educators with the autonomy to implement creative and effective teaching strategies for English vocabulary, ensuring that these strategies align with the needs and characteristics of junior high school students. In addition, Faiz and Siahaan (2022) point out that all kinds of games, even ones that help with speech training can be a great addition to language learning. Therefore, implementing

Hidden Object Games can serve as a creative and engaging strategy aligned with the Merdeka Curriculum, offering students a more enjoyable and interactive way to develop their English vocabulary. Thus, hidden object games are a great way to support both teaching and learning.

According to Sari (2017), hidden object games can improve students' vocabulary and increase their motivation to learn new words. They make the learning process fun and interactive, which helps keep students engaged. Moreover, these games support vocabulary acquisition by allowing students to identify and recognize various objects, helping them retain new words through repeated visual exposure. In addition, Saputra et al. (2021) noted that games are widely recognized for boosting students' enthusiasm and engagement in learning English, making lessons feel less boring. Finding hidden objects also encourages critical thinking and problem-solving, as students must look for clues and pay close attention to details. According to Widiarsa et al. (2018), hidden object games involve players locating specific items within a visual display, often concealed among other objects to reduce contrast, which improves visual perception and concentration. These skills are essential for reading comprehension and overall academic success. Furthermore, hidden object games foster interactive and collaborative learning by encouraging teamwork and communication among students. Triana et al. (2023) also emphasized that hidden object games are effective educational tools that make learning engaging and repetitive in a way that supports memory retention. In these games, students must locate items from a list and then come forward to recall and memorize the listed objects, reinforcing vocabulary learning. Therefore, this study aims to investigate the effectiveness of using hidden object games as a medium to enhance vocabulary acquisition among junior high school students.

#### **B. METHOD**

This study employed a pre-experimental research design, namely a one-group pre-test and post-test model, as outlined by Patten and Newhart (2017). This design was chosen to examine the effect of using Hidden Object Games on students' vocabulary acquisition by comparing their performance before and after the intervention. Pre-experimental designs do not involve random assignment or a control group, which may limit internal validity; however, they are considered suitable for small-scale educational interventions, such as classroom-based studies. The research aimed to investigate the effect of the Hidden Object Game on vocabulary acquisition. The participants were all eighth-grade students at SMP Negeri 2 Bungku Timur during the 2024–2025 academic year, totaling 25 students. A total sampling technique was used, meaning the entire population of the class was selected as the sample.

The primary instrument used for data collection was a test consisting of fill-in-the-blank items and sentence-making tasks, intended to assess students' knowledge of countable nouns and action verbs. To ensure content validity, the test design followed frameworks suggested by Mardapi (2008) and Nitko (2011). The research procedure began with a pre-test to establish baseline vocabulary knowledge, followed by six treatment sessions incorporating the Hidden Object Game as an instructional strategy, and concluded with a post-test to measure learning outcomes. The treatment followed structured steps adapted from Triana et al. (2023), including group-based activities where students identified vocabulary within visual media and constructed sentences from their findings. Data were collected using both the pre- and post-tests and were analyzed using SPSS version 24. A Shapiro–Wilk test was conducted to assess the normality of data distribution due to the sample size being below 50

(Shapiro & Wilk, 1965). Subsequently, a paired sample t-test was used to compare the mean scores of pre- and post-tests, following statistical guidelines outlined by Gravetter and Wallnau (2017). This analytical approach provided evidence on whether there was a statistically significant improvement in students' vocabulary mastery. The selection of this design and analysis method aligns with research methodology best practices for small-sample, single-group studies, offering practical insights into educational effectiveness despite inherent limitations in controlling external variables.

#### C. FINDINGS AND DISCUSSION

#### The analysis of students' vocabulary score in pre-test

The researcher administered the pre-test to the eighth-grade class on April 14, 2025, to assess students' vocabulary knowledge prior to the treatment. The assessment consisted of 10 fill-in-the-blank items and 6 sentence construction tasks, all in English. The results are displayed in Table 1.

| No    | INITIAL | Score |    | Obtained |
|-------|---------|-------|----|----------|
| 110   |         | FIB   | MS | Score    |
| 1     | AB      | 32    | 52 | 84       |
| 2     | AF      | 24    | 25 | 49       |
| 3     | AA      | 24    | 25 | 49       |
| 4     | AI      | 20    | 25 | 45       |
| 5     | FR      | 24    | 30 | 54       |
| 6     | FR      | 8     | 25 | 33       |
| 7     | LT      | 20    | 25 | 45       |
| 8     | MR      | 16    | 50 | 66       |
| 9     | MNI     | 36    | 37 | 73       |
| 10    | MA      | 16    | 40 | 56       |
| 11    | MFS     | 20    | 40 | 60       |
| 12    | MK      | 24    | 35 | 59       |
| 13    | MR      | 20    | 25 | 45       |
| 14    | MR      | 4     | 33 | 37       |
| 15    | MSE     | 4     | 25 | 29       |
| 16    | MS      | 24    | 40 | 64       |
| 17    | NA      | 24    | 44 | 68       |
| 18    | RB      | 16    | 40 | 56       |
| 19    | ZI      | 16    | 25 | 41       |
| 20    | SM      | 20    | 25 | 45       |
| 21    | NH      | 8     | 35 | 43       |
|       | TOTAL   |       |    | 1101     |
| MEANS |         |       |    | 52,42    |

Based on Table 1, the highest score in the pre-test was 84, and the lowest was 33. The total score across 21 students was 1101, yielding a mean score of 52.42. This average indicates that students' vocabulary knowledge was generally low prior to receiving any intervention and suggests the need for instructional improvement.

#### The analysis of students' vocabulary score in post-test

The post-test was conducted on April 16, 2025, after the students had received instruction using the Hidden Object Game. The test was structured identically to the pre-test. The results are summarized in Table 2.

Table 2. Result of Post-Test

| Score State 1.5 |         |     |    |                |  |  |
|-----------------|---------|-----|----|----------------|--|--|
| No              | INITIAL | FIB | MS | Obtained Score |  |  |
| 1               | AB      | 40  | 53 | 93             |  |  |
| 2               | AF      | 4   | 54 | 58             |  |  |
| 3               | AA      | 16  | 45 | 61             |  |  |
| 4               | AI      | 4   | 51 | 55             |  |  |
| 5               | FR      | 4   | 58 | 62             |  |  |
| 6               | FS      | 16  | 52 | 68             |  |  |
| 7               | LT      | 12  | 35 | 47             |  |  |
| 8               | MR      | 20  | 56 | 76             |  |  |
| 9               | MNI     | 20  | 52 | 72             |  |  |
| 10              | MA      | 16  | 48 | 64             |  |  |
| 11              | MFS     | 8   | 50 | 58             |  |  |
| 12              | MK      | 4   | 58 | 62             |  |  |
| 13              | MR      | 16  | 58 | 74             |  |  |
| 14              | MR      | 4   | 45 | 49             |  |  |
| 15              | MSE     | 8   | 56 | 64             |  |  |
| 16              | MS      | 12  | 56 | 68             |  |  |
| 17              | NA      | 24  | 60 | 84             |  |  |
| 18              | RB      | 8   | 60 | 68             |  |  |
| 19              | ZI      | 20  | 23 | 43             |  |  |
| 20              | SM      | 12  | 33 | 45             |  |  |
| 21              | NH      | 8   | 47 | 55             |  |  |
|                 | TOTAL   |     |    | 1326           |  |  |
|                 | MEANS   |     |    | 63,14          |  |  |

As shown in Table 2, the highest score was 93 and the lowest was 43. The total score was 1326, resulting in a mean score of 63.14. This increase from the pre-test mean indicates improvement in students' vocabulary following the intervention.

#### **Descriptive Analysis**

According to Green et al. (2022), descriptive statistics are used to summarize and examine the characteristics of a dataset, including commonly used measures for both categorical and numerical data, and how these are interpreted in data overviews. In this study, the researcher calculated the mean scores and standard deviations for both the pre-test and post-test, as shown in Table 3.

Table 3. Descriptive Statistics

|                    | $\mathbf{N}$ | N         | Mean       |           |
|--------------------|--------------|-----------|------------|-----------|
|                    |              | Statistic | Std. Error | Statistic |
| Pretest            | 21           | 52.4286   | 2.98294    | 13.66957  |
| Posttest           | 21           | 63.1429   | 2.73799    | 12.54705  |
| Valid N (listwise) | 21           |           |            |           |

As shown in Table 3, the mean score for the pre-test was 52.4286, indicating that the students' vocabulary is, on average, below the expected standard. In contrast, the post-test mean score increased to 63.1429, reflecting improvement after the treatment. The standard error decreased from 2.98294 in the pre-test to 2.73799 in the post-test, suggesting greater confidence in the accuracy of the post-treatment mean estimate. Additionally, the standard deviation declined from 13.66957 to 12.54705, indicating that students' scores became more consistent after the intervention. The increase in the mean score, along with reduced variability, suggests that the use of the Hidden Object Game had a positive impact on students' vocabulary performance.

#### **Test of Normality**

According to Tan et al. (2024), normality testing determines whether sample data follow a normal distribution, a prerequisite for parametric statistical tests. The Shapiro-Wilk test was used due to the small sample size (N=21). The data was deemed to the distribution is deemed to be normal provided that the significance level is greater than 0.05. Conversely, if a result of less than 0.05 was obtained from the statistical test, the hypothesis that the data were not normally distributed was put forth and subsequently tested. A presentation of the normality test is provided below.

**Table 4.** Test of Normality

|          | Kolmogorov-Smirnov <sup>a</sup> |    |       | Shapiro-Wilk |    |      |
|----------|---------------------------------|----|-------|--------------|----|------|
|          | Statistic                       | df | Sig.  | Statistic    | df | Sig. |
| Pretest  | .135                            | 21 | .200* | .977         | 21 | .884 |
| Posttest | .111                            | 21 | .200* | .971         | 21 | .755 |

a. Liliefors Significance Correction

As demonstrated in Table 4., the data reveal a statistically significant value of 0.884 for each student's learning outcomes in the pre-test, as well as a statistically significant value of 0.755 for the post-test. The values obtained from this analysis indicate that the information exhibits a normal distribution, with a significance level exceeding 0.05.

#### **Paired Sample Statistics**

The researcher employed the Paired Sample Test to test this hypothesis. This table presents the results of a Paired Samples Statistics, this is a parametric test that is utilized for the purpose of conducting a comparison between two related (paired) samples, such as pre-test and post-test scores. Ananalysis of the data was conducted by researcher using SPSS 24 version.

**Table 5.** Paired Samples Statistics

|        |          | Mean    | N  | Std. Deviation | Std. Error Mean |
|--------|----------|---------|----|----------------|-----------------|
| Pair 1 | Pretest  | 52.4286 | 21 | 13.66957       | 2.98294         |
|        | Posttest | 63.1429 | 21 | 12.54705       | 2.73799         |

As demonstrated in Table 5, the paired sample t-test was utilized. The information provided shows that there are 21 students. Moreover, an analysis of the mean scores revealed that the average score before the test was 52.4286, while the average score afterwards was 63.1429, indicating an improvement. Furthermore, the initial assessment showed a standard deviation of 13.66957. The post-test, in contrast, showed a standard deviation of 12.54705. Furthermore, the mean standard error for the pre-test is 2.98294, while the mean standard

error for the post-test is 2.73799. This finding suggests that students demonstrated enhanced vocabulary proficiency following engagement with the hidden object game. This observation indicates a positive correlation between the use of the gaming medium and students' vocabulary development.

#### **Paired Sample Correlation**

To assess the extent of relationship between scores obtained from the same participants under two distinct conditions (before and after treatment), the researcher implemented the paired sample correlation method, which will be presented in this following section.

**Table 6.** Paired Samples Correlations

|        |                    | N  | Correlation | Sig. |
|--------|--------------------|----|-------------|------|
| Pair 1 | Pretest & Posttest | 21 | .677        | .001 |

As illustrated in Table 6., the data set is characterized by a paired sample correlation. The data indicates that the number of students is 21. The correlation coefficient stands at 0.677, with a p-value of 0.001. The results of this research indicate a distinct relationship between the students' vocabulary skills prior to and following the treatment.

#### **Paired Sample t-Test**

To assess whether there is a significant distinction between the means of the two connected groups (pretest and posttest), the researcher utilized a paired sample t-test. Nurba'id et al. (2024), The paired sample t-test is used to evaluate how effective a treatment is by looking at the average values recorded before and after the treatment in the same individuals. This approach is especially beneficial in drug research to identify meaningful differences caused by the treatments.

 Table 7. Paired Sample t-Test

## Paired Samples Test

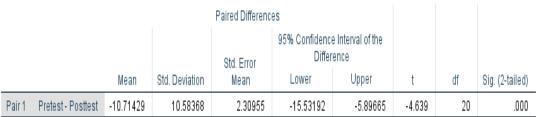


Table 7. presents the results from the paired sample examination. The paired sample examination produced a t-count of 4.639 with 20 degrees of freedom, whereas the t-table value is 2.086. The significance level is established at 0.05. Additionally, the two-tailed significance value is 0.000, which suggests that the importance level surpasses the significance value for two tails. The results from the data indicate that the Alternative Hypothesis (Ha) is upheld, whereas the Null Hypothesis (H0) is rejected. This indicates that the hidden object game effectively enhances vocabulary among eighth graders at SMP Negeri 2 Bungku Timur.

The pre-test results, conducted before the treatment, showed that students' vocabulary mastery was generally low. The total score across 21 students was 1101, resulting in a mean score of 52.43. This result indicates a need for improved instructional methods, as

vocabulary knowledge was below expected levels. Nuraeni and Lube (2020) emphasize the need for creative and student-centered learning strategies to stimulate engagement in vocabulary learning, which conventional methods often fail to deliver.

After the Hidden Object Game intervention, the post-test results revealed a mean score of 63.14, reflecting a marked improvement. This increase of 10.71 points suggests that students gained vocabulary knowledge after using the game. This finding is in line with Possumah (2024), who argued that the visual and interactive features of hidden object games stimulate curiosity and cognitive attention, both of which are essential for vocabulary learning.

Moreover, Statistical analysis using a paired sample t-test further confirmed this improvement. The t-value was 4.639, with a p-value of 0.000, which is significantly lower than the standard alpha level of 0.05. This means the difference between pre- and post-test scores is statistically significant. Consequently, the null hypothesis (H<sub>0</sub>), which posited no effect of the Hidden Object Game, was rejected, while the alternative hypothesis (H<sub>a</sub>) was accepted. These results affirm the positive influence of the Hidden Object Game on vocabulary development.

In addition, the data also showed that the standard deviation also decreased from 13.67 in the pre-test to 12.55 in the post-test, and the standard error of the mean dropped slightly, indicating greater consistency and accuracy in students' post-treatment performance. These findings support Mirta and Nuraeningsih (2021), who argue that game-based learning provides a structured yet engaging environment that enhances memory retention and student motivation. Furthermore, the Shapiro-Wilk test confirmed that both pre- and post-test data were normally distributed (p = 0.884 for pre-test and p = 0.755 for post-test), validating the use of parametric testing. This lends reliability to the results and supports the findings of Hong et al. (2022), who observed increased vocabulary retention and motivation among students exposed to hidden object games compared to traditional instruction methods.

Furthermore, in terms of correlation, the paired samples correlation yielded r = 0.677 (p = 0.001), indicating a strong positive relationship between students' scores before and after treatment. This reflects consistent learning progression among participants, aligning with the findings of Simamora et al. (2013) and Ningsi et al. (2024), who also documented vocabulary gains from game-based interventions. These findings confirm that integrating the Hidden Object Game into vocabulary instruction significantly enhances vocabulary acquisition in EFL contexts. The game's interactive and visual nature appears to engage students actively, increasing both motivation and retention, consistent with Saputra et al. (2021) and Triana et al. (2023), who advocate for the educational potential of game-based media.

#### D. CONCLUSION

This study aimed to determine the effectiveness of Hidden Object Games in improving vocabulary mastery among eighth-grade students at SMP Negeri 2 Bungku Timur. The results showed a clear increase in mean scores from 52.43 in the pre-test to 63.14 in the post-test, supported by statistically significant findings. These outcomes indicate that incorporating Hidden Object Games into vocabulary instruction can enhance students' learning outcomes. The findings are meaningful in the broader context of language pedagogy, showing that interactive, game-based learning can boost student engagement and vocabulary retention. As a practical implication, English teachers are encouraged to integrate

such games into their lesson plans to make learning more enjoyable and effective, especially for different proficiency levels. This research supports the use of Hidden Object Games as an effective and engaging tool for vocabulary development, offering valuable insight into innovative, student-centered English language teaching. However, the study had several limitations. The sample size was relatively small, and the treatment duration was limited. Additionally, the vocabulary instruction in this study focused only on two word classes, nouns and verbs, which narrows the scope of the results. Future research could explore other language components, broader lexical categories, or different game types across longer periods and more diverse groups.

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