

THE USE OF UNDERCOVER GAME TO ENHANCE STUDENTS' VOCABULARY ACHIEVEMENT

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Received: January 31, 2022

Published: May 31, 2022

Abstract: This study aimed to find empirical evidence of the use of undercover games on students' vocabulary achievement. The study used a quantitative method with a quasi-experimental design and purposive sampling technique. The total sample of this study was 70 students divided into two classes: experimental and controlled classes. The population of this study was the eighth-grade students of SMPN 108 Jakarta. The data was gained through pre-test and post-test. Both data from the tests were analyzed using a t-test in SPSS 25. The mean score in the post-test showed significant improvement between the pre-test and post-test. In the pre-test, the experimental class gained 65.82, while the controlled class gained 70.23. In post-test, the experimental class gained 78.20, and the controlled class gained 77.08. The test of the hypothesis showed that sig. 2 tailed was 0.076 while the determined alpha α was 0.05, which meant that $0.076 > 0.05$. It is supported by the result of effect size, which was 1.02 as well. It can be said that the H_0 (Null Hypothesis) was rejected, and the H_a (Alternative Hypothesis) was accepted. Therefore, the undercover game strongly affected students' vocabulary achievement.

Keywords: *achievement, effect, game, undercover, vocabulary*

How to Cite: Rosyidi, M.A., Fahriany, F., & Nahartini, D. (2022). The use of undercover game to enhance students' vocabulary achievement. *The Journal of English Literacy Education: The Teaching and Learning of English as a Foreign Language*, 9(1), 1-12. <https://dx.doi.org/10.36706/jele.v9i1.16918>.

INTRODUCTION

Vocabulary is an essential component of learning English. Students' vocabulary should be well-developed and comprehended based on their school level. Vocabulary is also a critical component in language instruction. Aligned with vocabulary is an essential element of language ability and offers a substantial foundation for how successfully language learners speak, listen, read, and write. As a result, a lack of vocabulary significantly impacts language skill acquisition; it is widely assumed that

vocabulary is the most important factor in language learning. Although the role of vocabulary as the primary tool of communication is crucial, junior high school's 2013 curriculum gives no specific time for teaching vocabulary. In other words, it is noted that vocabulary teaching and learning in Indonesia is integrated with other English skills. Unlike the other language skills such as reading, speaking, and writing, teaching vocabulary can be more flexible. Therefore, the teacher should be more creative in integrating vocabulary teaching with other language skills.

Some scholars have divided vocabulary into different definitions. According to Barnhart (2008), vocabulary is a collection of lists of words, usually in alphabetical order and defined. According to Stahl (2005), vocabulary knowledge is knowledge; knowing a word involves a definition and an understanding of how that term fits into the universe. They defined vocabulary as a collection of words that make up a language based on both statements. Simply said, it is the understanding of words and their meaning. According to Nation and Newton (1997), vocabulary is defined as the knowledge of words and their meanings. However, vocabulary is not as simple as mentioned before. According to Nation and Newton (1997), it is not only about knowing the words and their meanings but also about understanding how the words sound and how they were used in context. It indicates that having a large vocabulary must be supported by its proper application to convey or express ideas both orally and in writing.

As one of the language components, vocabulary is a crucial component for students to learn since it improves communication. People who lack vocabulary cannot communicate messages or express their views to others, and they are also unable to grasp what others say. "While without grammar, very little can be expressed, nothing can be conveyed without vocabulary," as Wilkins (1972) noted. That demonstrates the importance of vocabulary and implies that even if they do not understand the syntax perfectly, they can still express a few concepts. However, there is nothing that can be expressed since they do not know what to say because they did not master vocabulary. Although understanding vocabulary allows pupils to communicate to some extent, it is insufficient. Pupils also need to master the other language skills to make it easier for them and clarify the information to be conveyed. According to Becker (1977), a lack of vocabulary can be a significant reason for underprivileged students' failure to succeed in school. To emphasize the significance of vocabulary knowledge, Laufer and Ravenhorst-Kalovsky (2010) show that vocabulary knowledge is a critical predictor of reading success and that reading contributes significantly to vocabulary growth. Vocabulary is a helpful and vital instrument for communication and information acquisition that grows and evolves with age.

Students must have vocabulary mastery to deliver meaning and ideas since vocabulary is an essential communication component. However, unlike syntax and phonology, vocabulary does not have rules that a student may follow to gain and increase their knowledge (Eliah & Kiran, 2019). Learning vocabulary is still a struggle in Asia. Many students spend a significant amount of time and effort improving their vocabulary. However, they continue to claim that memorizing the words is complex and that there is no way to prevent forgetting them (Li & Marco, (2018). As the writers have learned, it is difficult to remember the meaning of vocabulary and apply it in a sentence. It is impossible to overstate vocabulary value in learning a foreign language. It is the link between the four abilities to speak,

listening, reading, and writing. To communicate effectively in a foreign language, students must master enough words and understand how to use them appropriately. Vocabulary learning is often regarded as dull by students, particularly those who grew up in the digital age (Yip & Kwan, 2006). As a result, teachers should find teaching methods that are compatible with their students' personalities. Especially in Indonesia, where English is not the national language, English vocabulary has grown tough to acquire, and students face great difficulty in acquiring the foreign language's vocabulary. There are some difficulties in learning English vocabulary which is caused by some factors. According to Riddell (2012), several issues arise with learning new words, including meaning, form, and pronunciation. Other factors, including spelling, grammar, length and complexity, range, connotation, and idiomaticity, make some words difficult, according to Thornbury (2002). Furthermore, Hasan (2019) discovered that the challenges were caused by several issues, including: first, the teacher's approaches, which prompted students to become less active and reluctant to participate in the learning process. Second, students are less engaged and motivated to pursue the learning process due to a lack of media and resources. Third, students with limited vocabulary repeat the exact words while creating a speech. Regarding such issues, students frequently find it difficult to study without understanding a rich vocabulary and new ways of learning vocabulary. As a result, it is critical for anyone involved in teaching English to discover an effective technique for making learning new vocabulary more enjoyable so that students enjoy attending English class and can participate in activities with others in the classroom and outside, such as expressing and sharing their feelings and ideas.

Because vocabulary acquisition is one of the most systematic activities when learning a new language in the school context, teachers try to make the lesson more interactive and motivating by introducing different activities, such as flashcards, word lists, or concept maps. One approach to discourage students from becoming bored in the classroom is to play games. Games have a one-of-a-kind role to play in the teaching of any foreign language. Both students and teachers would benefit from incorporating games into the classroom. According to many language education specialists, playing games is an efficient approach to acquiring vocabulary. According to Wright, Betteridge, and Buckby (1984), the teacher may create various scenarios in which students must use the language to interact, trade information, and express their ideas through the use of games. According to Huang (1996), learning through games can encourage the operation of specific psychological and intellectual factors that can help with communication, such as heightened self-esteem, motivation, and spontaneity, reinforcing learning, improving intonation, and building confidence. A game is another activity that might be enjoyable. According to Lewis and Bedson (1999), the game may be a suitable medium for both teachers and students. Students are drawn to study English because games are entertaining and encourage them to experiment, discover, and engage with their surroundings. According to Hansen (1994), games are very motivating and enjoyable, and they might provide timid students with additional opportunities to communicate their thoughts and feelings. As a result, the game will inspire the entire class to collaborate.

According to Sugar and Sugar (2002), games also help students enhance their learning ability. Furthermore, according to Richard-Amato (1988), games might reduce anxiety, making input acquisition more effective. According to Krashen

(1985), this environment aids in the formation of comprehensible input, including what they comprehended as they listened and read. According to McCallum (1980), it provides an opportunity to break from odd routines while also providing inspiration and difficulties. It may be stated that employing games to motivate kids and give an incentive and stimulus for them to utilize the language.

The undercover game was chosen from among the numerous available since not many studies applied it. The word "undercover game" refers to a word guessing game in which players' identities are kept secret from one another. The aim is to figure out the identity of the other players as quickly as possible to eliminate the Undercover. The principle of this game is similar to that of Taboo-related games. Taboo is a multiplayer word-guessing game in which the teller explains a word from a card while the other players try to guess it. The card shows a list of banned phrases that the teller cannot use, allowing them to improve their knowledge by reformulating and rephrasing; otherwise, the player is disqualified (Toma et al., 2017).

Studies regarding the use of the game in the classroom in both Indonesia and Asia have been carried out by earlier researchers like Thanh and Thu (2003) in Vietnam, Rizki and Wirhayati (2013) in South Tangerang, Umasugi, Bugis and Handayani (2018) in Sawa, and Noviyanti, Bahri and Nasir (2019) in Banda Aceh. However, the effectiveness of the undercover game use in the English class has never been discussed more specifically, especially in West Jakarta. It is crucial to perform a study on the effectiveness of this game because if this study states that an undercover game effectively improves students' vocabulary, then this game will be suggested to use by other English teachers. Besides, it also enriches the teaching methods that teachers can use in the classroom in Indonesia. This study is to determine whether there is a substantial difference between teaching vocabulary using the undercover game and teaching vocabulary using the traditional method.

METHODOLOGY

Subjects

This present study was conducted at a junior high school located in Cengkareng, West Jakarta. The school is a state junior high school and uses the curriculum managed by the Indonesian government, the 2013 curriculum. This school has 34 teachers and 735 students.

Design and Procedures

In this study, a quantitative methodology was employed to investigate whether or not the undercover game affected students' vocabulary achievement at SMPN 108 Jakarta. Because it is impossible to randomize people or groups into treatment and control groups, the researchers adopted a quasi-experimental design (White & Sabarwal, 2014). This is appropriate for the researchers' situation at school, where it is impossible to create a new class to conduct the research. The population in this research were eighth-grade students from SMPN 108 Jakarta. It consists of seven classrooms, each with 35 students; thus, 70 students from two classes were chosen as the sample to simplify and equalize the number of students in each class. Using the convenience sampling approach, two classes were picked: 8B as the sample for the controlled group and 8A as the sample for the experimental group for the study because only those two classes have an equal number of students. The sample was

gathered on the advice of the English teacher that the problems were primarily found at that level. In this case, a test was conducted. The test is meant to assess the students' vocabulary. The researcher utilized multiple-choice questions to assess the students' vocabulary abilities. The researchers selected multiple-choice questions since they are one of the most accessible forms of vocabulary assessments to score and create. Students were given a test that consisted of 25 test items, all of which were multiple-choice questions on both the pre-test and post-test based on school exam questions and national exams in previous years to ensure the validity and reliability of the instrument of the test.

Data Collection and Data Analysis

The study was conducted from April 9th to April 30th, 2021 and consisted of four meetings: a pre-test at the first meeting, then ongoing treatments until the fourth meeting, and finally a post-test. Because of the pandemic situation, the study was conducted online using the Zoom meetings app. The treatment used for the experimental class was playing the undercover game and noting what words were used during the game in class. Meanwhile, the treatment used for the control class is the traditional method in which the teacher explains in front of the class and the students listen to the teacher's explanation.

At the first meeting, the pre-test for both classes were conducted. The test consisted of 25 multiple-choice questions from a vocabulary test. Meanwhile, after four treatment times, a post-test was provided at the end of the meeting, which included 25 multiple-choice questions from a vocabulary test. The pre-test was used to determine how far students had gained in understanding the lesson; however, the post-test was used to see how far students had progressed in their vocabulary after taking the test. In addition, the pre-test and post-test scores of the experimental and control groups were compared. The results were then used to calculate the students' vocabulary achievement.

After obtaining the data from the score, the data were analyzed and processed using the T-test formula. However, the hypothesis must pass a precondition analytical test before doing the tests, such as the distribution normality and homogeneity tests, then continued with the T-test with a significant degree of 5%, and scores were obtained. Gain scores were used to determine the improvement or reduction in scores and the effectiveness of the media used. Gain scores are the difference between the pre-test and post-test scores of each class of the experimental and control groups. T-test was used to determine the differences between the students' pre-test and post-test scores in the experiment and control classes. To interpret the effect size, Cohen's d effect size was used as the base to determine the level of significance. The effect size criteria of Cohen's d are (Nissen et al., 2018):

- 0 – 0.2 = weak effect
- 0.21 – 0.5 = modest effect
- 0.51 – 1.00 = moderate effect
- > 1.00 = strong effect

FINDINGS AND DISCUSSION

Findings

Data collection was carried out using pre-test and post-test, then the results were followed by normality and homogeneity tests.

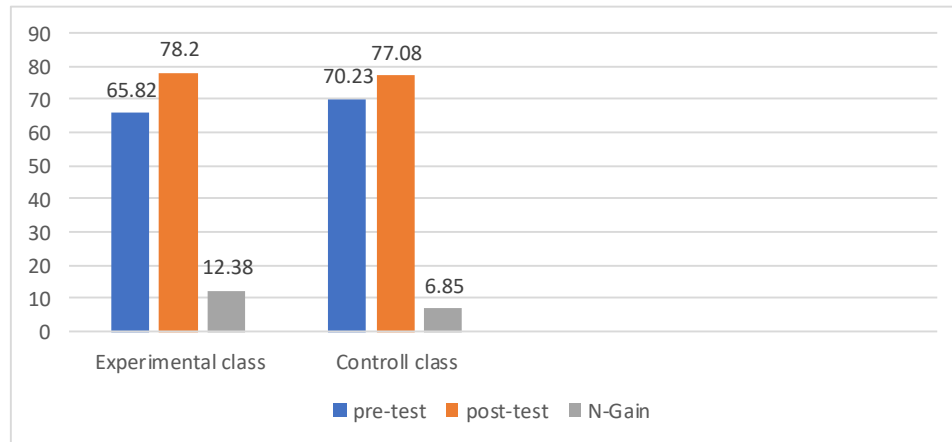


Figure 1. Mean of pre-test and post-test

Based on figure 1, the experimental class experienced an increase in scores from pre-test to post-test, namely 65.82 to 78.2, while the pre-test result for the control class was 70.23, and the post-test result was 77.08. The result shows that the difference score from the post-test of the experimental class was 78.2, while the post-test of the control class was 77.08. It means the experimental class gets a higher score than the control class. The score of N-Gain is the difference between the pre-test and post-test results. The mean score of the N-Gain experimental class was 12.38, and the mean score of the N-Gain by controlled class was 6.85. Then the test results are followed by normality and homogeneity tests.

Table 1. Normality test of pre-test experimental and control class

| Class | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|---------------------|---------------------------------|----|-------|--------------|----|------|
| | Statistic | Df | Sig. | Statistic | Df | Sig. |
| Pre-test experiment | .121 | 35 | .200* | .954 | 35 | .146 |
| Control | .095 | 35 | .200* | .966 | 35 | .337 |

a. Lilliefors Significance Correction

Table 1 showed pre-test and post-test of the experimental and controlled. The pre-test score of the experimental class was 0.200, and the controlled class was 0.200. Both the data were higher than >0.05 . The normality test of a pre-test for the experimental and controlled class was normal, and the data was normally distributed.

On the other hand, the data presented in table 2 showed post-test of the experimental and controlled classes had a significance score of $0.200 > 0.05$. Therefore, the controlled class had a significance score of $0.200 > 0.05$. In short, the post-test normality test results for the experimental and controlled classes were higher than 0.05, meaning the data was normally distributed. After the data were normally distributed, the author conducted a homogeneity test to show that experimental and controlled class comes from populations with the same variance.

Table 2. Normality test of post-test experimental and control class

| Class | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|----------------------|---------------------------------|----|-------|--------------|----|------|
| | Statistic | Df | Sig. | Statistic | Df | Sig. |
| Post-test experiment | .103 | 35 | .200* | .964 | 35 | .302 |
| Control | .087 | 35 | .200* | .971 | 35 | .483 |

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

a. Lilliefors Significance Correction

According to table 3, the significance score of the pre-test of the experimental and controlled class was $0.068 > 0.05$, while the post-test of the experimental and controlled class was $0.076 > 0.05$; it revealed that the data was homogeneous since the data score was higher than 0.05.

Table 3. Homogeneity test of pre-test experimental and control class

| | Levene Statistic | df1 | df2 | Sig. |
|-----------|------------------|-----|-----|------|
| Pre-test | 3.436 | 1 | 68 | .068 |
| post-test | 3.326 | 1 | 68 | .076 |

After the data were normally distributed and homogenous, the next step is to evaluate the data by using a t-test to answer the research question about whether or not the information gap in this research is successful.

Table 4. Calculation of T-test result

| | | Group Statistics | | | |
|-----------|------------|------------------|-------|----------------|-----------------|
| | | N | Mean | Std. Deviation | Std. Error Mean |
| Post-test | Experiment | 35 | 78.20 | 8.043 | 1.360 |
| | Control | 35 | 70.23 | 7.746 | 1.309 |

Table 4 presents the average value of the experimental and control classes. There are 35 students in each class. From the data above, the average value of the experimental class is 78.20, and the average value of the control class is 70.23. It can be seen that the average score of the experimental class is higher than the average score of the control class. This shows that information gap activities are helpful for teaching.

After that, the last stage of the processing data is calculating the independent t-test. An independent sample T-test is assessed to compare the average score of two unrelated groups. The result of the calculation is presented in table 5.

The result of an independent test was significant (2-tailed) was 0.000. The significant (2-tailed) is lower than t-table or sig $\alpha = 0.05$ (5%). It supports the alternate hypothesis and refuses the null hypothesis. Furthermore, the effect size calculation was 1.02, which means it is at a strong level. Therefore, it can be concluded that the undercover game is effective in developing students' vocabulary.

Table 5. Calculation of T-test result

| | | 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 | Lower | Upper | |
| Post-test | Equal variances assumed | .041 | .841 | 4.223 | 68 | .000 | 7.791 | 1.888 | 4.205 | 11.738 | |
| | Equal variances not assumed | | | 4.223 | 67.904 | .000 | 7.971 | 1.888 | 4.205 | 11.738 | |

Discussion

This research aims to determine the impact of using an undercover game on students' vocabulary achievement. This study's results revealed that the undercover game significantly impacted students' vocabulary achievement of the eighth-grade students of the school where two classes were selected. The first class was 8A as the experimental class that consisted of 35 students, and the second class was 8B as the controlled class that consisted of 35 students. Based on the statement above, the result of the research has answered the research question that was intended to determine whether there is a substantial difference between teaching vocabulary using the undercover game and teaching vocabulary using the traditional method. The following paragraphs explain the complete data result.

In this research, the result was obtained from pre-test and post-test for both experimental and controlled classes. According to the data description, the pre-test score was used to determine students' vocabulary levels before receiving treatments. According to the pre-test results, the experimental group's mean score was 58.82, whereas the controlled group was 61.31. The difference between the two groups' pre-test results was 2.49 points. The pre-test revealed that the experiment group's mean score was lower than the control group.

Furthermore, the experiment class received an undercover game treatment for around five meetings, but the control class did not. The experiment class received a significant result of the mean post-test score, namely 78.20. Meanwhile, the control group's average score was 77.08. Both classes improved in the post-test score, but

only the control class improved by 6.85 points, from 70.23 to 77.08. Meanwhile, the experiment class went from 65.82 to 78.20, increasing by 12.38 points. It is plausible to suppose that the experiment class's post-test score climbed substantially more than the control class as a result of being taught via the undercover game.

Furthermore, an independent sample test was used to see whether the usage of an undercover game had any or a positive impact on students' vocabulary achievement. The post-test p-value or sig (2-tailed) was 0.000, which was lower than sig α (0.05). The null hypothesis has been rejected, whereas the alternative hypothesis has been accepted. As a result, it was proven that using the undercover game positively impacted students' vocabulary achievement. Furthermore, the calculation of Cohen's criterion in determining the impact size of this study confirmed the conclusion. This research received a score of 1.02, indicating a significant impact. Furthermore, the outcome above answered the research topic posed throughout this study.

This research is also supported by a previous study from Noviyanti, Bahri, and Chairina (2019). The title of their research is *The Use of Think Bingo Game to Improve Students' Vocabulary Mastery at SMPN 16 Banda Aceh*. The researchers used a quantitative method and used a think bingo game as the method for learners. They compared the result score without using the pre-test think bingo game as a treatment and the post-test think bingo game as a treatment. The researcher used the T-test formula to evaluate vocabulary test achievement in the think bingo game. The outcome revealed a gap in context between students using and without thinking bingo games. The calculation result of this research shows that the score = 6,18 > $t_{table} = 1.72$ with the level significance 0.05. This means that SMPN 16 Banda Aceh's students think bingo games will enhance the mastery of students' vocabulary (Noviyanti et al., 2019).

Another research was from Umasugi, Hanapi, Bugis, and Handayani (2018). The research title is *The Scramble Game in Improving Students' Vocabulary at the Seventh Grade of MTS LKMD Sawa*. The study is about how games are essential and effective when used in EFL classrooms. It is a pre-experimental design, namely The One-group pre-post-test design in conducting the data. In addition, the result of the research is that the game had a significant difference when it was implemented in the learning process. It is proved by the mean score of the rate students' post-test result of 73.83 was higher than the pre-test 61.05 (Umasugi et al., 2018).

Finally, a study entitled *Teaching Vocabulary by Using Guessing* was conducted by Wahyuni (2020). The research was designed to find the effectiveness of teaching vocabulary by using guessing games on SMP Negeri 19 Palembang in the academic year 2018/2019. The data were collected through a written test and analyzed by using paired t-test formula. The result of the research shows a significant effect inside the classroom. It can be seen by the average score of the pre-test was 48.3 and the average score of the post-test was 58.4. The result of comparing the matched t-test (t-obtained) with the t-table was 7.37. At the 5% significance level (0.05) in the one-tailed test, the critical value of the t-table is 1.687, in other words, the result of the t-test was $7.37 > 1.687$ which means the null hypothesis (H_0) was rejected and the alternative hypothesis (H_a) was accepted, or it can be said that it was significantly effective to improve the students' vocabulary ability by using guessing games (Wahyuni, 2020).

Even though previous research differs from this present study in several ways, they are nevertheless considered to be supportive of the study. It can be concluded that the undercover game has a favorable effect on the vocabulary success of the students in the school throughout the 2020-2021 academic year. In addition to being a fun approach to find new languages and chances, the undercover game is also a means by which they can discover new languages and cultures.

CONCLUSION AND SUGGESTION

Based on the finding above, it could be concluded that the students' scores using the undercover game were better than those without using the undercover game after discovering the results and analyzing the evidence from the study on the use of undercover game on students' vocabulary achievement. It can be seen in the rising test scores of students who learned vocabulary through an undercover game. Furthermore, using the t-test to compare the value of t_o and t-table, it was found that t_o is higher than the t-table ($t_o > t\text{-table}$). Finally, it can be concluded that the use of undercover games has a significant impact on the eighth-grade students of the sample students. The students' interest in studying vocabulary was also increased due to the undercover game. Students were very enthusiastic about pursuing the English lesson throughout the learning process, using the undercover game as the strategy in the experiment class. They have become more confident, more able to ask questions, and more likely to share new words they have learned.

Several suggestions are recommended for teachers, students, and researchers interested in applying a method in teaching and learning activities. The English teacher should be innovative when planning classroom teaching-learning activities, particularly when acquiring new vocabulary. Teachers should be able to create a good situation during the teaching and learning process in the classroom to catch students' attention in learning English. Also, an English teacher should use appropriate teaching techniques with the material they want to deliver to students. For students, it is better to be more active in a classroom to participate in each material presented by their teacher. They were paying attention to the teacher and other students while they asked a question or gave an explanation. In the study, explaining the rules of the games and how to play the game took a great deal of time; thus, to save time is by giving a demonstration involving students as a demonstrator. It makes students more curious so that they will pay more attention.

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