



The Effectiveness of Using Scrabble to Increase Students' Vocabulary Mastery

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Abstract

This study investigates the effectiveness of using Scrabble as a cooperative learning model to enhance students' vocabulary mastery. The research involved 35 students and employed pre-test and post-test designs to assess the impact of the intervention. Statistical analysis revealed significant improvements in students' vocabulary understanding, with an average pre-test score of 56.3 increasing to 76.0 post-test. The analysis indicated a mean gain of 20 points and a 20% increase in learning outcomes. Normality tests confirmed the data's distribution, and homogeneity tests of variance showed consistent results across the groups. The findings suggest that Scrabble effectively enhances students' vocabulary skills, supported by a t-value of 3.48 ($p < 0.05$), indicating a significant difference pre- and post-intervention. These results highlight Scrabble's potential as an engaging tool for improving conceptual understanding in educational settings.

Keywords: *Scrabble, cooperative learning, vocabulary mastery, educational intervention, learning outcomes (Alphabetical)*

Introduction

Vocabulary is one of the most important elements to master when learning English. Experts agree that effective vocabulary learning methods should be multimodal, involving repetition, real context, cognitive engagement, and a balance of explicit and implicit learning. A combination of these strategies has been shown to be more effective than relying on a single approach, such as memorization. In addition, by using English extensively, students are expected to acquire the four English skills of speaking, reading, writing, and listening. Vocabulary is usually learned through memorizing vocabulary and regular practice. explicit vocabulary learning research is to understand how more structured and direct teaching approaches can help students acquire and use vocabulary better, and to explore the

factors that influence the success of these methods in different contexts and groups of learners. This research also aims to provide practical guidance for educators in selecting and implementing the most effective vocabulary teaching strategies. Improving English language teaching effectively and successfully is not an easy task for teachers, so English teachers must be able to coordinate teaching and learning events. In fact, memorizing words can be boring and make it difficult for students to learn English.

Learning vocabulary also improves your writing and speaking skills. From the above, it is clear that vocabulary is one of the aspects of a language that you should learn. Learning vocabulary is important because learners can understand the meaning of each vocabulary word by speaking, writing, and listening. Without a good and sufficient vocabulary, you will not be able to communicate effectively and express your ideas well, both orally and in writing. Apart from this, limited vocabulary is also an obstacle when learning other languages. On the other hand, one of the requirements for learning a foreign language is to master the language, especially English, as vocabulary richness affects a person's language proficiency.

In the real world, vocabulary is very important to enhance message understanding. However, it is important to note that vocabulary comprehension is not complete without the ability to listen carefully. This is because if elementary school students cannot hear, they may misunderstand the meaning of the words and messages. Vocabulary is also an important element in reading. The richer a student's vocabulary, the better their reading comprehension, and this affects their discourse and reading comprehension. The number of favorite words indicates that the person has acquired a lot of knowledge

This means that vocabulary, which represents complex and often multiple meanings, is central to language and important for language learners in general. Without sufficient vocabulary, you will not be able to communicate and express your thoughts both orally and in writing. Vocabulary is a major component of language skills and is a large part of the basis of how well a learner speaks, listens, reads and writes. Observations from school researchers at SMKN 2 LUWU UTARA found that some students had problems using English to communicate. They found that students' English proficiency will still not be up to standard, and some students only had basic knowledge of English but were unable to communicate with other students in English. Therefore, when teachers interact with students in the teaching and learning process, there needs to be an intertwining of English and Indonesian so that students can better understand the learning process and teachers and students can communicate more easily in class.

The most important thing about this game is to increase students' vocabulary about all aspects of life. This game helps students memorize and practice vocabulary during lessons, review some vocabulary at the end of lessons, and remind them of vocabulary acquisition after some activities. Regardless of the

purpose, board games are considered effective games that increase learners' motivation and help them pay more attention to vocabulary. Games are fun and can improve the atmosphere in the classroom. Furthermore, because the language used in any activity is unpredictable, teachers should encourage students to actively construct language for themselves.

To improve students' vocabulary acquisition, researchers are using the Scrabble method of Scrabble. Scrabble is a fun game designed to help you review vocabulary, whether it's from the lesson you just taught or the lesson you taught last week. It can also be used at the beginning of class to get students active. This is a great way to test what your students already know about the subject you want to teach. Learning vocabulary is crucial to learning the English language. In communication, vocabulary helps the speaker to express their opinions, ideas, and feelings. Vocabulary is usually learned through vocabulary memorization and practice routines.

Scrabble is a great game to practice vocabulary, whether it's from the lesson you just taught or the lesson you taught last week. It can also be used at the beginning of class to get students active. *Scrabble* games are an evolution of board games as general games that can be played on a board, table, or floor. Board games are a fun way for students to practice their English while participating in competitions. *Scrabble* games are unique when teachers incorporate them into their teaching tools. The application of the school *Scrabble* game is believed to increase students' curiosity and creativity. Moreover, board games are the best solution to solve the teacher's problem and are very interesting games to enjoy learning and competition at the same time. Students can be taught to practice English, especially vocabulary, while participating in some competitions.

Method

In this study, the researcher intended to use a quantitative method. The researcher planned to conduct the data based on a pre-experimental design with pretest-posttest. The researcher chose a pre-experimental design because it was assumed there would be a relationship between the dependent variable and the independent variable. The independent variable in this research would have been Scrabble, and the dependent variable in this study would have been students' vocabulary mastery. The population of this research was the XI Grade students of SMKN 2 Luwu Utara in the academic year 2023/2024. In this research, the researcher selected one class, XI A, consisting of 35 students as the sample. They were third-grade students of SMKN 2 in the academic year 2023/2024.

The research instrument for this study was a vocabulary test consisting of 15 multiple choice questions. Each test consisted of questions on verbs and questions on nouns. The test was conducted twice: before and after the intervention. Firstly, there was a pre-test. The purpose of the pre-test was to assess students' baseline vocabulary knowledge. This test involved a first meeting before using the board

race method and a second meeting after the pre-test itself. It was administered before any treatment or the use of *scrabble*. In conducting the test, the experimental group received a pre-test before the treatment, and was given a post-test after the treatment.

The researcher administered the pre-test to the students. In the preparation of multiple-choice test instruments to measure comprehension ability, validity and reliability are two important aspects that must be considered to ensure the quality and accuracy of the test. Validity is related to the extent to which the test actually measures the intended vocabulary ability. The test must have content validity by covering vocabulary material that is in accordance with the curriculum, such as synonyms, antonyms, and word usage in context. In addition, construct validity is needed to ensure that the questions really measure the understanding of the meaning of words, not just recognition of forms or memorization. Criterion validity can also be used by comparing test results with other relevant test results that have been proven valid.

Meanwhile, reliability shows the consistency of test results, both between items (internal reliability) and from time to time (test-retest reliability). A high reliability coefficient indicates that the test has stability and can be relied on in measurement. In addition, the split-half technique can also be used to assess consistency between two parts of one test. By ensuring high validity and reliability, comprehension tests will not only provide accurate and consistent results, but will also support a more effective language learning process. Therefore, systematic testing and evaluation of the instrument need to be done before the test is widely used.

Pre-Test

The pre-test was a vocabulary test consisting of 15 multiple-choice items. Each test consisted of verb questions and noun questions. The pre-test was given before the treatment.

The Steps of Treatment

The treatment was given to the experimental group using Scrabble. Here's a breakdown of the steps in past tense:

- a) The teacher greeted the students to open the class.
- b) The teacher explained the material about descriptive text relevant to the game that was given.
- c) The teacher explained the steps and rules of the game.
- d) The teacher divided the students into two teams.
- e) The teacher drew two parts on the whiteboard to be the boundary for each group and then wrote the name of each group. (White/black board can stay the same)
- f) The teacher explained to the students that in their teams they had to take turns running up to the board and writing a word related to the topic.
- g) The application of Scrabble

involved the teacher reading the word, and students writing the word with the meaning one by one within 10 minutes. h) After that, the teacher counted the words, and the team with the correct words was the winner. i) The teacher asked the students to pronounce each word written on the board. j) Lastly, the teacher gave prizes to the winning team and asked the students to share their opinions after playing the game.

Post-Test

After the treatment was given to the students, the researcher collected the data based on the post-test to determine the effect of Scrabble in English teaching and students' vocabulary achievement. The post-test consisted of a vocabulary test comprising 15 multiple-choice questions, with questions about verbs and questions about nouns.

Data analysis

While implementing a Scrabble game application to improve students' English vocabulary, it was important to choose the analysis method according to the data obtained and the research purpose. Additionally, careful statistical calculations needed to be performed to ensure accurate and reliable analytical results. In this study, the data was processed using a scoring rubric. The data analysis that was used was a normality test to determine which activities or products were evaluated. These activities and products were tailored to the competencies and learning objectives that were to be achieved.

Classification	Range of score
Very Good	95 - 100
Good	85 - 90
Fair	75 - 80
Lack	55 - 65
Fail	0 - 35

Results

Data Description

1. Specific Research Findings

The description of each group can be outlined based on the statistical analysis of central tendency as see in the summary results below:

Based on the data obtained from the pre-test results of applying the cooperative learning model in the form of *Scrabble* to enhance vocabulary understanding and frequency distribution data in the appendix can be outlined as follows: the average student score is 56.3; Variance = 204.608; Standard Deviation (SD) = 14.304; maximum value = 80; minimum value = 27, with a range of values

(Range) = 53. Meanwhile, the data obtained from the post-test results of The Effectiveness of Using Scrabble to Increase Students' Vocabulary Mastery can be outlined as follows: the average student score is 76.0; Variance = 110.382; Standard Deviation (SD) = 10.506; maximum value = 93; minimum value = 53, with a range of values (Range) = 40.

Table 2. Pre-test and Post-test Data for the *Scrabble* Class.

SUMMARY OF ANALYSIS RESULTS		
VARIABLE	Pre-test	Post-test
N	35	35
SUM	1969	2661
MEAN	56,3	76,0
VARIANCE	204,608	110,382
SD	14,304	10,506

The meaning of the variance results above is that the application of the *Scrabble* to enhance students' vocabulary understanding has **diverse** or **differing** values among students, as we can see that the variance values exceed the highest value from the data above. Quantitatively, this can be seen in the following table.

Tabel 3. Frequency Distribution Data on the Effectiveness of Using Scrabble to Increase Students' Vocabulary Mastery

Pre-test

Class	Interval Class	Frequency	Personates
1	27-35	3	8,57%
2	36-44	3	8,57%
3	45-53	10	28,57%
4	54-62	7	20,00%
5	63-71	6	17,14%
6	72-80	6	17,14%

Summary	35	100%
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Tabel 4. Frequency Distribution Data on the Effectiveness of Using Scrabble to Increase Students' Vocabulary Mastery

Post-test

Class	Interval Class	Frequency	Personates
1	53-59	1	2,86%
2	60-66	3	8,57%

Advanced Table 4.

3	67-73	14	40,00%
4	74-80	7	20,00%
5	81-87	7	20,00%
6	88-94	3	8,57%
Summary		35	100%

Based on these values, a histogram of the group data can be constructed as follows.:

The evaluation categories of pre-test and post-test data from The Effectiveness of Using Scrabble to Increase Students' Vocabulary Mastery can be seen in the following table.

a. Research Results Description

After collecting both pre-test and post-test data, the next step is the analysis phase. The initial analysis conducted is the comparison of learning outcomes both in the pre-test and post-test in the experimental class. The comparison of data on conceptual understanding abilities before and after treatment is as follows.

Table 5. Comparison of Results: The Effectiveness of Using Scrabble to Increase Students' Vocabulary Mastery

The Effectiveness of Using Scrabble to Increase Students' Vocabulary Mastery				
No. Respondents	Pre-test	Post-test	Difference	Percentage

1	60	73	13	13%
2	60	80	20	20%
3	67	73	7	7%
4	80	87	7	7%
5	73	93	20	20%
6	67	67	0	0%

Advanced Table 5.

7	60	73	13	13%
8	73	73	0	0%
9	73	73	0	0%
10	27	73	47	47%
11	67	93	27	27%
12	53	87	33	33%
13	53	93	40	40%
14	60	87	27	27%
15	53	80	27	27%
16	40	67	27	27%
17	27	80	53	53%
18	47	87	40	40%
19	53	87	33	33%
20	47	60	13	13%
21	47	67	20	20%
22	47	53	7	7%
23	27	80	53	53%
24	47	87	40	40%
25	60	67	7	7%

26	40	87	47	47%
27	60	60	0	0%
28	67	67	0	0%
29	47	67	20	20%
30	40	60	20	20%
31	60	67	7	7%
32	67	73	7	7%

Advanced Table 5.

33	73	80	7	7%
34	67	80	13	13%
35	73	80	7	7%
Summary	1960	2660	700	20%
Mean	56	76	20	

Based on the table above, it can be seen that in the class before receiving treatment, the average student learning outcome is 56, while for the average student learning outcome after being given treatment, namely the cooperative learning model in the form of *Scrabble*, the average learning outcome becomes 76. This means that based on the average increase of 20 points, there is a learning outcome increase percentage of 20%.

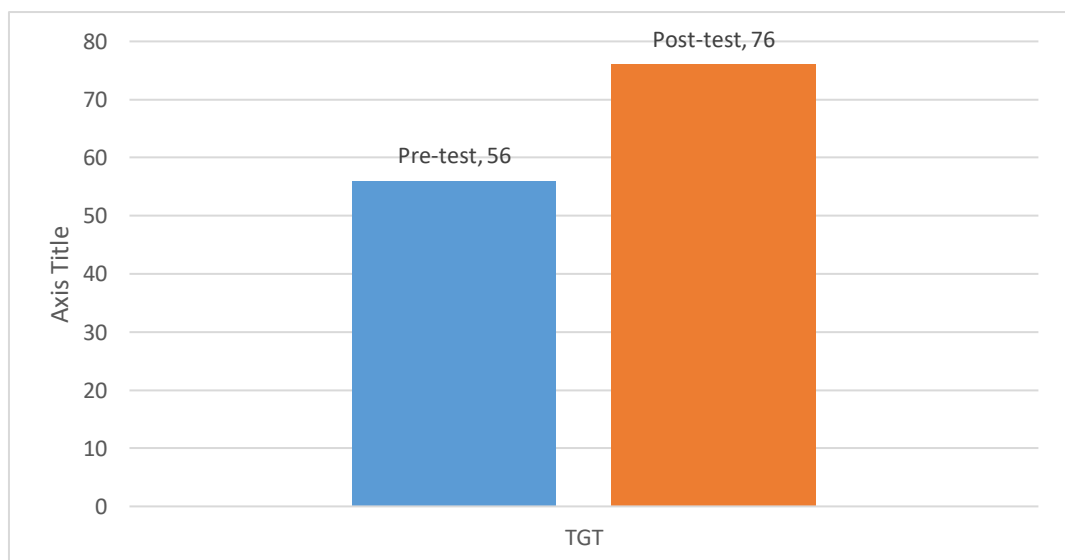


Figure 1. Histogram of Comparison: *Scrabble* Learning Model

A. Prerequisite Analysis Test

Before conducting regression analysis on student test results, it is necessary to perform prerequisite data tests, including: First, that the data is sourced from a saturated sample. Second, the sample is from a population with a normal distribution. Third, the data groups have homogeneous variances. Therefore, tests for the prerequisites of normality and homogeneity analysis will be conducted on the distribution of the collected test results data.

1. Normality Test

One technique in normality testing is the Lilliefors technique, which is an analysis of prerequisite testing before hypothesis testing. Based on the selected sample, the null hypothesis is that the sample is from a population with a normal distribution, and the alternative hypothesis is that the population is not normally distributed. The condition is that if the calculated T-value < tabulated T-value, then the research data is normally distributed. If the calculated T-value > tabulated T-value, then the research data is not normally distributed. The results of normality analysis for each subgroup are explained as follows:

Table 6. Normality Test for Pre-test and Post-test: Increase Students' Vocabulary Mastery

Group	L-value	L-table $\alpha= 0,05$	Note
<i>Pre-test</i>	0,117	0,150	Normal
<i>Post-test</i>	0,128	0,150	Normal

Based on Table 4.4, it is shown that the normality test results for the pre-test data are obtained as $0.117 < 0.150$. Meanwhile, for the post-test data, it is $0.128 < 0.150$. Thus, it can be concluded that students' mathematical conceptual understanding abilities are **normally** distributed.

2. Homogeneity Test

The homogeneity test of population variance, which is normally distributed, is conducted using the F-test. The condition is that if the calculated F-value < tabulated F-value, then H_0 is accepted and H_a is rejected, indicating homogeneity of variance. If the calculated F-value > tabulated F-value, then H_0 is rejected and H_a is accepted, or the variance is not homogeneous.

Based on the homogeneity test, the obtained F-value is 1.81, and the tabulated F-value is 3.27. Since the calculated F-value < tabulated F-value, which is $1.81 < 3.27$, H_0 is accepted and H_a is rejected. Therefore, the variance of the data on students' mathematical conceptual understanding abilities comes from a homogenous population.

B. Hypothesis Testing

The hypothesis data of this research were tested using an independent sample t-test with the formula of Separated Variance assisted by Microsoft Excel. The statistical hypotheses are as follows:

Independent sample t-test was used to compare the mean differences between the experimental group (application of the cooperative learning model in the form of *Scrabble*). This test is useful to observe if there is a significant difference in the measured variable. The hypotheses tested are:

H_0 : There is no improvement in conceptual understanding skills after the application of the cooperative learning model in the form of *Scrabble*.

H_a : There is an improvement in conceptual understanding skills after the application of the cooperative learning model in the form of *Scrabble*.

Based on the calculation of students' vocabulary understanding abilities, the data obtained are as follows:

Table 7. Summary of Hypothesis Testing Results

No.	TValue	Tabulated Tvalue	Conclusion
1.	3,48	2,03	Ha is accepted

Based on the analysis, it can be observed that the obtained t-value is 3.58. To determine its significance, we need to refer to the t-table at a significance level (α) of 0.05 with $df = n_1 + n_2 - 2$, where n_1 and n_2 are the sample sizes of the two groups. With $df = 35 + 35 - 2 = 68$, the t-table value at a significance level of 0.05 for a two-tailed t-distribution is 2.03.

Based on the results of the previous analysis, it can be seen that the obtained t-value (3.48) is greater than the t-table value (2.03). This means that in this study, the null hypothesis (H_0) is rejected, and the alternative hypothesis (H_a) is accepted. H_a states that **"there is an effectiveness of using scrabble to improve students' vocabulary mastery."**

Based on the gain score, the improvement in conceptual understanding skills during the learning process is considered moderate. This can be seen in the summary presented in the following Table 8:

Table 8. Summary of Gain Score Results

Note	Score
Pre-test Average	56,00
Post-test Average	76,00
<i>Gain Score</i>	0,41
N-Gain	Currently

Discussion

This section discusses the findings of the study based on the two research questions that were posed. The study aimed to determine whether or not the use of scrabble can improve students' vocabulary mastery.

Based on the data obtained, the use of scrabble was found to improve students' vocabulary mastery. This is evidenced by the statistical data showing a significant difference between pretest and posttest scores. The improvement can be seen from the results of the mean score and the dependent t-test. The mean score of the students increased. On the pretest, the mean score was 56.00, while on the posttest the mean score was 76.00. This score shows that the posttest was better than the pretest.

Furthermore, the results of the study showed that the t obtained (3.48) was higher than the t table (2.03). This finding allows this study to reject the null hypothesis and accept the alternative hypothesis. In other words, this indicates that students' vocabulary mastery improved through the use of scrabble.

Limitations and Weaknesses

Before presenting the research findings, the limitations and weaknesses of this study are first discussed. This is necessary to avoid errors in utilizing the research results.

The research describes The Effectiveness of Using Scrabble to Increase Students' Vocabulary Mastery. In this study, the researcher only focused on vocabulary materials, specifically verbs and nouns, and did not address the comprehension abilities of other sub-materials. This is one of the limitations and weaknesses of the research. In learning, many factors support students' social skills activities, one of which is the instructional model used. In this study, the researcher only examined The Effectiveness of Using Scrabble to Increase Students' Vocabulary Mastery, without considering other instructional methods. Furthermore, during the research process, the researcher made every effort to

supervise the post-tests; however, instances of cheating occurring beyond the researcher's supervision, such as students copying from their peers, represent a weakness and limitation of the study.

Conclusion

This study focuses on teaching and learning using the Scrabble game to improve students' vocabulary mastery. The aims of this research are to determine the effectiveness of the Scrabble game in teaching vocabulary to tenth graders at SMKN 2 Luwu Utara, and also to find out students' responses to the use of this technique. This research is pre-experimental in nature, with a one-group pre-test and post-test design. This research uses one class with a sample of 35 students. There are two instruments in this research, namely pre-test and post-test.

The findings of the study show that after several treatments, students' vocabulary improved. This can be seen from the results of the data analysis. First, related to the test results, students' vocabulary mastery before being taught using the Scrabble game was low, and after the treatment was carried out, the post-test data showed that almost all students got high scores. Furthermore, the statistical analysis showed that the obtained t-value (3.48) is higher than the t-table (2.03) which indicates that the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted, meaning that students' vocabulary mastery after being taught using the Scrabble game is better than before.

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