

The Influence of Scrabble Games on Word Formation in Writing Ability at Grade 11th Students of SMA PGRI Pekanbaru

Dilla Lestari

200602004@student.umri.ac.id

English Education Department

Muhammadiyah Riau University

Ardiya

ardiya@umri.ac.id

English Education Department

Muhammadiyah Riau University

Shahidatul Maslina

ms@umk.edu.my

English Education Department

Malaysia Kelantan University

Abstract

This study investigates the influence of Scrabble games on word formation in the writing ability of 11th-grade students at SMA PGRI Pekanbaru. The primary objective of this research is to determine whether the use of Scrabble as a learning tool can enhance students' ability to form words effectively and improve their overall writing skills. A quasi-experimental design was employed, involving two groups: an experimental group that utilized Scrabble games in their learning process and a control group that followed conventional teaching methods. Data were collected through pre-tests and post-tests, focusing on students' word formation and writing performance. Based on research, it is observed that the average pre-test score in the experimental class was 62.17, while the average post test score was 72.00. In contrast, the average pre-test score in the control class was 62.88 with a post-test average of 67.96. This indicates an enhancement in the experimental class. The independent Sample T-test conducted using SPSS version 25 yielded a probability value or sig (2-tailed) of 0.043, which is less than 0.05. The results revealed a significant improvement in the experimental group's ability to form words and construct coherent written texts compared to the control group. This suggests that Scrabble games can serve as an effective and engaging tool to enhance students' vocabulary acquisition and writing proficiency. The result of this study provides valuable insights for educators seeking innovative methods to improve writing ability in the classroom.

Keywords: Scrabble Games, Word Formation, Writing Ability, Vocabulary Acquisition, 11th-Grade Students, SMA PGRI Pekanbaru.

Introduction

Language is an essential tool for communication in human interaction. In the context of education in Indonesia, English is taught as a mandatory foreign language. However, many students face difficulties in remembering and correctly using vocabulary. This research focuses on the use of Scrabble games to enhance students' writing abilities, especially in word formation.

The ability to write effectively is a crucial skill for students, particularly in the context of learning a foreign language such as English. However, many students face significant challenges in mastering writing skills, particularly in word formation and vocabulary usage. At SMA PGRI Pekanbaru, grade 11 students have been observed to struggle with retaining and applying vocabulary correctly in their writing. This issue is compounded by traditional teaching methods that often fail to engage students, leading to boredom and disinterest in learning English. The present study addresses these challenges by investigating the potential of using Scrabble games as a pedagogical tool to enhance word formation and overall writing ability among these students. By integrating a fun and interactive game into the learning process, this research aims to provide insights into effective strategies for improving students' writing skills.

This study aims to explore the influence of using Scrabble game as a unique and enjoyable approach to improving word formation skill, and the overall writing abilities English learners at SMA PGRI Pekanbaru. In addition, the Scrabble game is not an unfamiliar medium for learning English words. Memory games, such as Scrabble, can assist students enhance their English vocabulary. This game can train students to compose words, sentence or discourse and improve vocabulary instruction which can motivate students to memorize the terminology that they have kept in their memory.

Students made mistakes when they were required to write down nouns and animals based on what they heard; for example, some students wrote "flag" as "fleck" and "cat" as "ket" and then "hour" as "hawer". Moreover, another example is how they descriptions incorrectly. For instance, they spell "self" as "sef" and "street" as "strit", along with many other incorrect word formations in their writing. Based on the researcher's experience before implementing the Scrabble game in class, student's still encountered problems related to mastering English vocabulary and word-formation in English Language Learners. English language students at SMA PGRI Pekanbaru frequently suffer from word structure in their writing, reducing their capacity to convey them clearly and effectively.

Methodology

This study employs a quantitative approach with a quasi-experimental research design. The sample consists of 60 grade 11 students divided into two groups: the experimental group (35 students) and the control group (25 students). Data were collected through pre-tests and post- tests measuring students' writing abilities. This study used a quasi-experimental research design. Hastjarjo (2019:189) a subset of standard experimental research is called quasi- experimental research. The goal is to predict conditions that can be achieved through actual experiments. In quasi-experimental research, researchers compare groups with different conditions or treatments to find cause-and-effect relationships. The participant groups in this study were selected randomly, but there were obstacles in quantified the dependent variables. The group participants in this study were chosen randomly, yet there were issues with quantified the dependent variable. Comprehensive data collection, processing, and interpretation of quantitative data are necessary for quasi-experimental research. These studies have two variables: an independent variable (X) and a dependent variable (Y). The influence of Scrabble games was the independent variables in this study and student's ability to generate words in their writing ability was the dependent variable.

From the source table above, it can be seen that there are two classes, namely control class and experimental classes, where the control class does not implement the treatment and in

in the experimental class the treatment was carried out by playing the Scrabble games. The treatment is only for the experimental class. As an indicator in this study, Scrabble is utilized to teach nouns, verbs, adjectives, adverbs, and word formation. The strategy was used for at least eight meetings. The kinds of material used in teaching vocabulary are Descriptive text. The data collected were analyzed using SPSS 25. The analysis included descriptive statistics to determine mean scores and standard deviations, normality and homogeneity tests, and a paired sample t-test to assess the significance of any differences between pre-test and post-test results.

After collecting data from the pre-test and post-test of the experimental and control classes, the researcher used IBM SPSS 25 to establish whether the Scrabble Game was beneficial in enhancing students' writing ability at SMA PGRI Pekanbaru. The researcher analyzed the data by calculating the proportion of students' total test scores. Data were collected through pre-tests and post-tests administered to both the experimental and control groups. The tests were designed to assess students' writing abilities, focusing on their capacity to form words and construct coherent written texts. The normality test was conducted to determine whether the data obtained in this study were normally distributed or not. According to Field (2013), the normality test was an important step in statistical analysis because many parametric statistical methods required the assumption of data normality.

To know the students' level, the researcher classifies the students levels based on the results of their accumulated scores. The scoring of writing based on (Weigle (2002:72) and Jacobs, 1981, p. 185). There are the criteria of students range score base on (ArikuntoS. , 2009, p. 245).

Table 1. Classification of score

Score	Criteria
100-80	Excellent
79-66	Good
65-56	Enough
55-40	Less
39-30	Fail

The scores of the post-test were used to measure students' writing ability with and without the Scrabble game. The normality test is a test to know whether the data distributed normal or not. According to Razali and Wah (2011), the Shapiro-Wilk test was more sensitive and had higher statistical power than other normality tests, such as Shapiro-Wilk especially for small samples ($n < 100$). In this research, the researcher will use Shapiro-wilk to analyze the data using IBM SPSS Statistic 25. with the analysis for testing the normality is as follows:

1. If p -value (sig.) > 0.05 = the data was normal distribution.
2. If p -value (sig.) < 0.05 = the data was not normal distribution.

Moreover, the homogeneity test is to determine whether the data was from homogeneous population or not. The analysis could be seen as follows:

Ha: population was homogeneous

1. If p -value (sig.) > 0.05 = Ha is rejected

2. If p -value (sig.) < 0.05 = H_a is accepted

To find the significant effect of the Scrabble game, a paired sample t-test was used with the following hypothesis:

H_a : There is a significant effect of using Scrabble game to improving writing ability students at SMA PGRI Pekanbaru.

The analysis could be seen as follows:

1. If the probability or $Sig. < \alpha (0.05)$, H_a is accepted
2. If the probability or $Sig.) > \alpha (0.05)$, H_a is rejected

Results and Discussion

The results of the research indicate a significant improvement in the writing abilities of students in the experimental group who used Scrabble games. The average pre-test score for the experimental group was 62.17, which increased to 72.00 after the intervention. In contrast, the control group showed a smaller increase from a pre-test average of 62.88 to a post-test average of 67.96.

The independent Sample T-test conducted using SPSS version 25 yielded a probability value (sig 2-tailed) of 0.043, which is less than the significance level of 0.05. This indicates that the Scrabble game had a statistically significant effect on the students' ability to form words and improve their writing skills. The data was collected using SPSS IBM 25 Version, and the pre- test and post-test results for the experimental and control classes are shown below.

1). The Result of Students' Pre-test Score

Pre-test results from the experimental class and the control class were used to gather data. The post-test results can be categorized as follows:

Table 2. The Descriptive Analysis of Pre-Test Experimental Class Descriptive

Descriptive Statistics						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Pre-test Experimental	35	42	44	86	62,17	10,127
Valid N (listwise)	35					

Based on the descriptive analysis table above, it can be seen that number of students in the Experimental class are 35 students. The average pre-test score of the Experimental Class is 62, 17 with the minimum score of 44 and the maximum score on scale of 86 with a standard deviation of 10,127.

Table 3. The Descriptive Analysis of Pre-Test Control Class

	N	Range	Minimum	Maximum	Mean	Std. Deviation
Pre-test Control	25	31	49	80	62,88	8,428
Valid N (listwise)	25					

According to the descriptive statistic table above, the control class consisted of 25 students with a mean pre-test score of 62.88 and a maximum pre-test score of 80. While the minimum score was 49 and the standard deviation was 8.428.

2) The Result of Students' Post Test Score

The experimental class received treatment utilizing the Scrabble game, whereas the control class employed the Conventional Technique. The researcher administered a post-test to both classes following therapy. The post-test assessed student's writing abilities following the treatment. The post-test results indicated the following:

Table 4. The Descriptive Analysis of Post-Test (Experimental Class)

Descriptive Statistics						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Post-test Experimental	35	29	60	89	72,00	7,761
Valid N (listwise)	35					

The descriptive data table above shows that the experimental class had 35 students. The experimental class's minimum post-test score was 5 points higher than that of the control class. The experimental class had a higher maximum post-test score than the control class by 7 points. Furthermore, the mean scores in both courses indicate that the experimental class had a higher mean score of 72.00. The following table shows the post-test description statistics for the control class:

Table 5. The Descriptive Analysis of Post-Test (Control Class)

Descriptive Statistics						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Post-test Control	25	27	55	82	67,96	6,985
Valid N (listwise)	25					

Based on the descriptive analysis table above, it can be seen that the number of students in the control class is 25 students. The average post-test score of the control class is 67.96 with the lowest score of 55 and the highest score at 82 with a standard deviation of 6.985.

3) Normality Test

The normality test determined if the collected data had a normal distribution. The researchers carried out the Shapiro-Wilk normality test with SPSS version 25. The results of the normalcy testing analysis may be found in the table below:

Table 6. The Result of Normality Test by Using SPSS

Tests of Normality		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
Class	Test Score	Statistic	df	Sig.	Statistic	df	Sig.
	Pre-test	0,114	35	.200*	0,970	35	0,451
	Experimental						
	Post-Test	0,173	35	0,009	0,943	35	0,069
	Experimental						
	Pre-test	0,094	25	.200*	0,961	25	0,441
	Control						
	Post-test	0,145	25	0,185	0,959	25	0,393
	Control						

The results of the normalcy testing analysis may be found in the table below:

1. If the sig. (Shapiro-Wilk) value was > 0.05 , then the data was declared normally distributed.
2. If the sig. (Shapiro-Wilk) value was < 0.05 , then the data was declared not normally distributed.

According to the table above, the Experimental Class's P value or Sig. for the pre-test score is 0.451, whereas the Control Class's P value or Sig. for the pre-test score is 0.441. The significance value is greater than 0.05, indicating that the data is regularly distributed. This signifies that the probability value (p-value) for both the control and experimental classes exceeds ($>$) the level of significance of 0.05. Thus, it is possible to conclude that the distribution of data from students' pre-test scores in the control and experimental classes is normal. Furthermore, for the post-test of the control class with a significance level of 0.069, and the post-test of the experimental class with a sig. of 0.393, the data were also normally distributed.

4) Homogeneity Test

The homogeneity test is a statistical method used to check if the spread or variance of data in two or more whether the difference in variance between the groups is statistically significant or if they are likely due to random chance. The analysis could be seen as follows:

1. If Sig. or P-value > 0.05 the data is homogeneous
2. If Sig. or P-value < 0.05 the data is non-homogeneous

The result of the homogeneity test could be seen in the following table:

Table 7. The Result of Homogeneity Test by Using SPSS

Test of Homogeneity of Variance		Levene				
		Statistic	df1	df2	Sig.	
	Test Score	Based on	0,913	1	58	0,343
		Mean				
		Based on	0,356	1	58	0,553
		Median				
		Based on	0,356	1	56,946	0,553
		Median and				
		with adjusted				
		df				
		Based on	0,850	1	58	0,360
		trimmed mean				

Based on the data analyzed above, the table showed the results of homogeneity based on the mean score. The homogeneity test of variance in the control class and the experimental class showed a significance of 0.343. It can be concluded that 0.343 is greater than 0.05, which means that the data variance is homogeneous.

5) Hypothesis

The hypothesis in this study was investigated using independent t-test. The independent t-test is designed to examine whether or not the scrabble game technique influences writing abilities. In this test, the researcher used SPSS version 25.

1. If the probability or $\text{Sig. (2-tailed)} < \alpha (0.05)$, then H_0 is rejected. And H_a is accepted.
2. If the probability or $\text{Sig. (2-tailed)} > \alpha (0.05)$, then H_0 is accepted. And H_a is rejected.

The hypothesis data was analyzed using SPSS version 25 from the pre-test and post-test of the experimental class as shown below:

Table 8. Hypothesis Test of Experimental Class

	Independent Samples Test								
	Equality Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Interval of the Difference	
Test Score	0,913	0,343	2,071	58	0,043	4,040	1,951	0,135	7,945
Equal variances assumed					2,108	54,872	0,040	4,040	1,916
Equal variances not assumed						0,199			7,881

Based on the Independent Samples Test results provided, researcher can determine whether the null hypothesis (H_0) is accepted or rejected by comparing the Sig. (2-tailed) value with $\alpha = 0.05$. Based on the results of the t-test:

$\text{Sig. Value (2-tailed)} = 0.043$, which is less than 0.05. Thus, H_0 is rejected and H_a is accepted. Conclusion: There is a significant influence of Scrabble games on word formation in writing abilities between students who are taught using Scrabble games and students who are not taught using Scrabble games.

The researcher addresses the results of "the influence of scrabble games on word formation in writing ability of grade 11 students of SMA PGRI Pekanbaru" in this section. The results demonstrated that the experimental class that underwent scrabble game treatment improved their writing abilities far more than the control class that used traditional approaches. The experimental class's average post-test score (72.00) was considerably higher than that of the control class (67.96), with a difference of 4.04 points. This shows that scrabble games are effective in improving students' writing abilities, especially in terms of vocabulary and organization, as evidenced by higher scores in these categories. During the implementation of the scrabble game, students in the experimental class

showed increased engagement and motivation. According to Ardiya, A. (2018) Interest in learning and motivation need to be increased in every students which would ultimately has an impact on improving students achievements at school. The game provides a dynamic and interactive learning environment, encouraging students to actively participate in vocabulary building activities. This is in line with the observed increase in vocabulary scores, which increased from 91.05 (pre-test) to 85.29 (post-test) in the experimental class.

However, the mechanics score remained in the "poor" category (46.29), indicating that although the Scrabble game improved vocabulary and organization, its impact was limited to technical aspects of writing, such as punctuation and spelling. This suggests that while the game is effective in improving certain writing skills, it may need to be supplemented with additional strategies to address other areas of writing proficiency. The results of this study are consistent with previous research highlighting the benefits of game-based learning in education. For example, studies by Wright et al. (2019) and Chen et al. (2020) have shown that games such as Scrabble can improve vocabulary acquisition and retention by providing a fun and interactive learning experience. Likewise, constructivist learning theory, which emphasizes active participation and engagement, supports the use of games as a tool to foster deeper understanding and skill development. This study is also in line with Mutia Khaira (2020) who stated that to assess the improvement in learning outcomes for vocabulary utilizing Scrabble game media. Other researchers also revealed Dewi Purnama (2022) learning activities with the Scrabble game can be fun away to help students to achieve vocabulary.

Then, the limited improvement in mechanics scores contrasts with several studies that have reported broader benefits of game-based learning across all aspects of writing. This discrepancy may be attributed to differences in the implementation of the game or the specific focus of the intervention. For example, while the Scrabble game primarily targets vocabulary and word formation, other games or strategies may be more effective in addressing technical writing skills. The results of this study have several implications for teaching practice. First, the Scrabble game can be a valuable tool for improving students' vocabulary and organizational skills in writing. Teachers can incorporate this game into their lessons to create a more engaging and interactive learning environment.

Conclusion

According to the results of a study on the impact of the Scrabble game on the ability to form words in the writing skills of class XI students at SMA PGRI Pekanbaru, the use of the Scrabble game had a significant impact on improved students' word formation abilities in writing. The results showed that the experimental class deployed the Scrabble game had a significantly higher level of writing ability than the control class used the standard technique. The experimental class's average post-test score was 72.00, while the control class's was just 67.96, a 4.04-point difference. Although there was an increase in vocabulary and organization aspects, the mechanics score remained in the "poor" category (46.29), indicating that although the Scrabble game was effective in improving vocabulary and structure, its impact on technical aspects of writing such as punctuation and spelling was still limited. This is evident from the increase in the average post-test score in the experimental class compared to the control class. Aspects of writing abilities that have improved include vocabulary, writing organization, grammar, and writing mechanics.

In conclusion, this study shows that playing Scrabble is an effective approach for boosting students' writing skills, particularly vocabulary and structure. However, it has a limited impact on technical components of writing, such as mechanics. These findings show the potential of game-based learning as a supplemental tool in education, as well as the importance of a diverse approach to addressing all areas of writing proficiency. Future study should explore strategies to improve the usefulness of Scrabble and overcome its limitations.

This study is consistent with earlier studies on the benefits of game-based learning in education, which supports the use of games as a method to boost student engagement and motivation in learning. The use of Scrabble helps students understand word structure and expand their vocabulary. The Scrabble game has been proven effective in increasing student motivation and participation in learning English. Students look more enthusiastic and active in the learning process.

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