

THE EFFECT OF RIDDLE GAMES TO IMPROVE VOCABULARY OF EIGHT GRADERS AT SMP SATAP NEGERI NIAN

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Abstract

This research aimed to determine the effect of riddle games on improving the vocabulary achievement of the eight graders at SMP Satap Negeri Nian. The research subject was class VIII A, which consists of 20 students. This research design was pre-experimental with a pre-test and post-test design. The students did a pre-test, received treatment, and did a post-test. The research results indicated increased students' vocabulary achievement—the average post-test score was 77, more than the pre-test 45. For a level of significance (α) of 5% and $df = 19$, the table value was 1.729, and the t-test value was 1.68. It showed that the t-test value was more significant than the t-table ($1.68 \geq 1.729$). Thus, teaching vocabulary using riddle games significantly influenced vocabulary. The students' vocabulary was classified as fair, good and excellent.

Keywords: *Effect, Riddle Games, Vocabulary*

INTRODUCTION

Vocabulary is one of the components of languages that should be acquired to communicate effectively with other. It is the fundamental element when someone learns a foreign language (Felogau, 2018). One technique for teaching vocabulary is games. These games can encourage many learners to remain interested in learning. Playing games enhances students' learning abilities and brain function, keeping them interested and engaged in their studies. One game that can be used to help students enhance their vocabulary is riddle games (Nugroho et al., 2017).

Riddles are practical tools for language acquisition as they demand students to employ a range of linguistic abilities to solve a problem and higher levels of critical thinking. When playing a riddle game, learners must not only comprehend the meaning of the question but also generate possible answers. Learners must connect pre-existing questions and answers (Dewiana, 2023). Applying the riddle game as a teaching strategy in the classroom can help with language learning by boosting listening, vocabulary, and speaking skills (Purnamasari, 2019).

Some research focused on improving students' vocabulary achievement by using riddle games has been conducted by some scholars. First, Rohman et al. (2024) observed that the word search riddles game has become an innovative approach to teaching vocabulary in class 12 MA. This study aimed to examine the effectiveness of this game as a learning aid and how well students respond to it. The result showed that implementing riddles has excellent outcomes, including improving students' vocabularies. Second, Wilda et al. (2024) researched classroom action to improve seventh graders' vocabulary using riddle games. The result revealed a significant improvement in vocabulary, and the students were active and enthusiastic during the lesson. Third, Megi et al. (2023) employed a quasi-experimental design to improve ninth graders' vocabulary using riddle games. The study asserted that riddle games were effective in improving students' vocabulary. The students were also motivated in the teaching and learning process using riddle games. Last, Sinaga et al. (2022) researched how a riddle game affects students' vocabulary mastery in grade ten of SMK Swasta HKBP Pematangsiantar. The study found that the riddle game substantially influenced the vocabulary knowledge of students in grade ten at SMK Swasta HKBP Pematangsiantar. Previous studies have pinpointed that learning vocabulary is not an easy thing. The students often struggle to memorize and use the word in a sentence. That is why teachers should encourage themselves to be creative in selecting the approach and the method of teaching English to make it easier and fun to learn a new vocabulary. Sitepu (2018) stated that learning methods that involve interactive techniques can help students enhance their vocabulary because if the method captures their attention, they will enjoy and absorb the material more easily. The similarity and difference between previous and current research was using riddle games. However, it can be differentiated by the subject, location, and cultural background.

Based on observations during teaching practice at SMP Satap Negeri Nian, the researcher found that vocabulary was one of the students' problems. Students were less enthusiastic about reading, had difficulties understanding the meaning of words, and were lazy about using dictionaries. It occurred because they did not know the meaning, could not use it, or knew the references well. These vocabulary problems must be solved because they would hinder students from learning English. Therefore, the researcher decided to research improving students' vocabulary by using riddle games. This research focused on finding the effect of using a riddle game to improve vocabulary achievement of the eighth-grade students at SMP Satap Negeri Nian. Furthermore, it analyzed the level of eighth-

grade students at SMP Satap Negeri Nian vocabulary achievement after being taught by using a riddle game. Therefore, the null hypothesis (Ho) was that riddle games did not affect students' vocabulary achievement. Meanwhile, the alternative hypothesis (Ha) was that riddle games affected improving students' vocabulary achievement.

METHOD

The researcher applied a pre-experimental method. This method aimed to determine the effect of using riddle games to improve students' vocabulary. Sugiyono (2017) states that a pre-experimental design only involves one group or class and is given a before and after test. One group pre-test and post-test design is done on one group without a control or comparison group. Using purposive sampling, VIIIA was selected as the sample of this research. Before treating the students using a riddle game, the researcher gave a pre-test (a multiple-choice test) to determine their vocabulary achievement. After giving the pre-test, the researcher used the riddle game to develop the student's vocabulary for three meetings. The researcher presented and introduced the material using riddle games and showed the students how to play them. After giving the treatment, the researcher gave a post-test to measure the results of the treatment after teaching vocabulary through the riddle game. Finally, data analysis steps were carried out using quantitative analysis.

RESULTS AND DISCUSSION

At the first meeting, the researcher administered a pre-test to students to determine their vocabulary mastery before giving treatment. After giving treatment three times, the researcher conducted a post-test. The results of the pre-test and post-test are presented in Table 1.

Table 1. Students' pre-test and post-test score

No.	Students	Pre-test	Post-test
1	AF	44	92
2	SS	72	80
3	AO	64	76
4	MN	60	80
5	NK	54	76
6	AL	60	80
7	NL	36	72
8	DM	36	64

9	YO	44	72
10	MK	60	76
11	HP	56	80
12	RB	60	80
13	KT	52	76
14	DK	40	72
15	MT	40	72
16	DN	72	88
17	RT	56	80
18	VM	60	88
19	AO	64	92
20	CK	60	84
Total		1.090	1580

Based on the score in Table 1, the scores are classified into five-level classifications. The level of classification is presented in Table 2.

Table 2. The rate percentage of the frequency of pre-test

No.	Classification	Score	Frequency of Pre-Test	Percentage of Pre-Test
1	Excellent	80-100	0	0%
2	Good	70-79	2	10%
3	Fair	60-69	8	50%
4	Poor	50-59	4	15%
5	Very poor	0-49	6	25%
Total			20	100%

Before the treatment, no students were classified as excellent; two students were classified as good, eight students were classified as fair, four were classified as poor, and six were classified as very poor. The total score in the pre-test was 1.090. The result reflects low vocabulary because some students obtained poor and very poor scores. The following is the calculation process to determine the mean and standard deviation in the pre-test in Table 2.

$$x = \frac{\sum x}{n}$$

$$x = \frac{1090}{20}$$

$$x = 54.5$$

Based on the pre-test results, the data shows that the mean pre-test score is 54.5. It shows that students' vocabulary is still low because some students got poor and very poor scores, ranging from 36-56. Next, the researcher calculated the standard deviation from the pre-test.

$$SD = \sqrt{\Sigma x^2 - \frac{(\Sigma x)^2}{n}}$$

$$SD = \sqrt{61.716 - \frac{(1090)^2}{20-1}}$$

$$SD = \sqrt{61.716 - \frac{1.188.100}{19}}$$

$$SD = \sqrt{\frac{61.716 - 59.405}{19}}$$

$$SD = \sqrt{\frac{2.311}{19}}$$

$$SD = \sqrt{122}$$

$$SD = 6.4$$

After determining the mean (X) of the pre-test, 54.5, and the standard deviation, 6.4, the researcher concluded that the students' vocabulary is in the very poor category. After the treatment was carried out in three meetings, the researcher gave a post-test in the experiment class, which was VIII A, with a number of 20 students. The post-test scores for vocabulary mastery are presented in Table 1. Based on Table 1 regarding students' vocabulary scores, the researcher calculated the frequency of score classification in the following table.

Table 3. The rate percentage of the frequency of post-test

No.	Classification	Score	Frequency of Post-Test	Percentage of Post-Test
1	Excellent	80-100	11	60%
2	Good	70-79	8	35%
3	Fair	60-69	1	5%
4	Poor	50-59	0	0%
5	Very poor	0-49	0	0%
Total			20	100%

Table 3 shows the improvement in students' vocabulary achievement after using the riddle game. Eleven students received excellent scores, eight received good scores, and one received fair scores. The total score on the post-test was 1580. Furthermore, the post-test results revealed that no student had poor or very poor classification. In this table, the researcher studied the data of students' post-test scores to see if there was a significant difference in students' achievement before and after the learning process when using the riddle game to improve students' vocabulary.

$$x = \frac{\Sigma x}{n}$$
$$x = \frac{1580}{20}$$
$$X = 79$$

The post-test results show that the mean is 79. From that analysis, almost 20 students' vocabularies had excellent and good scores. Next, the researcher calculated the standard deviation of the post-test.

$$SD = \sqrt{\Sigma x^2 - \frac{(\Sigma x)^2}{N-1}}$$
$$SD = \sqrt{123.248 - \frac{(1580)^2}{20-1}}$$
$$SD = \sqrt{123.248 - \frac{2.496.400}{19}}$$
$$SD = \sqrt{123.248 - \frac{124.820}{19}}$$
$$SD = \sqrt{\frac{1572}{19}} \quad SD = \sqrt{82}$$
$$SD = 8$$

Meanwhile, to see students' scores, a statistical test is carried out to determine D using the following formula:

$$D = \Sigma \frac{D}{N} = \frac{490}{20} = 24,5$$

Finding out the difference by calculating the t-test value by using the following formula. The calculation the t-test value:

$$t = \frac{D}{\sqrt{\frac{\Sigma D^2 - (\Sigma x)^2}{\frac{n}{N(N-1)}}}}$$

$$t = \frac{24,5}{\sqrt{\frac{61.532 - (490)^2}{\frac{20}{20(20-1)}}}}$$

$$t = \frac{24,5}{\sqrt{\frac{61.532 - \frac{240.100}{20}}{20(19)}}}}$$

$$t = \frac{24,5}{\sqrt{\frac{61.532 - 12.005}{380}}}$$

$$t = \frac{24,5}{\sqrt{\frac{49.527}{380}}}$$

$$t = \frac{24,5}{\sqrt{130}}$$

$$t = \frac{24,5}{11,4}$$

$$t = 2.14 = 2$$

Table4. The test of significant

Variable	T-test	T-tablevalue
Pre-test–post-test	2.14 =2	1.729

(Data source: Primary data processing)

A general comparison of students' pre-test and post-test scores shows an increase in the quality of their vocabulary from poor to fair, fair to good, and good to excellent. Pre-test and post-test data are then used to evaluate the hypothesis using the dependent t-test. The dependent t-test only indicates one group; it does not differentiate between girls and boys. To determine the degree of freedom (df), the researchers utilized the following formula.

$$Df = N-1$$

$$Df = 20-1$$

$$Df = 19$$

For a level of significance (α) of 5% and $df = 19$, the table value is 1.729, and the t-test value is 1.68. It shows that the t-test value exceeds the t-table ($1.68 \geq 1.729$). This treatment drastically improves students' vocabulary. Therefore, teaching vocabulary using riddle games significantly affects vocabulary achievement of VIIIA grade students at SMP Satap Negeri Nian.

Research findings prove that riddle games can improve students' vocabulary, which can be seen from the pre-test and post-test scores. The students' mean score on the pre-test was 54.5. Then, the researcher used a riddle game in the treatment to develop students' vocabulary. After treatment, the researcher applied the post-test, and the mean score was 79. The researcher concluded that the mean score of students before treatment was lower than that of students after treatment. For the level significant (α) 5% and $df = 19$, the value of the table is 1.729 while the value of the t-test is 2, which means that the t-test value is greater than the t-table ($2 \geq 1.729$). Thus, the student's vocabulary mastery is significantly better after getting the treatment. The findings of the research prove that riddle games can improve vocabulary achievement. Similar results were also revealed by Wannebo et al. (2018) and Hakim et al. (2023) that riddle games can improve students' vocabulary achievement, which can be seen from the post-test result.

The researcher gave the students a post-test after carrying out the treatment for three meetings using riddle games. In the post-test, eleven (60%) students got excellent scores, eight (35%) students got good scores, one (5%) students got fair scores, and no one students got poor or very poor scores. It can be concluded that the student's vocabulary mastery went from very poor to fair, good and excellent classification.

According to Hakim et al. (2023), learning using a riddle game can boost students' enthusiasm for reading and motivation. The effect of the riddle game on the classroom environment and learning process was superior. During teaching and learning process, students could focus on the explanation. The students' behavior changed. They did not engage in useless activities during the lesson. They were more motivated. They were more active in asking questions about the lesson that they did not understand. They responded more when they were asked to complete the task in front of the class, and they were pleased with the situation.

CONCLUSION

The mean pre-test score (54.5) is less than the mean post-test score (79). The student's vocabulary achievement improved from very poor to fair and excellent classification. The result may be established by comparing the mean score of the students' vocabulary tests in the pre-test and post-test. The t-test (2) outperformed the t-table (1.729). The T-test result has a value of 2. It was more significant than the t-table, at 1.729 at the significance level of 0.05, and the degree of freedom df was 19. Thus, the riddle games influence eight grade students' vocabulary at SMP Negeri Nian. It is suggested that the English teachers apply riddle games because they can help the students learn English, especially vocabulary, in a fun way. The teachers should ask and motivate the students to study together (in pair or group) to make them understand the material because they can help and share.

REFERENCES

- Dewiana, Shindy Lukman. (2023). The Effective of Riddle Game on Vocabulary Mastery of the Seventh Grade Students of SMP Negeri 4 Parepare. Undergraduate thesis, IAIN Parepare.
- Felogau, F. (2018). The Effectiveness of Simon Says Game in Teaching Vocabulary to The Second Year Students of SMP Negeri 1 Palopo. *IDEAS: Journal on English Language Teaching and Learning, Linguistics and Literature*, 6(1).
- Hakim, L. A., Pahmi, P., &Febtiningsih, P. (2023). The Development of Read Riddle Games to SSImprove Students' Reading Interest. *ELT-Lectura*, 10(2), 177-187.
- Megi., Syahrir., & Sari, P. (2023). Improving Students' Vocabulary Mastery by Using Riddle Games. *JurnalSerambiIlmu*, 24(1), 83-92.
- Nugroho, W., &Suprpto (2017). The Effectiveness of Picture Crossword Puzzle Game in Teaching Vocabulary. *ELT Forum: Journal of English language teaching*, 6(2), 191-200.
- Rohman, S., Khairunisa, K., Seregar, R. F., & Faida, I. (2024). Use of Riddles Games to Improve Students' vocabulary Class XII MA MiftahulUlumBettet. *Science And Education Journal (SENJA)*, 1(1), 26-32.
- Purnamasari, P. (2019). Improving Students' Vocabulary by Using Mixed-up Riddle Game at the Second Grade of MTS DDI Kaballangang. Doctoral dissertation, IAIN Parepare).
- Sinaga, E. P., Napitupulu, S., &Hutabarat, N. M. P. (2022). The Effect of Riddle Game on Students' vocabulary Mastery at Grade Ten of SMK Swasta HKBP Pematangsiantar. *International Journal of Multi Science*, 3(03), 60-72.

- Sitepu, L. E. R. (2018). The Effect of Using Riddle Technique on Students' vocabulary Mastery of the 2017/2018 Tenth Grade Students of SMK Swasta Pemda Langkat Bahorok. *Ansiru Pai. Pengembangan Profesi Guru Pendidikan Agama Islam*, 2(1), 36-45.
- Sugiyono, (2017). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: CV. Alfabeta.
- Wamnebo, R., Bugis, R., & Hanapi, H. (2018). The Use of Riddles Game in Improving Students' Speaking Skill at SMA Negeri 1 Buru. https://www.researchgate.net/publication/328879024_THE_USE_OF_RIDLES_GAME_IN_IMPROVING_STUDENTS'_SPEAKING_SKILL_AT_SMA_NEGERI_1_BURU
- Wilda, F. Z., Eusabinus, B., & Wardah, W. (2024) Improving Students' Vocabulary by using Riddle Game. *Jurnal Pendidikan Bahasa Inggris Indonesia*. 12(2), 76-85.