IMPROVING STUDENTS' VOCABULARY BY USING RIDDLE GAME

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The purpose of this study is to improve students' vocabulary using riddle games as a method in the teaching-learning process. This study employs a Classroom Action Research (CAR) design, conducted in two cycles during the academic year 2022/2023 at SMP Negeri 14 Pontianak with a total of 34 students in Grade VII A. The class sample was selected using Cluster Random Sampling. Data collection was carried out using three primary instruments: observation checklists, field notes, and measurement tests. The observation checklists were used to monitor student engagement and participation during the learning process, while field notes provided detailed qualitative insights into the classroom dynamics. The measurement tests were administered at the end of each cycle to quantitatively assess the improvement in students' vocabulary. The data from checklists and field notes were analyzed descriptively to capture the students' active involvement, and the test score data were analyzed using the mean value formula to measure progress. Observations and field notes indicated that students were active and enthusiastic during the lessons. Student performance increased by 17.33% from the first cycle to the second cycle. Furthermore, the individual score data revealed that some students initially only achieved the minimum score of 50. However, after the implementation of riddle games, most students achieved satisfactory results, reaching the Minimum Completion Criteria of 75 points. These findings highlight a significant improvement in vocabulary acquisition between the first and second cycle tests, clearly indicating that the use of riddle games is an effective method for teaching vocabulary.

Keywords: Classroom Action Research; Riddle Game; Teaching Vocabulary

1. INTRODUCTION

Vocabulary instruction is a fundamental responsibility of English teachers, encompassing pronunciation, spelling, meaning, and word usage. This complexity makes the task challenging for both teachers and students. Students often struggle to retain vocabulary, making English learning difficult and later instruction problematic. However, it's not solely the students' errors that contribute to these challenges; other factors must also be considered.

Vocabulary is crucial for the development of the four primary language skills: reading, listening, speaking, and writing. According to Thornbury (2004), vocabulary comprises the collection of words that an individual uses in their native language. This definition underscores the importance of vocabulary as a primary tool for efficient English learning. Students often find it difficult to express their ideas in writing or speaking due to limited vocabulary. This limitation can hinder the effectiveness of the teaching and learning process, particularly for English as a Foreign Language (EFL) students, as noted by Alqahtani (2015). A broad vocabulary is essential for students to communicate effectively and develop their English skills. Vocabulary refers to the range and richness of words within a language. It is essential for language learning, as a robust vocabulary significantly influences one's ability to communicate fluently (Megi et al., 2023).

Memorizing vocabulary can be tedious for some students, making it crucial for teachers to select engaging teaching techniques. Various methods, such as velcro games, jigsaw puzzles, card games, wall cards, pictures, and jigsaw tricks, have been employed to make vocabulary learning more interesting (Bakhsh, 2016). Riddles, in particular, require ingenuity and critical thinking, which can enhance students' excitement and interest while learning. Riddle games involve rules that players must follow, making them not only educational but also structured (Liu, 2020). According to Johnson (2022), riddle games help learners expand their vocabulary, particularly in understanding word meanings and spellings. These games

also encourage students to experiment with different word uses, meanings, and combinations, thus enhancing their vocabulary. To make English vocabulary appealing to students and foster an interest in learning the language, it can be introduced and developed through game-based methods or techniques (Julia, 2020).

Riddles are beneficial for teaching dialogue as they allow students to practice communicating in varied ways. Sharndama and Magaji (2014) in Hapsari and Pinandhita (2015) describe riddles as confusing descriptive statements or direct questions that require associative or connotative responses. Riddles have several advantages: they entertain students, motivate them, and improve cognitive functioning. Additionally, riddles can significantly expand students' vocabulary. Riddles Game is excellent ESL / EFL tools because they have forced students to practice a variety of linguistic skills in order to find a solution. Previous studies that analyzed the use of puzzle games to improve vocabulary skills have received mixed reviews. Puzzle techniques can improve students' vocabulary acquisition (Octaviarnis, 2020).

A pre-interview with an English teacher revealed that students often struggle with vocabulary, particularly in understanding meanings and showing enthusiasm for learning English. This is a common issue among seventh graders who are relatively new to learning English. To retain the vocabulary taught, students need to engage in fun activities like games. The Curriculum Merdeka used in this junior high school emphasizes mastering vocabulary to support speaking abilities. It focuses on vocabulary related to the four main English skills: listening, speaking, reading, and writing. Students need to learn the meanings of nouns and adjectives to comprehend information about school activities, aligning with the Curriculum Merdeka-based learning objectives.

Previous research supports the use of riddle games for vocabulary improvement. Rahmawati et al. (2022) found that riddle games significantly impact students' vocabulary mastery, while Wahyuni et al. (2022) reported improved test scores when riddle games were used in the classroom. Similarly, Mina et al. (2021) demonstrated that riddle games significantly enhance vocabulary, as evidenced by comparisons of pre-test and post-test scores. However, these studies predominantly focused on students with varying levels of prior English exposure or proficiency, leaving a crucial gap in research regarding their effectiveness for students who are entirely new to learning English. There is currently no comprehensive analysis of how riddle games specifically impact beginners in English, which makes this study particularly valuable. By addressing this gap, the study seeks to provide targeted insights into how riddle games can benefit seventh-grade students at SMP N 14 Pontianak, who are just beginning their English language education which is inline with the research question "How did the riddle game improve the vocabulary on the seventh-grade students of SMP N 14 Pontianak?". This research is worthy of review as it not only expands the understanding of riddle games' effectiveness but also offers practical solutions for enhancing vocabulary instruction among novice English learners.

2. RESEARCH METHOD

This study utilized Classroom Action Research (CAR) to improve students' vocabulary through the use of riddle games. CAR is particularly suited for this study because it focuses on addressing and resolving issues directly within the classroom setting. By employing CAR, the research aimed to specifically tackle the challenges faced by students who were new to learning English and to refine instructional methods in real-time. This approach allowed for iterative cycles of planning, action, observation, and reflection, facilitating immediate adjustments and improvements based on classroom experiences and student feedback. Thus, CAR provided a practical framework for enhancing vocabulary instruction and evaluating the effectiveness of riddle games in a direct and context-specific manner. The mean of the research is an action, either to enhance the practical or to take an action to have an affair with a problem (Kumar, 2011). CAR is divided into two cycles based on the class's problem and overcomes by giving the treatment and making an improvement that must be shown in the next cycle (Phillips & Carr, 2010). Thus, this research only had two cycles. The research procedures in Classroom Action Research based on Kemmis and Taggart (1988)

as cited in Lumoindong and Sanger (2023) were conducted in some stages as follows.
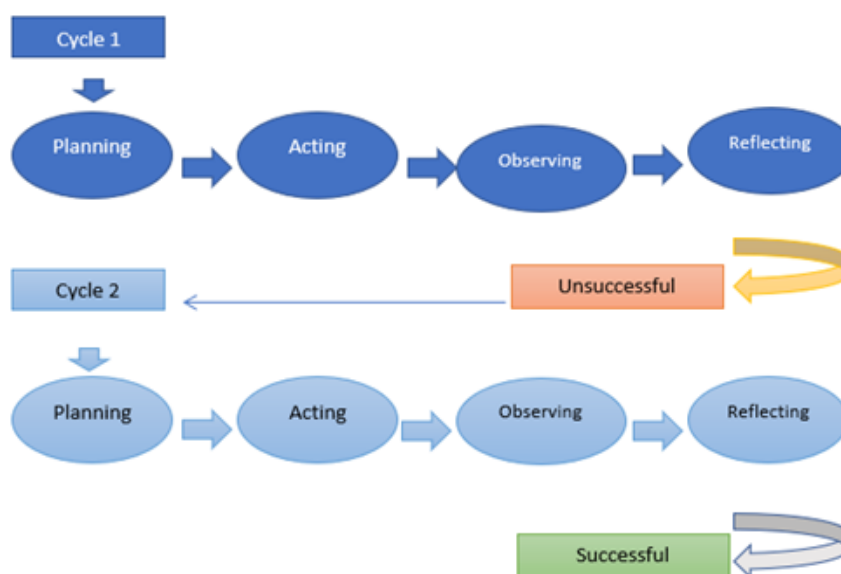

Figure 1. The Stages in Classroom Action Research

Research Partisipant

The research was conducted at SMP Negeri 14 Pontianak, chosen due to the significant number of students who were still unfamiliar with English and were just beginning to learn the language. The participants were seventh-grade students, specifically from class VII A, who were at the beginner level in their English proficiency. This class was selected as the subject of the study because it provided a representative sample of students encountering English as a new language. There were 34 students in the class, consisting of 18 boys and 16 girls.

Technique of Data Collection

To gather the necessary data for the study, the researchers employed observation and measurement techniques. They first identified and secured the consent of suitable participants (Creswell, 2012). An observation checklist was used to systematically record various classroom and student behaviors that could influence the learning process, while a measurement test was administered to assess students' knowledge and understanding of the material . Additionally, field notes were utilized as a reflective tool to document and refine the teaching methods used throughout the study (Burns, 2010).

Intruments of Data Collection

The intruments of data collection involved observation checklists, field notes, and a multiple-choice test. The observation checklist identified key conditions affecting the teaching-learning process, allowing the researcher to reflect on and adjust instructional methods. Field notes provided additional context by capturing nuances not covered by the checklist. The 40-question multiple-choice test was administered after the riddle game technique to measure vocabulary improvement. Experts emphasize that using varied data collection methods in classroom action research is essential for gaining both qualitative and quantitative insights, which are crucial for assessing the effectiveness of teaching strategies (Burns, 2010).

Data Analysis

Data analysis is a crucial component of the reflective nature of action research, as it helps determine the success or failure of implemented actions (Widodo & Zacharias, 2014). In this study, data was analyzed using both score analysis and descriptive analysis. The

descriptive analysis examined information obtained from field notes and observation checklists, describing phenomena according to the researcher's interpretation. This method aimed to analyze circumstances to describe norms and understand the context. The score analysis involved evaluating each student's individual test results from cycles 1 and 2 to assess their performance after the implementation of the plan. The results from both cycles were compiled into a score list, allowing for the calculation of the mean score for the group and the individual scores of each student. The formulation is as follows:

$$\text{Individual Degree of Score} = \frac{total\ score}{maximum\ score} \times 100 \tag{1}$$

$$\text{Subject Mean Score} = \frac{sum\ of\ students'\ score}{Number\ of\ students} \tag{2}$$

The results of mean scores would be categorized as follow:

Table 1. Criteria of Mean Score (Heaton, 1990)

Students' score	Category	Qualification
80-100	A	Good to excellent
60-79	B	Average to good
50-59	C	Poor to average
0-49	D	Poor

To find the level of students' improvement, the formula for calculating the percentage of improvement were used. The formula was used to calculate the percentage of improvement in cycle 2 from cycle 1. The formula was developed from Meltzer (2008) in Fajriyani (2011). The formula could be seen as follow:

$$P1 = \frac{y1 - y}{y} \times 100\% \tag{3}$$

P   : Percentage of students' improvement in cycle 2
y   : Cycle 1 mean score
y1   : Cycle 2 mean score

3. FINDINGS AND DISCUSSION

Student improvement is what is expected from the use of this riddle game. This can be seen from how students become enthusiastic and active during the teaching and learning process who were previously silent, listening, and talking with their friends. Students who were previously passive and answered only when appointed by their teacher in class became more active and enthusiastic in participating in lessons using riddle games.

There were several issues that were found during the first cycle. First, through the observational checklist, it was found that the most of the students were not ready to study even after the class was opened. Plus, the teacher did not show pictures that were supposed to be involved in the learning activities. Apart from those two issues, the other lists in the observational checklist showed positive responses. Second, through field notes, several behaviors were to be pointed out. The first cycle began after the rest time, many of the actions taken by students showed that they were not ready to take part in class lessons. This was because the lessons started after the break time so that many students came late attending the lesson. Besides that, their unpreparedness was also seen from the students who were still talking to their friends. Thus, the lesson could not start on time. On the current situation of the classroom did not fully support a good learning environment. For example, there was no board marker, and the classroom temperature was hot. Moreover, the students' attitude also worsened the situation. They also translated the riddles into Indonesian. Some

of them also did not bring any dictionaries. Despite from all of the facts above, the topic of riddles seemed stimulate the students' curiosity about the learning theme.

For the measurement vocabulary test in the first cycle, it is found that the mean score of the first cycle is 71.25. This mean score is categorized as B or average to good in the criteria of mean score by Heaton (1990). Based on these numbers, the mean score is room for the improvement if the next cycle is to be carried out accordingly. Down below is the calculation of the mean score.

$$\text{Mean Score} = \frac{sum \ of \ students' \ score}{Number \ of \ students}$$

$$\text{Mean Score} = \frac{2422.5}{34}$$

$$\text{Mean Score} = 71.25$$

Meanwhile, through the measurement test for the second cycle, it is found that the mean score of the second cycle is 83,60. This mean score is categorized as A or good to excellent in the criteria of mean score by Heaton (1990). Down below is the calculation of the mean score:

$$\text{Mean Score} = \frac{sum \ of \ students' \ score}{Number \ of \ students}$$

$$\text{Mean Score} = \frac{2842.5}{34}$$

$$\text{Mean Score} = 83.60$$

The mean score of the test on the first cycle and second cycle, the improvement of students was able to be calculated. First, it is found that the mean score of the first test is 71,25. Second, it is found that the mean score of the second test is 83.60. Details of this data are displayed in Table 2. Based on the available mean scores above, the percentage of students' improvement in the second cycle can be seen as follows:

$$P1 = \frac{y1 - y}{y} \times 100\%$$
$$P1 = \frac{83,60 - 71.25}{71.25} \times 100\%$$
$$P1 = 0.1733 \times 100\%$$
$$P1 = 17.33\%$$

Table 2. Students' Vocabulary Test Score

No.	Students	Cycle 1	Cycle 2	Status
1	Student 1	90	97.5	Improved
2	Student 2	55	75	Improved
3	Student 3	82.5	90	Improved
4	Student 4	77.5	82.5	Improved
5	Student 5	50	77.5	Improved
6	Student 6	62.5	75	Improved
7	Student 7	60	72.5	Improved
8	Student 8	77.5	90	Improved
9	Student 9	80	92.5	Improved
10	Student 10	92.5	95	Improved
11	Student 11	57.5	80	Improved
12	Student 12	72.5	90	Improved
13	Student 13	67.5	85	Improved

No.	Students	Cycle 1	Cycle 2	Status
14	Student 14	72.5	75	Improved
15	Student 15	70	77.5	Improved
16	Student 16	62.5	80	Improved
17	Student 17	72.5	80	Improved
18	Student 18	85	92.5	Improved
19	Student 19	90	97.5	Improved
20	Student 20	82.5	97.5	Improved
21	Student 21	67.5	80	Improved
22	Student 22	77.5	90	Improved
23	Student 23	60	85	Improved
24	Student 24	72.5	82.5	Improved
25	Student 25	65	82.5	Improved
26	Student 26	55	70	Improved
27	Student 27	57.5	75	Improved
28	Student 28	95	97.5	Improved
29	Students 29	75	95	Improved
30	Student 30	65	75	Improved
31	Student 31	62.5	82.5	Improved
32	Student 32	75	82.5	Improved
33	Student 33	62.5	72.5	Improved
34	Student 34	72.5	75	Improved
	Total Score	2422.5	2842.5	Improved
	Mean Score	71.25	83.60	

It is found that the mean score of the first cycle test is 71,25. The students experience 17,33% improvement in the second cycle. The improvement brings the students' mean score to 83,60. These numbers suggest huge gaps from the first cycle test to second cycle test. This clearly shows that the use of riddle games as a vocabulary teaching technique is highly recommended. Students' curiosity and students are also able to apply their high order thinking skills well in carrying out or doing the assignments given. In other words, significant improvement has happened to the students regarding to their vocabulary. On the other hand, the calculation of overall student test results in using riddle games, the individual scores obtained by each student during the process of implementing riddle games can be a significant benchmark. From the table of student test results above, there are several students who got low scores with the code; Student 2, Student 5, Student 7, Student 11, Student 13, Student 16, Student 21, Student 23, Student 25, Student 26, and Student 33. Those who previously get the low scores that range from 50 - 67.5 which do not even reach the Minimum Learning Mastery Standard in the school in cycle 1, can get a significant increase in scores in cycle 2 even though some of them are like the student with the code Student 2, who is only able to reach the Minimum Learning Mastery Standard. However, one of the students with code Student 11 who is only able to get 55.7 in cycle 1, is able to get a high score of 80 in cycle 2. It can then be concluded, that each individual was able to obtain satisfactory grades after the implementation of the riddle game in the teaching and learning process in class.

In addition, for the field notes, Cycle 1 showed that the class began after a break, leading to some students arriving late and being unprepared for the lesson. The classroom was uncomfortably hot, and several challenges were noted, such as the lack of a board marker and not all students bringing dictionaries. Additionally, some students were talking among themselves and translating the riddles into Indonesian, reflecting a lack of active engagement in using English.

However, in Cycle 2, the classroom environment and student behavior improved markedly. The class started on time, with all students arriving punctually and ready to learn. The teacher introduced an ice-breaking activity before the lesson, creating a more enjoyable and conducive atmosphere for learning. The classroom was more comfortable, allowing

students to focus better. Student participation increased, with students raising their hands before answering riddles and ensuring they brought the necessary dictionaries. Moreover, the teacher provided rewards, such as snacks, to students who successfully answered the riddles, which heightened their interest and motivation in the game. Overall, Cycle 2 demonstrated enhanced student readiness, engagement, and motivation compared to Cycle 1.

Vocabulary mastery is an important aspect to be learned by the students. The appropriate amount of vocabulary stored in students' minds will help them to construct sentences both verbally and orally. Vocabulary is a list of words usually arranged alphabetically and defined, explained, or translated into the range of language. According to Taylor (2022), vocabulary is a collection of words, usually alphabetically arranged and defined; it is the stock of words in the language of a group or individual. Such a case allows students to communicate freely. As Richards and Willy (2002) states in their book, vocabulary is the core in learning all of English skills such as to speak, read, write, or listen. Someone who have mastered vocabulary will be clear and easy in learning the other skills. Those are explained that vocabulary is very important to be learned by the students as new English learners. However, problems often emerge around the topic of vocabulary learning and mastery. The seventh-grade students in SMP Negeri 14 Pontianak were not be the exception. For example, there was a sense of unfamiliarity with the English language as the students had little to no experience of it during elementary school. Thus, the students faced difficulties in their learning.

This class research project uses puzzles to solve this problem. Brassell (2008) defines puzzles as phrases, questions, or phrases with hidden or double meaning as puzzles to be solved. As a game, the benefits of using puzzles to teach vocabulary include: (1) students are more interested in the learning material because when students are interested in the learning material, they focus their attention; (2) students also feel more challenged because solving puzzles requires critical thinking; (3) As the teachers introduce the vocabulary in the puzzles and give the students a vocabulary, the students gain a lot of vocabulary and vocabulary value. In contrast, Nasution and Sinaga (2020) argued that two rounds of puzzle games were required to improve students' vocabulary. In conclusion, using a puzzle game can keep students interested and help them remember the vocabulary of the material being studied.

Student improvement is what is expected from the use of this riddle game. Students who were previously quiet, passive, and engaging in conversation with friends after implementing the riddle game show enthusiasm and activity during the teaching and learning process. Riddle games encouraged previously passive students to become more active and enthusiastic during the lessons. These students previously responded only when asked by their teacher in class. Not only from student behavior in class, has the increase in individual scores from the test also showed the improvement of students in learning in class by implementing the riddle game. The individual scores each student earned while playing riddle games can serve as a useful benchmark. Numerous students with the code received low scores, including Student 2, Student 5, Student 7, Student 11, Student 13, Student 16, Student 21, Student 23, Student 25, Student 26, and Student 33. Although some of them are like the student with the code Student 2, who is only able to reach the Minimum Learning Mastery Standard (KKM), those who previously receive low scores that range from 50 to 67.5 and do not even reach the school's Minimum Learning Mastery Standard in cycle 1 can get a significant increase in scores in cycle 2. However, one of the students with the code Student 11, who only managed to earn 55 points in cycle 1, was successful in earning a high score of 80 points in cycle 2. It can be concluded that each person was able to achieve satisfactory grades.

The findings in the first cycle showed that most students' scores were rather low. Meanwhile, some students' scores were above 80, which were classified as A category or good to excellent based on the criteria of mean score by Heaton (1990), some of the scores were also in the C category. Meanwhile, most students' scores were in the B category. Hence, the mean score of the first cycle test was 71.25. This mean score fell into the

category of B or average to good. After the treatment process in teaching and learning vocabulary in the class by using the riddle game, a huge improvement in students' scores occurred in the second cycle test. 12 students managed to score above 90. At the same time, the frequency of students who scored between 70 to 89 skyrocketed. In fact, none of them scored below 70. Thus, the mean score of the second cycle test was 83.60. The mean score fell in the category of A or good to excellent. This huge improvement was due to the utilization of the riddle game along with the countermeasure concluded in the first cycle, which was strengthening the class management. Related to the findings throughout the processes, there was a prominent improvement in vocabulary suggested by the students' first cycle test and the second cycle test. The students experienced 17.33% improvement in the second cycle. These numbers suggested huge gaps from the first and second cycle test. In other words, significant improvement had happened.

Some earlier researchers have investigated similar cases. A study by Rahmawati et al. (2022), riddle games have a significant impact on students' vocabulary mastery, according to research from the year 2022. The information obtained reveals the areas where students' vocabulary mastery is significantly impacted by the riddle game strategy. According to Garcia (2021) in her research, any number concept can be developed or reinforced with ease by playing a guessing game. The process of studying can be enjoyable. She comes to the conclusion that by introducing a concept of a riddle game, the teacher can teach a variety of subjects, particularly for elementary school, such as about animals, professions, or people. Meanwhile, Harris (2023) in his research related to the idea that guessing is a genuine communicative situation and that this makes learning a foreign language fun and exciting. He claims that because they combine language practice with excitement and fun, riddle games are enjoyed by students of all ages, from young children to adults. They also pique their interest and inspire the learners to communicate. However, this research is different from the others. None of them are address to examine the students' vocabulary mastery through riddle games based on the students' level which are new in learning English in seventh-grade.

According to the study's findings, vocabulary among students can be raised by playing riddle games. It seemed that the students' vocabulary achievement wasn't satisfactory prior to the use of the strategy. Their poor vocabulary performance served as evidence. The vocabulary score of the students increased as a result of the researcher's riddle game experiments. Through the use of a riddle game and the researcher's guidance, the students have improved in all areas. The students' ability to use vocabulary was enhanced while playing the game.

4. CONCLUSION AND SUGGESTIONS

Based on the analysis of the data presented in finding, it is evident that using riddle games as a teaching and learning method significantly enhances students' vocabulary. This conclusion is supported by changes in student attitudes and performance. Students who were previously passive and disengaged became more active, excited, and enthusiastic about participating in lessons. This shift in attitude was further reflected in improved personal scores on administered tests. Students who initially scored below the Minimum Learning Mastery Standard of 50 to 67.5 achieved scores ranging from 70 to 82.5 after engaging with riddle games. These findings demonstrate that riddle games, by creating a fun and entertaining learning environment, are beneficial for teaching vocabulary. They not only make learning enjoyable but also stimulate students' curiosity and enthusiasm for learning English. Additionally, students developed higher-order thinking skills and became more engaged as the cycles progressed, as noted in field observations. This clearly indicates that riddle games are an effective strategy for vocabulary teaching and can be adopted by other schools to enhance students' vocabulary mastery.

In light of these conclusions, the researcher offers several recommendations for teachers, students, and future researchers. For teachers, especially those working with EFL learners, it is crucial to select strategies that engage students and spark their interest in the learning process. Riddle games are highly recommended for vocabulary instruction due to

their ability to make learning engaging and motivating. For students, it is important to stay focused and actively participate in the teaching and learning process. Playing riddle games requires careful attention to the teacher's clues, which helps reinforce vocabulary learning. Finally, this research can serve as a valuable resource or reference for other researchers interested in exploring effective techniques for teaching vocabulary. Future studies can build on this work to further investigate and refine strategies for enhancing vocabulary instruction.

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