Improving Students' Vocabulary Mastery by Using Crossword Puzzle Technique

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Abstract: Many high school students face several challenges in mastering vocabulary. Students need help to improve their English vocabulary mastery and need more self-confidence. The crossword puzzle technique was used in this study to enhance students' vocabulary mastery at SMKS Tarbiyatul Ourro. This study employed Classroom Action Research with 20 students in second grade. Observation and tests were used as instruments for data collection. This study shows that applying the crossword puzzle technique can improve students' vocabulary mastery. The student's vocabulary mastery showed significant improvement, as evidenced by the increasing average scores from 55.25 in the pre-test to 67.75 in the post-test cycle 1 and 77 in the second cycle 2. On the other hand, in cycle 1, teacher observation results were 50%, which increased to 81.25% in cycle 2. This means that the teacher performed the crossword puzzle technique more frequently from cycle 1 to cycle 2. Similarly, student observation results improved from 56.25% in cycle 1 to 78.125% in cycle 2. This means that the students followed the crossword puzzle procedures more frequently from cycle 1 to cycle 2. In conclusion, the students' vocabulary mastery showed significant improvement through the application of the crossword puzzle technique.



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INTRODUCTION

Language is used in daily life to communicate within society. It provides access to a wealth of information, knowledge, and culture, which are essential for expressing thoughts and feelings to others. Individuals should view language as a communication tool that must be understood and applied correctly in the appropriate context (Ariawan, 2020), Similarly, Brown & Lee (2015) emphasizes that communication is how people interact with one another, involving their entire being—including culture, education, and personal communication development. It involves the entire individual, including their culture, education, and communication development. This view is further reinforced by Saepuloh et al., (2022), who argue that language is a complex phenomenon that can be examined from multiple perspectives. It serves as the primary medium of communication worldwide, allowing individuals to share their thoughts, desires, and ideas.

In learning English, students should master four skills: Listening, Speaking, Reading, and Writing. Although all four skills are practiced from the beginning, vocabulary is prioritized over grammar (Anwar & Efransyah, 2018). To enhance these four skills, students should become fluent in language components such as vocabulary, pronunciation, and grammar. Zhi-liang (2010) supports this by stating, "Without grammar, little can be conveyed; without vocabulary, nothing can be conveyed," underscoring the importance of vocabulary development in second language learning. A broad vocabulary is essential for improving overall language proficiency. According to Wulandari & Assapari (2024) perspective, vocabulary enables precise expression. Highlighting how a rich vocabulary contributes to clarity in communication.

Therefore, a new technique must be implemented to boost students' enthusiasm for memorizing English vocabulary. Teachers need specific strategies to help students remember word meanings. To teach vocabulary, teachers might employ a variety of techniques, such as semantic maps, word detective, word wizard, word connect, crossword puzzles, and mind maps. These strategies not only make the lesson more engaging but also help students better retain word meanings. This is closely related to memory strategies. Memory strategies are defined as memory storage of information consciously in the short and long term, and its subsequent use when necessary (Ariawan, 2023).

In the dynamic landscape of language learning, many high school students face significant challenges in mastering vocabulary. At SMKS Tarbiyatul Qurro, students have limited vocabulary. The factors influencing a lack of vocabulary are both internal and external. Internal factors include students' lack of self-confidence, while external factors involve teachers' difficult-to-understand teaching techniques and methods that may not be suitable for students. Each student's experience highlights various aspects, such as pedagogical skills, class management, student-centered approaches, handling difficult students, and the impact of facilities on their teaching methods, all of which can significantly affect vocabulary development (Suhandra & Ariawan, 2023). In conclussion, students will have difficulty learning English at school without adequate vocabulary (Ratnawati et al., 2022). To address this issue, crossword puzzles may be used to teach vocabulary. Because the crossword puzzle poses a challenge, students will be motivated to solve it. There are several opportunities for repetition and improvement in students' sentence structure and vocabulary.

Therefore, a new technique must be implemented to boost students' enthusiasm for memorizing English vocabulary. According to Muhsinin & Assapari (2023), the students work on activities related to vocabulary. Teachers need specific strategies to help students remember word meanings. To teach vocabulary, teachers might employ a variety of techniques, such as semantic maps, word detective, word wizard, word connect, crossword puzzles, and mind maps. And also, that the materials should consider what students want to achieve (Assapari et al., 2019). These strategies not only make the lesson more engaging but also help students better retain word meanings. This is closely related to memory strategies. According to Ariawan (2023), memory strategies are defined as memory storage of information consciously in the short and long term, and its subsequent use when necessary.

Students will have fun learning the words in a new way—by solving puzzles. The words presented in class can be transformed into puzzle formats, allowing students to make educated guesses and place words correctly using definitions and images. Essentially, a crossword puzzle is a game where players fill in empty spaces in a grid with letters to form words that correspond to given clues.

In this research, the researcher reviewed five previous studies to support the investigation. Each study is explained in detail as follows:

The first review is a research conducted by Siddik & Ainun (2022) explored the effectiveness of crossword puzzle games on students' vocabulary mastery. The study involved eleventh-grade students at Vocational High School 1 Banyuputih, specifically the experimental class XI AKL, consisting of 25 students. Using purposive sampling, data were collected through questionnaires and tests divided into pre-tests and post-tests. A quantitative approach with a pre-experimental design was employed, and data were analyzed using SPSS version 16. The results indicated a significant difference, confirming improved vocabulary mastery after using crossword puzzle games. The research goals were to see how these games impacted students and whether they worked. The advantage of this study was that it showed how fun and engaging methods can make learning language more enjoyable and effective in the classroom.

The second review is a study conducted by Elva & Yosi (2022), titled An Analysis Of Crossword Puzzle To English Vocabulary Mastery. This research employed a descriptive qualitative method to explore how crossword puzzles can enhance students' vocabulary mastery. The study's main objective is to improve vocabulary acquisition among students, while the purpose is to identify effective strategies using the crossword puzzle method. The study involved ten students, four males and six females, with data collected through vocabulary tests, interviews, and questionnaires. The findings revealed that 60% of students found English difficult and expressed boredom with traditional teaching methods, while all students were familiar with crossword puzzles. The advantage of this

study highlights the potential of crossword puzzles to engage students and make learning vocabulary more enjoyable, as indicated by their positive responses to the method.

The third research conducted by Safitri & Suryadi (2023), titled the Effect of the Use of Crossword Puzzle Media on Students' Vocabulary Mastery, and employed a quantitative method to explore the impact of crossword puzzles on students' vocabulary acquisition and oral communication skills. The study aimed to demonstrate how crossword puzzles can enhance vocabulary development and retention, offer suggestions for future research, and describe the influence of crossword puzzle media on learning new words. Data was collected through a questionnaire distributed to 30 students at SMPIT Bait Et-Tauhied. Findings indicated that crossword puzzles significantly improve students' understanding and usage of vocabulary, with a validity test confirming the questionnaire's effectiveness. The study's strength lies in demonstrating the effectiveness of crossword puzzles as an engaging tool for vocabulary enhancement, making the learning process more interactive and enjoyable for students.

The fourth research conducted by Siti (2024), titled "Meta-Analysis: The Effect of Word Search, Wordwall, Crossword, & Scramble Games in Learning English Vocabulary," employed a meta-analysis method to examine the effectiveness of various games, including Word Search, Wordwall, Crossword, and Scramble, in enhancing students' vocabulary. The research objective was to evaluate the impact of these games on students' vocabulary acquisition and to provide insights into which games are most effective for learning vocabulary. Findings revealed that these games had an impressive 83% significant effect on vocabulary learning, with Crossword puzzle games showing the highest influence. The advantage of this research lies in its strong evidence supporting the use of engaging games in vocabulary instruction, offering educators practical strategies to design more effective learning experiences for students.

The last research conducted by Ayu (2021), titled "The Effectiveness of Crossword Puzzles in Teaching Vocabulary to Seventh-Grade Students at MTs Mathlaul Anwar Cintamulya, South Lampung, in the Academic Year 2021/2022," involved 211 seventh-grade students distributed across six classes. A quasi-experimental design was employed, with class VII 1 designated as the experimental group using crossword puzzles and class VII 2 as the control group. The primary objective was to evaluate whether incorporating crossword puzzles into vocabulary instruction led to a noticeable improvement in students' vocabulary acquisition. The advantage of this study was its demonstration of the effectiveness of crossword puzzles in making vocabulary learning more engaging and enjoyable, providing evidence of improved vocabulary comprehension among students. Results indicated that using crossword puzzles led to better vocabulary retention and increased student motivation, making lessons more dynamic and interactive.

Based on the explanation above, the researcher is interested in studying the impact of crossword puzzles on students' vocabulary achievement.

THEORETICAL SUPPORT

Vocabulary is a fundamental component of the English language, playing a crucial role in developing the four primary language skills. "Vocabulary is a core component of language proficiency and provides much of the foundation for how well learners listen, speak, read, and write (Richards & Renandya, 2013)." This underscores the importance of vocabulary; individuals with a robust vocabulary are better equipped to communicate effectively. Vocabulary mastery refers to the comprehensive understanding of words and their meanings, enabling skilled use in various contexts. According to Nation, I. S. P., (2011), the aspect or component of vocabulary are form, meaning, and use. In this research, the researcher will focus on word meaning, word use, and word form, as they align with the English syllabus.

According to Schmitt (2020), vocabulary consists of three key aspects: meaning, form, and use. Meaning encompasses the relationship between a word's form and its concept, including the various interpretations and associations that arise. Words can have multiple meanings, and their meanings can be understood through their relationships with other words, known as semantic relations. Use highlights the grammatical patterns of words, including their classifications (countable/uncountable, transitive/intransitive), collocations, and any restrictions on usage (formal, informal, etc.). Schmitt emphasizes understanding the grammatical function and context of words to enhance vocabulary usage. This research will focus on word meaning, word use, and word form,

aligning with the English syllabus to provide a comprehensive understanding of vocabulary components.

Crossword puzzles are another form of game that helps improve teaching and learning. using crossword puzzles to teach vocabulary is particularly effective because the explanations of words' synonyms are immediately accessible (Pohloh & Ma'rifatulloh, 2023). Nurul Alda & Wati (2021) also claims that games that involve an information gap motivate students to negotiate with a partner to solve a puzzle, create an image, and identify similarities and differences between pictures. Thus, a crossword puzzle is a widely used strategy in various contexts. To teach vocabulary, the researcher recommends using crossword puzzles. It is also supported by Amalia (2019), a crossword puzzle is a popular puzzle strategy where the goal is to solve a mentally challenging problem or task. They can help students remember new words by stimulating their brains. Additionally, students will learn English by collaborating with their classmates to complete the crossword puzzle.

Crossword puzzles are an engaging tool for learning English, and teachers can employ various procedures to present these puzzles effectively. These methods should not only enhance student interest but also promote active participation in the learning process. According to Vivin (2022), some effective procedures include giving each student the same crossword puzzle with written hints to solve independently, dividing the class into groups with different puzzles for collaborative work, or having students complete a puzzle individually before regrouping to share their answers. Another approach involves writing a crossword puzzle on the board without clues, allowing the teacher to guide students verbally as they work in groups to fill in the answers. Additionally, incorporating a competitive element, such as awarding points to the first group to complete the puzzle correctly, can further increase motivation and engagement.

Crossword puzzles offer a creative and interactive way to enhance vocabulary learning, significantly improving retention and student engagement. They support language proficiency development by requiring students to engage with the meanings and usages of new words, aligning with the Lexical Approach emphasized by Lewis (2019). Research shows that repeated exposure through such activities strengthens comprehension and recall. Additionally, crossword puzzles enhance cognitive skills, as highlighted by Sweller (2018), by providing an optimal challenge that reinforces vocabulary without cognitive overload. They also encourage collaborative learning, consistent with Social Constructivism, where social interaction, as discussed by Mercer and Littleton (2017), enhances understanding. Furthermore, they improve orthographic skills by engaging both visual and linguistic elements. Lastly, crossword puzzles boost student motivation and engagement, in line with Self-Determination Theory by Deci and Ryan (2018), by making learning enjoyable. Overall, these puzzles are a valuable tool for fostering active participation in language learning.

METHOD

The research was conducted at a school located in Selagalas, Mataram City, West Lombok, NTB Province. The second-year students (class XI) were chosen as the subjects of this study due to their low proficiency in English vocabulary, as recommended by their English teacher. Additionally, this school has not previously implemented the crossword puzzle technique in vocabulary teaching, providing an opportunity to explore its effectiveness in a fresh context. The accessible location of the school also contributed to the researchers' decision to select it as the study site.

The research design is based on classroom action research (CAR) (Kemmis et al., 2014)l. This model involves a cyclical process consisting of four stages: planning, acting, observing, and reflecting. The study was conducted in two cycles, with each cycle consisting of two meetings. The goal of CAR is to improve classroom learning through repeated cycles of action and reflection, allowing the researchers to assess and refine their approach. By incorporating this research model, the study aims to contribute to the professional development of teachers and improve students' vocabulary skills through innovative classroom practices. In conclusion, the use of crossword puzzles at SMKS Tarbiyatul Qurro proves to be an effective strategy for enhancing vocabulary mastery. This innovative approach not only improves academic performance but also cultivates a more confident and motivated group of learners, ready to tackle the complexities of English vocabulary. Through this study, it is evident that employing engaging techniques like crossword puzzles can lead to significant advancements in students' language proficiency.

RESULT AND DISCUSSION

The aim of the researcher in this study is to present the results from the pre-cycle, cycle I, and cycle II. During the pre-cycle, the researcher assessed the students' vocabulary skills to gauge their abilities before introducing the crossword puzzle games. The findings revealed that the students had weak vocabulary knowledge, with many of them still unclear about the meaning of various words, and the majority struggled to recognize vocabulary.

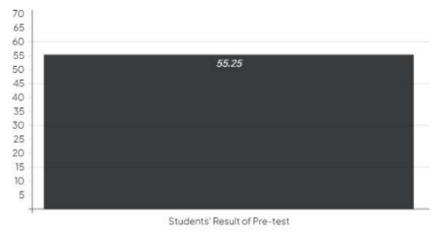


Table 1. The average student score

Based on the pre-test results, The Average Student Score is 55.25, which is below the standard threshold. The pre-test success rate is 25%, whereas the KKM standard is 75. Only 5 out of 20 students met the KKM criteria. To improve this average, the researcher conducted a treatment in cycle 1 to assess the students' vocabulary mastery. In cycle I, it shows the average learning of students.

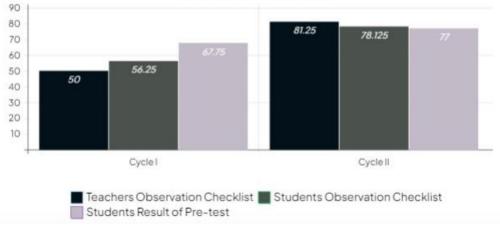


Table 2. Comparisons between Cycle I and Cycle 2

The research was conducted over two cycles, each consisting of four stages: planning, action, observation, and reflection. The findings were derived from observations of both teachers and students. In cycle 1, teacher observation results were 50%, which increased to 81.25% in cycle 2. It means that the teacher perform the crossword puzzle technique increasingly from cycle 1 to cycle 2. Similarly, student observation results improved from 56.25% in cycle 1 to 78.125% in cycle 2. It means that the students followed the crossword puzzle technique increasingly from cycle 1 to cycle 2.

Moreover, the results demonstrated an improvement in vocabulary mastery using the crossword puzzle technique. This was evident in the pre-test average score of 55.25 with a success rate of 25%, which increased to 67.75 in post-test 1, achieving a 56,25% success rate. However, despite the improvement, the results did not yet meet the minimum competency standards (KKM). Following post-test 2, students' post-test average of 77 with a success rate of 80%, indicating significant progress and meeting the KKM requirements.

The explanation above shows an improvement in the average scores between the pre-test,

post-test I, and post-test II, with post-test II having the highest score. This indicates that the use of crossword puzzles enhances students' vocabulary mastery.

The research findings of using crossword puzzles can help students at Tarbiyatul Qurro SMKS improve their vocabulary knowledge are presented in this paper. This research was conducted in class XI

The researcher used Classroom Action Research (CAR) in this study. Research conducted in the classroom by taking actions to improve the quality of the teaching and learning process in order to obtain better results than before, is known as classroom action research (CAR). Classroom action research (CAR) is collaborative research that is practical in nature to solve learning problems in the classroom. The Kemmis and Taggart model, which consists of four components, planning, action/action, observation, and reflection. There are two cycles in this study: cycle 1 and 2. The following score comparison shows the results of the actions taken.

The result, In cycle 1, teacher observation results were 50%, which increased to 81.25% in cycle 2. Similarly, student observation results improved from 56.25% in cycle 1 to 78.125% in cycle 2.

Moreover, the results demonstrated an improvement in vocabulary mastery using the crossword puzzle technique. This was evident in the pre-test average score of 55.25 with a success rate of 25%, which increased to 67.75 in post-test 1, achieving a 56,25% success rate. However, despite the improvement, the results did not yet meet the minimum competency standards (KKM). Following post-test 2, students' post-test average of 77 with a success rate of 80%, indicating significant progress and meeting the KKM requirements.

These findings are consistent with previous research by Elva Utami (2022) using a descriptive qualitative method, aimed to improve students' vocabulary through crossword puzzles. The subjects included 10 students (4 males, 6 females). Interviews showed 60% disliked English for its difficulty, while 50% struggled with vocabulary memorization. All students found classroom teaching boring, but 100% were familiar with crossword puzzles and found the method engaging. However, only 30% felt excited about learning vocabulary. The significant benefit of this study suggests a need for varied teaching strategies to enhance interest and engagement in English learning.

In addition, another previous study that has similar findings with this study was also conducted by Ayu (2021), who stated that improving vocabulary mastery by using crossword puzzle techniques. The finding of this research could be seen from the difference of the students' mean score on the pre-test and post-test. The mean score of the pre-test was 36.93 and on the post-test was 37.73. In addition, based on the analysis of the data calculation, it was obtained that the value of significant sig. (2 tailed) 0.715 < 0.05.

The findings of this study are in line with previous research conducted by Siddik and Ainun Habiba (2022) explored the effectiveness of crossword puzzle games on students' vocabulary mastery. The study involved 25 eleventh-grade students from Vocational High School 1 Banyuputih, using a quantitative pre-experimental design. Data were collected through questionnaires and pre-test/post-test assessments, analyzed with SPSS 16. The results showed a significant difference, with a T-test value of 18.90, surpassing the T-table value of 1.713 at a 5% significance level. Consequently, the null hypothesis (H0) was rejected, affirming that crossword puzzle games positively impacted students' vocabulary mastery.

The next research that has similar findings with this study was also conducted by Safitri (2023), aimed to investigate "The Effect of Crossword Media on Students' Vocabulary Acquisition and Oral Communication" using a quantitative method. The participants included 30 students from SMPIT Bait Et-Tauhied, who completed a questionnaire containing 20 statements. The findings revealed a significant impact of crossword puzzles on students' vocabulary understanding and usage, supported by a validity test showing the calculated R value exceeded the R table. Additionally, a reliability test using Cronbach's alpha confirmed high reliability, with all respondents successfully completing the questionnaire. This highlights the beneficial role of crossword puzzles in enhancing vocabulary acquisition and oral communication skills among student

Crossword puzzles offer many benefits in vocabulary acquisition for students learning English. This activity not only helps students strengthen their understanding of vocabulary but also improves their spelling and ability to use words in the correct context. Crossword puzzles are also useful for teaching students about morphology and assessing their understanding of verb endings,

prefixes, suffixes, and other linguistic elements.

Since the researcher wanted students to master vocabulary through fun activities, the researcher used this method to help students master vocabulary learning more precisely. This study supports the statement made by Rahmayanti (2022) which states that crossword puzzles are an interesting source and medium for teaching language.

Another benefit of crossword puzzles is their ability to enhance contextual understanding. Students are not only asked to remember words, but also to understand how those words are used in a particular sentence or situation. The clues in crossword puzzles often give students clues to the context in which the word is used, thus helping them learn the meaning of the word in everyday use. It can be seen from the results of each cycle, students still made mistakes in the meaning of the clues, while the results of post-test I students made fewer mistakes compared to cycle II.

The students' word use, word form and word meanings have improved, according to the assessment test results from cycle I to cycle II. The use of crossword puzzles to improve students' vocabulary mastery has been successful, as evidenced by students' learning activities and test results after giving tests in cycles I and II. Many students were able to write, spell and understand the words they found in the crossword puzzle.

In conclusion, research shows that using crossword puzzles effectively improves students' vocabulary. By challenging them to fill in words in the correct context, students are encouraged to remember and understand various new terms. This process not only enhances their linguistic skills but also makes learning enjoyable.

CONCLUSION

The use of crossword puzzles significantly improved students' vocabulary mastery. Through this method, students gradually enhanced their ability to understand and remember new words. The technique not only made learning more engaging but also helped students apply vocabulary more effectively, leading to noticeable progress in their overall language proficiency. This shows that crossword puzzles can be an effective tool in boosting vocabulary acquisition.

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