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Implementation of Crossword puzzle Games to Improve SMA Students' Vocabulary Mastery

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Abstract

The research subjects were the tenth-grade students and the research area was at SMA DharmaAyu Kefamenanu. This research investigated the improvement of students' vocabulary by using crossword puzzle games in the classroom. The research design was Classroom Action Research (CAR) conducted in two cycles. The research subjects were 10 of the tenth-grade students of SMA Dharma Ayu Kefamenanu. The data were collected by using observation and vocabulary achievement tests. The collected data were analyzed statistically by using a percentage formula. The students' average score was 76.5% in pre-test 1 of cycle one; then it was improved to 79.8 % in post-test 1, and increased to 87.5 % in post-test 2 of cycle 2. It indicates that the students' vocabulary and level of mastery was improved by using crossword puzzle games. This result reminds the teachers of English to use crossword puzzle in teaching and learning process of English, particularly to boost the students' vocabulary mastery.

Keywords: Implementing, crossword puzzle games, vocabulary mastery, SMA students

1. INTRODUCTION

The ability of English is the most important thing in an increasingly competitive world due to the rapidly growing knowledge based economy and technological advances in the era of globalization (Sutaryo, Komari & Hasan, 2021). This should be an important concern for every citizen to learn English. The demands of the times that have made many technological advances are seen as the significant facilities that help many people to master English.

It is undeniable that in this technological era, there are many application features that involve English in it (Elmiwati & Effendi, 2023). On the other hand, English is also included in one of the languages that are often used in the international world and even in some aspects of international activities, whether in trade, conference meetings, or diplomacy.

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As one of the world parts, English is the language of communication in Indonesia. It is a foreign language that has a high level of popularity, both for children and adults. English has become the center of attention in Indonesia (Pajarwati, Mardiah, Harahap, Siagian & Ihsan, 2021). Even the existence of an international school brings English as the language in learning activities. And the existence of an international school also makes a good contribution to students who are practicing English language skills.

English is the language of technology, so indirectly the language is recognized in all aspects of society that follow technological developments (Styvant, Arasuli & Afriazi, 2019). After grammar, spelling, and pronunciation, vocabulary is one of the most critical aspects of learning English. The structure of language is stressed in the English material, and students must be able to understand the tenses pattern.

The tenses pattern is extremely difficult for students, and it makes them reluctant to learn English (Pareza & Ratmanida, 2019). When students have a limited vocabulary, they are unable to communicate in English (Widagsa, 2016). Having vocabulary, students are easier to understand the teacher's explanation and also help them in learning for skills above.

The existing materials for English teaching do not suit the need of the students (Rohmatillah, 2014). Thus, the teaching and learning process of English subject is still facing various problems as shown by the student's unsatisfactory learning outcomes (Afzal, 2019). The value of vocabulary in English studies cannot be overstated. It would be difficult for students to articulate what they want to say if they just study grammar. However, a learner who simply learns vocabulary or reads a text or consults an open dictionary would be able to express themselves (Akhmad, Saleh & Pakaya, 2022).

To develop the four English skills of listening speaking reading, and writing, you will need more vocabulary. Students with a small vocabulary will have trouble interpreting the context of the text, speaking English, and writing their own ideas (Ahmed, 2015). Furthermore, students with a limited vocabulary read slowly because they do not understand several words and must pause to look them up in a dictionary. If someone learns vocabulary well, it will be easier to communicate with a large number of vocabularies that is controlled by a person, the wider the range of knowledge.

Vocabulary is very important in learning English, apart from structure, grammar, because if a student does not master vocabulary (Purwanto, Hartono & Wahyuni, 2023). It will be difficult for them to communicate what is on their mind both verbally and in writing.

One of the factors that caused the students' low mastery of English vocabulary was the ineffective teacher teaching techniques which did not vary in the learning and learning process, especially in vocabulary learning (Rumbouw, 2021). In fact, the success of a teachers learning is largely determined by how the learning material is presented to students (Khairiah, Rionaldi & Aprizawati, 2017). Therefore, teachers must find, develop and even provide an effective technique to motivate students to learn and improve their mastery of English vocabulary.

Learning English vocabulary will also be easier to learn and memorable if the method used is right and triggers creativity in thinking (Leba & Temaja, 2023). Consequently, one interesting way to learn vocabulary is by playing a game. The game is an activity that has an element of purpose, a sense of pleasure, and a rule of playing it.

There are two types of games that are commonly played, namely competition games, in which individual players or teams compete to be winners and achieve goals, and cooperative games where players and teams work together to achieve goals (Anwar & Efransyah, 2018). One type of game as a learning method that is suitable for improving English vocabulary is a crossword puzzle game.

The crossword puzzle strategy is one of the active learning strategies involving all students to think actively by filling out crossword puzzles which has been prepared by the teacher. So it is hoped that students will become more enthusiastic in participating in learning (Khaedar & Alam, 2023). Therefore, the crossword puzzle game is very helpful for finding new vocabulary words. It is an interesting technique to improve the motivation, skill, and knowledge of students (Wijaksono & Siddik, 2022). Thus, it is an activity that can be used in teaching English.

The crossword puzzle is challenging, interesting, funny and creative to be used in teaching and learning process of English. It arouses students' motivation using crossword puzzles and force them to take an active part in teaching and learning process (Nurmala, Irianto, Franchisca, Amsa & Susanti, 2023). Besides, it is a technique that improves motivation, simulation and imagination of the students because it is studying while play. Furthermore, the students can learn a new language and connects them with the mastery of four language skills, namely: listening, speaking, (talking), reading and writing (Sari, Yusuf, Wahyuni & Kangkha, 2023).

Crossword also provides challenges that motivate students to solve puzzles by making learning fun and relaxing. It becomes a media that provide chances for students to practice and repeat sentence patterns and vocabulary (Lestari & Sismulyasih, 2018). This media is designed to make students feel interested in learning more about English vocabulary. It contains some interesting topics in English vocabulary to play such as nouns, adjectives and adverbs. It can also encourage students to think and guess words based on instructions given. This activity challenges students at the same time.

Another research developed crossword puzzle to help the students master the terminology through meaningful learning rather than rote learning (Yuriev, Capuano & Short, 2016). The investigation shows that crossword puzzles improve the students' problem-solving skill and if it were applied systematically, it would make contribution to the learning improvement. This finding was discussed in information processing and meaningful learning context.

Crossword puzzle game is the most popular and widespread word game in the world. Yet it has a short history. The first crosswords appeared in England during the 19th century. It was an elementary kind game, apparently derived from the word square, a group of words arranged to letters read alike vertically and horizontally, and printed in children's puzzle books and various periodicals.

In the United States, the puzzle developed into a serious adult pastime. It was first known published by Liverpool journalist, Arthur Wvne. He was usually credited as the investor of the popular game. On December 21st, 1931, crossword puzzle appeared in Sunday newspaper, the New York World.

Wynne Puzzle was different from nowadays crosswords. It has diamond shaped and contained no internal black squares. During early 1920's, other newspaper picked up the newly discovered pastime and within decade crossword puzzles were featured in almost all-American newspapers. It was in this period crossword begun to assume their familiar form. Ten years after it rebirth in the States, it crossed the Atlantic and re-conquered Europe.

According the Guinness Book of Records, the first collection of crossword puzzles was published in the USA in 1924 called The Cross Word Puzzle Book. It was the first publication by a new partnership formed by Dick Simon and Lincoln Schuster. The book, a compilation of crossword puzzles from the newspaper New York World, was an instant success and helped to establish publishing giant Simon & Schuster, who continue to produce crossword books to this day. Meanwhile, the first appearance of a crossword in a British publication was in Pearson's Magazine in February 1922, and it the first Times crossword appeared in February 1st, 1930 and British puzzles quickly develop their own style, being considerably more difficult than the American variety. In particular the cryptic crossword became established and rapidly gained popularity. The generally considered governing rules for cryptic puzzles were laid down by A. F. Ritchie and D. S. Macnutt. They were given with the ability to see words puzzle together in given geometrical patterns and capable of twisting and turning words into word plays dancing on the wit of human minds, have since constructed millions of puzzles by hand and each of these puzzlers has developed personal styles knows and loved by his fans- These people have set the standard of what to expect from a quality crossword puzzle.

Crossword puzzle is a word game in which words corresponding to numbered clues are put into a grid of horizontal and vertical 25 squares to form intersecting words (Feigenbaum, 2013). The puzzle is solved when a player supplies all of the words correct.

The word cross game is a common puzzle game in which the puzzle-goal solver is to solve a specific mentally difficult problem or complete a specific mentally difficult mission (Manus, Samola,

& Olli, 2022). In accordance with the preceding claims, the word cross game is a common game in which players fill in grids with words or letters. It has evolved into one of the most popular teaching-learning games, including language learning. This game is rated as a tough game.

There are three kinds of crossword puzzle that can be performed in the process of teaching and learning vocabulary in the classroom (Anwar & Efransyah, 2018). They are, first, oral puzzle. It is a puzzle that is giving oral by the teacher, and students are given only an empty crossword puzzle without a clue. Give instructions orally can train hearing students, tell students to fill out what they could and then repeat the instructions again until they understand. Second, picture puzzle. It is a puzzle using the picture as a clue and only gives students the puzzle without the clues. Each clue is replaced with pictures. It works very well with a unit which embroils many new vocabularies. And third, object puzzle. It is the crossword where inside the object is written a clue, give a blank puzzle without a hint to the students. The good placed around the each given a labeled with the prompts number. Then the students are asked to go around at different situations; allow them to pick up the objects as they complete the puzzle.

The utilization of crossword puzzle is one of instructional games that can give an impact on students' achievement in learning (Puspita & Sabiqoh, 2017). It is proven to be more dynamic to students in giving reaction to the teachers' explanation. It also gives up-side impact in further developing the students' reading comprehension and inspiration in learning reading. It means that crossword puzzle game is a media in understanding about the material in easier way because it will be more interesting for the learners.

Vocabulary consists of words that construct a language. It deals with words that are basic building blocks of language (Karakoç & Köse, 2017). It develops words combination/multiple units, word families and core meaning. In different view, vocabularies are words that have nuances and sometimes multiple meanings (Enayat, Amirian & Ghaniabadi, 2018). These complexes, multiple definitions of terms must be interpreted in the light of other words in sentences and paragraphs of texts. This condition gives birth contextual vocabulary that is used to that we should think of English vocabulary as a collection of subsets of words that are used in specific contexts (Afzal, 2019). So, vocabulary refers to words and their subsets, which are an essential part of language construction, It conveys meaning in a number of contexts through the use of language.

Based on the theories above, the researchers would to conduct research under the two questions: Can crossword puzzle game improve the students' vocabulary or not? and what is the level of improvement by the students when studying vocabulary using crossword puzzle game?

2. METHODS

This study applies classroom action research (CAR). Its design comprises four steps in every cycle: planning, acting, observing, and reflecting (Kemmis & McTaggart, 1988). The use of this method is based on the problems and the objectives being learnt or researched.

This research is to know whether using crossword puzzle can improve students' vocabulary mastery. On the basis of the aim, it employed the quantitative method because it involved the CAR. It involved the tenth-grade students of SMA Dharma Ayu Kefamenanu in the 2022/2023 school year.

This research applied 2 cycles. If the first cycle is not successful, it continues to the second one. It might go on the third one depending on whether there is an increasing on the students' vocabulary mastery.

To realize the cycles used, it involved four steps. They are planning, acting, observing, and reflecting. Each cycle has a closely relationship.

To get the data needed, each cycle applied pre-test and post-test. The pre-test was conducted before applying the treatment, that is, crossword puzzle. The pre-test required the students fill the blanks of the crossword puzzle with a proper answer. While the post-test was implemented after

teaching vocabulary. It was also an essay test that asked the students to fill the blank spaces of the crossword puzzle with a proper answer.

The aim of the observation is to explain the situation being investigated: activities, people, or individuals involved in the activity and the relationship among them. Observations were systematically recorded rather than stored only in personal memory, and are carefully interpreted and analyzed. It employed systematic and plan procedures. It means that observation is a data collection strategy in which the activities of subjects are visually examined.

To analyze their right and wrong answers, the researchers gave scores ranged from 0-10. In the same vein, their scores are ranged from 0-100. To measure the quantitative data, the researchers used the following simple formula (Sudjana, 2013). First, scoring and classifying the students' vocabulary using the following simple formula.

$$\text{Score: Students' correct answer} \div \text{Total number of items} \times 100$$

Or:

$$P = \frac{F}{N} \times 100\%$$

Notation :

P = Percentage

F = Frequency

N= Total of respondent

To calculate the rate percentage of the students' raw scores, this study used the following formula (Sugiyono, 2016) which classifies the scores into five levels (Riduwan, 2014) as follows:

Range of score	Level
81-100	Very high
61-80	High
41-60	Average
21-40	Low
0-20	Very low

3. RESULTS AND DISCUSSION

Results

Before implementing CAR, the researchers interviewed the students. The questions in the interview were related to the teaching and learning process of vocabulary, such as the techniques that the teacher used in presenting new vocabulary. In addition, they were given some vocabularies taken from students' book, asked them to memorize the whole vocabulary, and memorize some conversations.

In the text meeting, they were not given the chance to review the words and to apply the words into sentences.

Before implementing CAR, they were given a chance to complete the pre-test. It was done to know whether the students had good vocabulary mastery. The results of their answers in pre-test will be displayed in the following figure.

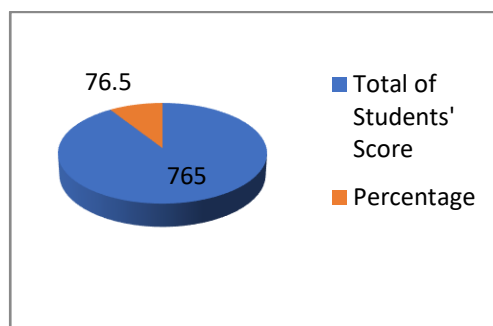


Figure 1. Students' scores on pre-test

Based on Figure 1, their average score was 76.5. It indicates that they have high level mastery in pre-test activity. However, their raw scores in pre-test will be displayed in the following figure.

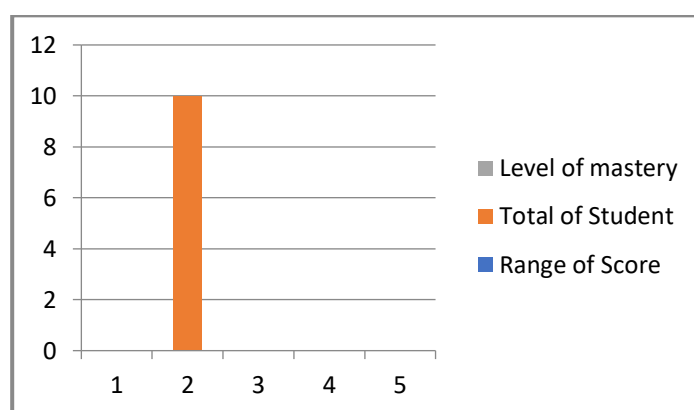


Figure 2. Students' raw scores

Figure 2 shows that all students got 10 in pre-test. It means that their Based on the students' raw scores above, the researcher found that there were 10 students who got high level in vocabulary mastery.

After finishing pre-test, this study went on post-test 1. The result of the post-test 1 will be shown in the following figure.

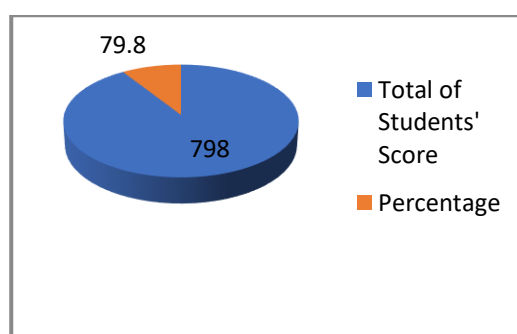


Figure 3. Students' scores on post-test 1

In the first pre test, there were only 2 students who had passed the minimum score. However, it significantly improved their mastery from 76.5 to 79.8. It occurred in post-test 1 as seen in the following figure.

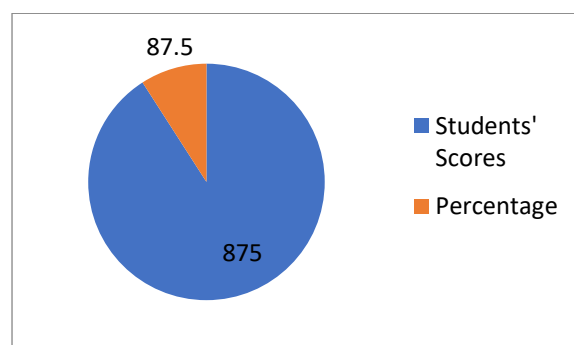


Figure 4. Students' Scores on Post Test 2

In this cycle, the students get better score, from the previous students had reached KKM, the average score also improved from 79.8 to 87.5. The students were braver in showing up in the class the actively asked and answered in English language even grammatically it was an error sentence, students also could recall almost all of the words that the writer gave including knowing the Indonesian translation and synonym for some words, in addition, they could make the sentences by using the words given, especially in narrative sentences. When the writer asked the students to make conversation by using the words that she had given, she found that students could use the words correctly.

In this cycle also, the time was more efficient than before, since, the time was not wasted by preparing the word cards, then, the writer could maximize the time and complete the material, that was, the writer decided to stop the cycle.

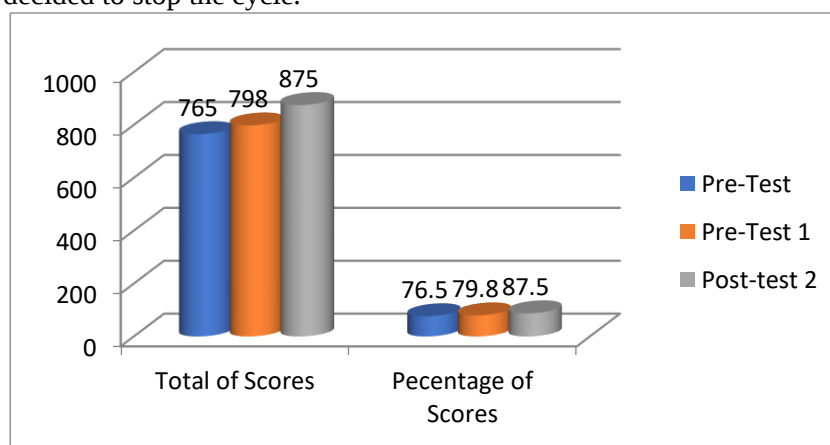
Figure 5.
Students' Scores on pre-test, post-test 1 and post-test 2

Figure 5 shows that the average score of post test 1 and post test 2 is 87.5. It indicates that the crossword puzzle games are effective to improve the students' vocabulary mastery.

Discussion

The results of data analysis show that the students' average scores were improved from 79.8 to 87.5. It signifies the fact that using crossword puzzle is effective to improve the students' vocabulary mastery and increase the level of their mastery.

The results of the present study confirm the previous ones conducted by (Anwar & Efransyah, 2018), (Lestari & Sismulyasih, 2018), (Wijaksono & Siddik, 2022), (Khaedar & Alam, 2023), and (Sari, Yusuf, Wahyuni & Kangkha, 2023). They also found that crossword puzzle is effective to improve the students' vocabulary mastery and increase the level of their mastery.

On the basis of the results of the present study, it can be stated that using crossword puzzle is very important to arouse the students' interest in learning vocabulary. Students will find difficulty to express something in communicating with others when they are lack of vocabulary (Anwar & Efransyah, 2018). In addition, vocabulary is needed to improve the four English skills; listening, speaking, reading, and writing". This means that one of the important elements in learning English is vocabulary. This signalement wants to emphasize how important vocabulary in learning language is.

Therefore, this study initiates the importance of using crossword puzzles in increasing the students' mastery in getting many words that can help them to communicate. Furthermore, using crossword puzzles can make learning process run well (Khaedar & Alam, 2023). Crossword Puzzle model is one of the strategies derived from active learning strategies, the challenges and its comfortable games.

On the basis of the above ideas of (Anwar & Efransyah, 2018) and (Khaedar & Alam, 2023), the results of the present study are still relevance with the development of teaching and learning strategy of vocabulary.

4. CONCLUSION

Based on the results of the analysis of finding, it can be concluded that the crossword puzzle games is effective to improve the students' vocabulary mastery. It can be seen from the data that the students' mastery was improved from 79.8 to 87.5. This average score shows that their level of mastery is categorized excellent.

The results of this study recommend that the teaching and learning process of vocabulary apply crossword puzzles because they can help the students to develop their competence of getting a lot of vocabularies. In the same vein, teachers of English should be creative to use media in running their teaching and learning process of English.

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