



Improving EFL Students' Vocabulary in a Rural Area through Scrabble with Crossword Picture Puzzle

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Abstract

There are still many EFL students in Indonesia who face struggles in learning English, especially in memorizing vocabulary. This is prominent in particular to students who reside in rural areas, where besides school facilities are limited, motivation is also among the factors for their depleted motivation to learn English. The students in one of the senior high schools in Sabang island, Aceh, Indonesia, still strain when dealing with this subject. To solve the problem, a game insinuated to improve their vocabulary is the scrabble with crossword picture puzzle. This game demands cooperation of students to work together with their peers in a group in an entertaining way. This research employed the quantitative approach by experimental teaching. The sample of study of were 25 students in the experimental class and 26 students in the control class. Purposive sampling was used in which these two classes had most students with the lowest English scores among the other tenth grade students. The results of the t-score showed that there was a difference between the scores of the pre-test and the post-test of the experimental (4.23) and control classes (3.59). This proved that the used of scrabble with crossword picture puzzle game gave a significant improvement on students' vocabulary. The application of this game made the students in the experimental class be more active, communicative, and challenging during learning process compared to the control class.

Keywords: Crossword; game; picture; puzzle; scrabble; vocabulary

Introduction

English as a Foreign Language (EFL) learners, especially in rural areas in Indonesia, encounter various struggles in learning due to various factors. Some common challenges faced by these learners are such as limited access to resources (Muslem et al., 2018), lack of qualified teachers (Febriana et al., 2018), limited exposure to English (Rahim & Chun, 2017), inadequate infrastructure (Bahrin et al., 2023), cultural and linguistic differences, and limited motivation and support (Supriadi et al., 2023). All of these challenges must be resolved by the teachers to continuously improve the students' ability and interest in learning English as a global language deemed important for their future careers.

One of the solutions to create an effective and enjoyable teaching and learning process, especially in a setting with many problems to students such as in the rural area. Efforts made by teachers in doing so can activate students to be fond of the subject they are learning, in this case, English (Djafar & Tamhir, 2021). Good learning media can increase their motivation to learn, and participate in classroom activities (Nugrahani, 2017). Among the simple efforts that teachers can partake is using games in the language classroom (Sari et al., 2020; Sari et al., 2022).

In language learning, vocabulary games should be the main emphasis in the process because it connects with all language abilities at all levels of proficiency (Elfiondri et al., 2022). Hence, learners with poor vocabulary need more time to pick up new words, are less able to participate in text comprehension, and are less likely to engage in oral conversation with their peers (Khan et al., 2018). The students with these problems then have a low awareness on how they process and produce the target language (Yousefi & Biria, 2018). Insufficient vocabulary as a major barrier further leads them to further struggle in improving all aspects of language skills (Hamad, 2013).

The researchers had conducted a preliminary research at one of the senior high schools in Sabang island, Aceh, Indonesia. It was also discovered that the major barrier in their English learning was vocabulary. Despite that they had learned this language since the 7th grade in junior high school, they still strived to remember the English vocabulary till senior high school. In the English subject, only 30% out of 61 tenth grade students at this senior high school reached *Kriteria Ketuntasan Minimal* (or KKM, translated as Minimum Score Criteria) was only 30%, and those who did not reach KKM was 70%; this was quite alarming and efforts need to be taken by the

teachers to resolve this problem. Junior high students studying English as a foreign language (EFL) in Indonesia must acquire 1.000 words, whereas senior high school students must learn 2.500 words—nearly three times as many as junior high students must learn (Astaman, et al., 2002). However, not all terms in language instruction are equally important. Therefore, teachers must know which words they need to teach to the students at different grades from the 7th-12th grades.

There are numerous methods for teaching vocabulary in learning a foreign language. Among them is the use of scrabble with crossword picture puzzle game. It is known as an engaging technique for students to actively engage in the learning process (Franklin et al., 2003), and is helpful in the approach for students to remember vocabulary. Crossword or scrabble is a type of game that trains and develops vocabulary thinking insights (Shoimin, 2014). In this game, two to four players score points by placing tiles, each bearing a single letter, onto a game board. This model takes the form of various words, sentences, or paragraphs and are done in groups. The words, sentences, or paragraphs are then combined with picture puzzles to support the creation of more interesting learning. This puzzle game involves assembling pieces of cluttered images into one complete picture (Prasetyoningrom, 2015).

A number of studies have been conducted on the effectiveness of scrabble with crossword picture puzzle game in English language learning. Some researchers have done some previous studies related to scrabble with picture puzzles. In the Palestinian context, Keshta & Al-Faleet (2013) found it successful in developing tenth graders' vocabulary achievement and retention. In the Indonesian context, Sitompul & Harahap (2020) and Panjaitan & Amaniarsih (2021), for example, found that this game provided meaningful effect on students' vocabulary achievement in Medan. The pre-test post-test design of these research showed an increase in students' English scores after the experiment was implemented in their English classes. In Binjai, Fachrozi et al. (2021) investigated how this game increases senior high school students' vocabulary mastery. Through classroom action research, they found the increase in scores by the students in the first cycle to the second cycle. This game did not only improve the student's command of the English language vocabulary, but also made the class interesting and fun.

In view of that, this present study also intended to implement the scrabble with crossword picture puzzle game to the senior high school under study in Sabang.

Puzzle is an interesting strategy to make the students actively participate in the learning process and requests students' cooperation in groups. Very limited study has been conducted in the context of rural students in Indonesia, and thus this study intends to fill in this research gap. Consequently, this research aimed to use scrabble with crossword picture puzzle game to help improve students' vocabulary at the tenth grade of a rural senior high school in Sabang, Aceh, Indonesia.

It is expected that the results of this research provide better insights into the extend of how scrabble with crossword picture puzzle game can be help EFL students in learning vocabulary. Hence, the research hypotheses for this research are as follows:

Alternative Hypothesis (H_a): There is a significant improvement on students' vocabulary after being taught with the scrabble with crossword picture puzzle game.

Null Hypothesis (H_o): There is no significant improvement on students' vocabulary after being taught with the scrabble with crossword picture puzzle game.

Research Methodology

This research used the quantitative method by using an experimental research. A quantitative research is a formal, objective, systematic process in which numerical data are used to obtain information about the world (Burns & Grove, 2005). The population of this research was students in the tenth-grade students of one of the senior high schools in a rural area in Sabang island, Aceh, Indonesia, with a total of 61 students. The sample of study of were 25 students in the experimental class and 26 students in the control class. Purposive sampling was used in which these two classes had most students with the lowest English scores among the other tenth grade students.

Instruments in research are tools and facilities used by researchers in the data collection process to facilitate work and the results become better, careful, complete, and consistent so that the research carried out is easier to process (Goldsmith et al., 2020). In this research, the instrument used were tests to measure student's ability in English vocabulary before and after the treatment of teaching vocabulary through the scrabble with crossword picture puzzle game. Two test that were given to the students namely the pre-test and the post-test. The researchers took the test materials from the English textbook used by the school.

On the first meeting, the pre-test was conducted on the students in the control and experimental groups, they were given 50 words and were asked to describe the meanings of those words in short sentences. For the next three meetings, the control class was taught using the conventional method, where teaching was based on the materials solely from the textbook. The experimental class was taught using the scrabble with crossword picture puzzle game. Following the steps of conducting this game by Prasetyoningrom (2015), first, the teacher (who is the second researcher of this study) presented the students with how to do the activity of scrabble with picture puzzle by writing the steps on the blackboard. Once the students understood, the class was divided into groups which consisted of 4-5 students in a group. The teacher laid out the scrabble and 10 picture puzzles on each table of the group. The students consecutively arrange pictures and guess the meaning of the pictures with their group members. They were given time of about 30 minutes. After knowing the meanings of the pictures, they arranged the letters on the scrabble board. The group that finished first is the winner. Before the class ended, the teacher recalled the lesson for the day. Finally, on the fifth meeting was the post-test, the teacher again gave a set of slightly different 50 words from the pre-test and were asked to describe the meanings of those words in short sentences.

The scores from the pre-test and the post-test were analyzed by using the statistical procedure to find out the mean, t-score, and standard deviation (Sudijono, 2003). Mean is the average score results from the students in each test. Standard deviation is measure of the amount of variation or dispersion of a set of values. Meanwhile, the t-score (also known as t-value) is equivalent to the number of standard deviations away from the mean of the t-distribution.

Findings and Discussion

Findings

Table 1 shows the results of the pre-test and post-test from the control class with a total of 25 students. The mean score of pre-test is 62.4, and after the treatment the mean score of the post-test increases to 71.8. The standard deviation score of the pre-test is 7.6, and after the treatment, the standard deviation score increases to 8.1. After determining the standard deviation, the t-score was calculated and the result is 3.59.

Table 1. The Scores of the Pre-Test and the Post-Test of the Control Class.

		Mean	Std. Deviation
Pair 1	Pre-test	59.0	6.86
	Post-test	67.3	7.5

Table 2 shows the results of the pre-test and post-test from the experimental class with a total of 26 students. The mean score of pre-test is 59, and after the treatment with the conventional method, the mean score of the post-test slightly increases to 67.3. The standard deviation score of the pre-test in is 6.8, and after the treatment, the standard deviation score slightly increases to 7.5. After determining the standard deviation, the t-score was calculated and the result is 4.23.

Table 2. The Scores of the Pre-Test and the Post-Test of the Experimental Class.

		Mean	Std. Deviation
Pair 1	Pre-test	62,4	7,6
	Post-test	71,8	8,1

Based on the data above, the t-score or t-value of the control class is 3.59, and the experimental class is 4.23. This result shows that there is a significant difference between the pre-test and post-test in both classes, however, the experimental class gained higher significant difference by learning through the scrabble with crossword picture puzzle game because the critical value of the t-score for freedom of 26-25 samples was 0.64 at a significance level of 6% (0.06). So, t-score = 4.23 is higher than t-table = 3.59.

In conclusion, the analysis of the data reveals significant differences between the pre-test and post-test scores for both the control and experimental classes. However, the experimental class, which utilized the Scrabble with Crossword Picture Puzzle game as a learning tool, exhibited a higher significant difference compared to the control class. This game had a more substantial impact on the learning outcomes, as evidenced by the higher t-score compared to the control class.

Discussion

Based on the findings of the study, the implementation of scrabble with crossword picture puzzle game was effective to improve the students' English vocabulary in the experimental class. Despite the control class also had an increase in scores, hence, the scores are not as significant as obtained from the experimental

class. The results showed that the value of t-score (4.23) was higher than t-table (3.59) at the significant level 6%. It means that the Alternative Hypothesis (H_a) was accepted, the Null Hypothesis (H_0) was rejected. Scrabble with crossword picture puzzle was able to improve students' vocabulary mastery of tenth grade students in a senior high school at Sabang island, Aceh, Indonesia.

During the experiment, the students in the experimental class were seen to be more active and enthusiastic in learning compared to the control class in which the atmosphere was more monotonous. The experimental class was student-centered, meanwhile the control class was teacher-centered. During the game of scrabble with crossword picture puzzle, the students were seen to interact with their group members keenly to find meanings to words during the time given. They all strived to be the winner. Indeed, this game demanded students' participation to work with each other their group (Wulanjani, 2016). Since the class ambiance was joyful and less-stressed, the students were confident to actively communicate with each other, both in English and Indonesia, and sometimes even the local language (i.e., Acehese) to reach their goal of completing the English game task. Their use of a number of languages in the classroom was not much commented by the teacher. As long as they all had the same goal of providing the English meaning to the English words in the task, the teacher let them be. This is to encourage them in learning English because before this game for learning were implemented, they initially had low motivation to learn this language. Consequently, this lively engagement was helpful in the progress of learning and remembering the English words (Franklin et al., 2003).

While learning through playing the scrabble with the crossword picture puzzle, the students were also seen to generate ideas from each other while thinking and discussing on how to formulate words to explain the meaning of words from pictures. Shoimin (2014) has mentioned that games in language learning can foster the growth of vocabulary-related cognitive skills. Nevertheless, despite its advantages, this game was also seen to be time-consuming. Even though all of the groups managed to complete their game task on time in the experimental class, some of the students in the groups gave the impression of 'unsatisfied' with their work because a few words assigned by the teacher for the game was not given enough explanation. This made them discontented. This setback was also revealed by Pohan (2018). Perhaps in the future, due to the time constraint, the number of words that the

students had to do could be lessened to cope with the time provided by the school for each English lesson.

Finally, this game can be an alternative media that can be applied in teaching and learning English vocabulary. It is found to found to successfully develop students' vocabulary achievement and retention (Keshta & Al-Faleet, 2013). They could easily absorb the materials (i.e., vocabulary) delivered by the teacher in class and the students become more excited to learn (Fachrozi et al., 2021; Panjaitan & Amaniarsih, 2021; Sitompul & Harahap, 2020). This enthusiasm is important to build on students residing in rural areas, in which many factors exist to dwindle their learning motivation (Bahrun et al., 2023; Febriana et al., 2018; Rahim & Chun, 2017; Supriadi et al, 2023). To consistently advance the students' capacity and enthusiasm for learning English, teachers must make extra efforts to find solutions to these issues.

Conclusion and Suggestion

Based on the results of this study, it can be concluded that the scrabble with crossword picture puzzle game can improve EFL students' vocabulary. The mean pre-test score of the control class is 59.0 while the post-test mean score is 67.3. The mean pre-test score of the experimental class is 62.4, while the mean post-test score is 71.8. The results of the t-score showed that there was a difference between the scores of the pre-test and the post-test of the experimental and control classes. The t-score for the control class is 3.59, while the t-score of the experimental class is 4.23. With a higher t-score from the experimental class, this proved that the used of scrabble with crossword picture puzzle game gave a significant improvement on students' vocabulary. The application of this game made the students in the experimental class be more active, communicative, and challenging during learning process compared to the control class.

Yet, the results of this study were only from two classes in a senior high school situated in a rural area in Sabang island, Aceh, Indonesia. There are still many schools in other rural areas in Indonesia that needs similar attention in improving their students' English vocabulary. Future related studies are suggested to involve more school in rural areas in Aceh to study further effect of the scrabble with crossword picture puzzle game in learning vocabulary. Questionnaires, and even interviews

with both teachers and students toward the implementation of this game in learning to retrieve in-depth information are also advocated.

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