

Investigating Educaplay as a game-based learning in teaching English vocabulary to young learners

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Abstract

This study explored the use of Educaplay, a game-based learning website, in teaching English. Specifically, the study aimed to investigate its effectiveness in teaching English vocabulary, especially for young learners. The participants were thirty-two fifth graders who were given a pretest and post-test to measure their vocabulary achievement. The study used a pre-experimental design with a single group. The results of the data analysis on students' pretest and post-test scores showed no significant difference between the mean scores, indicating that Educaplay did not improve the student's vocabulary mastery. The researchers suspect this situation occurred due to several factors: 1) implementation time limitations, 2) The differences in the pretest and post-test forms. Instead of the insignificant effect of the media, the learning environment became more interactive and enjoyable for students. Further, the study discussed the benefits and challenges of using Educaplay in the context of young learners and the implications and suggestions for future research.

Keywords: Educaplay, Game-Based Learning, Vocabulary, Young Learners.

INTRODUCTION

Learning vocabulary is crucial to learning English. Teachers could measure the students' language proficiency by examining their vocabulary knowledge. According to Wulanjani (2016), vocabulary should be integrated with four English skills: listening, speaking, reading, and writing, because they play a vital role for language learners. The fundamental component of language that connects them all is vocabulary. To master all those skills, the students need good vocabulary mastery. Learning English depends on the student's ability to acquire adequate words. Rahmadhani (2015) found that students with good vocabulary mastery will find it easier to express their views orally and in writing and understand what others say. Teachers should have specific vocabulary acquisition objectives for students, considering the implications of the situation. This is crucial in the early phases of vocabulary development when a broader vocabulary greatly impacts a student's ability to use and comprehend language. The objectives must be based on the learning strategies and the time available to acquire vocabulary inside and outside the classroom.

There are obstacles that teachers face when teaching vocabulary. Based on Ardiyanti et al. (2021), teachers find it challenging to tell students to memorize vocabulary because only a few students follow their teacher's instructions, and others are just busy playing and talking to themselves in a friend's seat. Suardi (2019) also found that teachers find it difficult to select vocabulary to be taught because there are many words in English, and the students do not have the same ability. Susanto (2021) identifies several common difficulties students face:

pronouncing words, writing and spelling, different grammatical forms, choosing appropriate meanings, using words based on context, and idiomatic words or expressions. These difficulties are obstacles for students in learning vocabulary. Difficulties in learning vocabulary are not only felt by students, but teachers can also feel difficulties in learning, especially for young learners who have characteristics that are more difficult to control than adult learners. These obstacles exist because of the characteristics of young learners. Teaching English to Elementary School students differs from teaching to adults because they like to play rather than study Ulfa et al. (2017).

Babiarz & Kraj (2019) stated that young learners are different from adult learners because they have short attention spans, become easily bored, and lose focus after ten minutes. Teaching English to young learners can be challenging due to their particular characteristics. Therefore, teaching young learners should pay attention to their nature. So, Young learners should have an activity or learning that they feel is enjoyable and fun. Even so, young learners can easily understand something new in their lives. Therefore, interestingly, teaching vocabulary is necessary so that young learners can capture and understand the vocabulary being taught. Young learners are still children who like playing with others, and playing is their priority. Teachers should be imaginative and creative in developing the learning activities (Wardhana, 2019). From the explanation above, it can be said that the obstacles in teaching vocabulary to young learners can be overcome by finding an interactive media to overcome students' difficulties in learning vocabulary.

Interactive media can help create engaging learning experiences. These days, technology is used extensively in the classroom. English language learning is accelerated by technology compared to conventional approaches. As a result, given the rapid advancement of educational technology, most educators encourage students to use technology. Technology use in the classroom can significantly improve teaching and learning, according to Prayudi et al. (2021). Research by Alex (2019) shows that using technology in the classroom encourages rivalry among students and boosts their enthusiasm and level of activity. Additionally, to satisfy their students' requirements and expectations, English language teachers must maximize the use of technology. Game-based learning can be employed with educational components to facilitate learning and make it more engaging.

Game-based learning is a method that uses games to teach material by combining the fun of playing games with the learning process. This method is expected to increase student motivation and learning outcomes. Game-based learning can overcome difficulties in understanding material by balancing cognitive, emotional, and social factors to create an adaptive and effective learning environment (Greipl et al., 2020). Nowadays, the use of technology in teaching provides the benefit and effectiveness of getting the appropriate tools that can be used for teaching, one of which is an interactive game that can collaborate with the material to be taught. There are many websites or applications that provide game-based learning templates that are very easy for teachers to use to help improve learning effectiveness. One example is a website that focuses on fun learning using game-based learning, such as Educaplay.com.

Educaplay is one of the media innovations in learning activities. Educaplay is a website that provides various kinds of interactive learning games that can be tailored to the teacher's needs. Educaplay was created by Juan Diego Polo, who studied telecommunications Engineering at the UPC, Barcelona. According to Sison (2021), Educaplay is a form of educational platform that effectively integrates tools that utilize many features that teachers can use for teaching. There are many types of games, namely Yes or No, Froggy Jumps, Memory Game, and Matching Pairs, which can be fun and engaging for all students. At the end of the game, students can see their ranking and other students who follow the game. To create and use educational games on Educaplay.com, teachers register and choose or create

new game models, and teachers can share the games with their students. With these games, Students can learn while playing and improve their ability to remember learning material. Game-based learning can be maximized with learning that focuses on teamwork to create a learning environment that can stimulate students to think and have shared responsibility.

Websites or game-based learning applications such as Educaplay can reduce vocabulary difficulty through a fun and active learning approach. Research conducted by Sison (2021) proved that difficulties in online learning can be overcome with Educaplay, which makes learning fun and better. Research conducted by Ghazy et al. (2021) regarding increasing student achievement and interest in Game-based Learning shows an increase in student learning achievement when using Game-based learning by encouraging students to be actively involved in learning and focus on learning. Another research conducted by Shaleha & Junaid (2022) in class VIII students at MTs Negeri Palopo showed that students had very good perceptions and liked the learning carried out by teachers using virtual learning platforms. Student perceptions and responses greatly influence the smoothness of the learning process. The response of students who like learning using game-based or virtual learning platforms can increase teacher success in teaching English language skills, including English vocabulary.

Highlighting the role of Educaplay in making learning better and more fun. The study explores the use of that game-based learning application. Unfortunately, it is hard to conduct, especially for young learners. Therefore, the researcher intends to examine the use of Educaplay by researching elementary students' vocabulary learning using Educaplay with the research question: Is Educaplay effective in teaching English vocabulary to young learners?

METHOD

Design

This research is quantitative. It used pre-experimental research administering a single group with a pretest and post-test as a methodology since it aimed to improve English vocabulary for young learners using Educaplay. Ary et al. (2010) defined pre-experimental as only one group or class being given a pretest and post-test. Pretest and post-test were completed only on one group without a control or comparison.

Participants

The participants in this research were fifth-grade students at SDN Jombang 3. They consisted of 13 males and 19 females. Participants were taken using non-probability or non-randomized sampling techniques. Specifically, the participants were chosen based on the teacher's recommendation.

Instruments

The study used tests to measure the use of Educaplay implementation on young learners' vocabulary. The test was divided into two types: pretest and post-test. These can be defined as the tools to assess participants' knowledge foundation at the beginning of a course and compare it to the information obtained after the course. The vocabulary pretest and post-test consisted of 15 multiple-choice choices adapted from the learning material and syllabus.

Data collection

The data in this study were collected through pretest and post-test. The pretest was given before treatment to determine students' previous vocabulary mastery. After the pretest, treatment was carried out using Educaplay as an influencing variable (independent variable). The treatment was given in two meetings. In the first meeting, the researcher introduced some

vocabulary about professions. Listening and repeating activities, as well as spelling, were done to drill students' skills and understanding.

The activities in the second meeting were done using Educaplay media. Specifically, the games used were Froggy Jumps and Word Search Puzzle. These two games were chosen because they can be effectively used in a large class. After the treatment, students were given a post-test to determine the results of using Educaplay. Furthermore, SPSS was used in this study to calculate the pretest and post-test scores.

Data analysis

The inferential statistics were utilized in this study. These aimed to analyze the data in measuring the use of Educaplay on young learners' vocabulary mastery. Additionally, the data was examined using SPSS. The study used inferential statistics to investigate the significant effect of Educaplay implementation on students' vocabulary mastery.

Before the data analysis, a normality test was used to determine whether the data distribution was normal. Shapiro-Wilk was utilized in SPSS to test the normality of the data. The result is presented in Table 1.

Table 1
Test of Normality

	Shapiro-Wilk		
	Statistics	df	Sig.
Pretest	.925	32	.029
Post-test	.908	32	.010

The data might be categorized as normally distributed if the value exceeds 0.05. In contrast, if the value was lower than 0.05, the data was classified as abnormal. Referring to Table 1 above, the Sig. the pretest value is 0.029, lower than 0.05. Furthermore, the Sig. The value of the post-test is 0.10, which is lower than 0.05. Both of the data indicate that the data distribution is not normal. It can be concluded that the assumption of normality is not fulfilled.

The Wilcoxon Signed Rank Test was utilized to measure the pretest and post-test results because the normality assumptions were not fulfilled. According to Taheri & Hesamian (2013), the Wilcoxon signed-rank test is a non-parametric hypothesis test determining whether two paired groups have the same distribution by comparing their medians. In line with it, a Wilcoxon Signed Rank Test was utilized in this study to ensure whether there is a significant difference in young learners' vocabulary mastery before and after being taught using Educaplay. The considerable difference indicates whether the media is effective or not effective.

FINDINGS AND DISCUSSION

As the normality test results showed abnormal data distribution, the researchers conducted the hypotheses test using the non-parametric Wilcoxon Signed Rank Test. It intended to answer the research question: Is Educaplay effective in teaching English vocabulary to young learners? The results of the data analyses are presented in Table 2 and Table 3.

Table 2
Ranks

		N	Mean Rank	Sum of Rank
Post-test-pretest	Negative Ranks	11 ^a	11.95	131.50
	Positive Ranks	10 ^b	9.95	99.50

	Ties	11 ^c
	Total	32
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a.	Post-test < pretest	
b.	Post-test > pretest	
c.	Post-test = pretest	

Table 2 presents the mean ranks of each comparison. Negative ranks refer to students' post-test scores, which are lower than their pretest scores. On the contrary, positive ranks refer to students' post-test scores, which are higher than their pretest scores. Additionally, ties refer to a constant achievement on the pretest and post-test. Of thirty-two participants, eleven students experienced a decline in learning outcomes (Negative Ranks N=11) with a mean rank of 11.59.

In comparison, ten students experienced increased learning outcomes (Positive Ranks N=10) with a mean rank of 9.95. Furthermore, eleven students got similar results in the pretest and post-test (Ties N=11). This means that eleven students did not experience an increase or decrease in learning outcomes.

Table 3
Test Statistics

	Post-test - pretest
Z	-.559a
Asymp. Sig. (2-tailed)	.576

- a. Based on positive ranks.
- b. Wilcoxon Signed Ranks Test

The Wilcoxon Signed Rank Test result presented in Table 3 shows that Asymp. Sig (2-tailed) has a value of 0.576. Because that value is higher than 0.05, the Null Hypothesis cannot be rejected. It means there is no significant difference in young learners' vocabulary mastery before and after being taught using Educaplay. The results indicate that Educaplay, a game-based learning media used to teach young learners English vocabulary, is considered ineffective.

Educaplay is a website that provides various kinds of interactive games for learning that can be adjusted to the teacher's needs. According to Sison (2021), Educaplay is an alternative media that teachers can use to make learning more interesting by integrating tools to produce a game that teachers can use for teaching. There are many types of games provided by Educaplay, namely Yes or No, Froggy Jumps, Memory Game, Matching Pairs, Word Search Puzzle, and other games that can be made to be presented in a fun and engaging way for all students.

Researchers implemented the treatment in two meetings with different activities in this study. The activities in the first meeting were listening, repeating, and spelling. The activities were done considering some difficulties in teaching and learning vocabulary (Suardi, 2019; Susanto, 2021). Two types of games provided by Educaplay were used in the second meeting. The games were Froggy Jumps and Word Search Puzzle. These two games were used with a two-stage elimination game system. In the first stage, researchers divided students into six groups, and each group would compete to answer questions in the Froggy Jumps game. After the game was finished, the researcher announced the two groups with the highest scores. After that, the game entered the second round using Word Search Puzzle, with two teams competing to answer quickly. The team that managed to answer more times won the game. This group competition was done to encourage students to actively participate in the activities and minimise challenges such as busy playing and talking to their friends (Ardiyanti et al., 2021).

Researchers made direct observations regarding classroom conditions and the learning environment created by integrating technology in the form of game-based learning. As a

result, the learning environment became more fun, interactive, and enjoyable for students. This can be seen from the students' enthusiasm to participate in the game and answer the questions. Those observation results aligned with previous studies that argue that using technology in the classroom boosts students' enthusiasm (Alex, 2019), one of the forms is game-based learning, such as Educaplay, which has been proven to create a fun, adaptive, and effective learning environment (Greipl et al., 2020; Sison, 2021). However, based on research results on student learning outcomes after being taught using Educaplay, there was no significant increase in student learning outcomes. On the contrary, it tends to decrease. The results do not align with the theory that game-based learning can improve student learning outcomes.

This study investigated the difference in students' vocabulary mastery after being taught using Educaplay as a Teaching Media. The data analysis on the difference in students' vocabulary mastery was conducted using non-parametric Wilcoxon Signed Ranks because the normality assumption was not fulfilled. Based on the data analysis result, the Asymp. Sig. (2-tailed) value was 0.576, which was higher than 0.05. It indicates no significant difference in students' vocabulary mastery after being taught by Educaplay.

Based on the analysis, eleven students experienced decreases in their post-test results, ten experienced increases, and eleven had the same pretest and post-test results. This indicates a decline in student performance in mastering vocabulary after being taught using Educaplay. The situation shows the ineffectiveness of Educaplay as a learning media that can improve students' mastery of vocabulary. The results of this present study are contrary to the results of previous research, which states that technology use in the classroom (Prayudi et al., 2021), especially in the form of game-based learning (Ghazy et al., 2021), is an alternative to learning that can improve teaching and learning, as well as students' abilities.

The researchers assume that this situation occurs due to several factors. The first factor is the time limitations. The treatment using Educaplay in this study was a one-set activity that was given in two meetings. However, the implementation of Educaplay itself was only one meeting, preventing game-based learning from being implemented optimally. This situation is predicted to influence the final results of the treatment. It is assumed that the students need more time to get used to the application and feel the benefits, as Galoyo (2021) suggested that game-based learning is a way of teaching that can attract students' interest and potential. However, this teaching requires much time to maximize learning outcomes.

The second factor is the difference between the pretest and post-test forms, in which the pretest was given in a paper-pencil form while the post-test was given through Educaplay. Even though both tests were in the form of multiple-choice items, it is assumed that the different forms of the tests – paper-based and technology-based – result in different test anxiety and focus. The data analysis showed that the participants experienced a decrease in learning outcomes compared to their prior test. This can be seen in eleven students who experienced a reduction in post-test results, as well as eleven students who did not experience an increase in post-test results. The situation could probably be caused by the students' anxiety and focus on doing the technology-based post-test. This is caused by external factors that intervene in the post-test. This confirms Babiarz & Kraj's (2019) and Ulfa et al.'s (2017) statement that young learners are different from adult learners because they like to play, have a short attention span, get bored quickly, and lose focus after ten minutes. Thus, teachers should be imaginative and creative in developing learning activities (Wardhana, 2019).

CONCLUSION

The study explored the use of Educaplay, a game-based learning website, in teaching English vocabulary to young learners. The research used a pre-experimental design with a single fifth-grader group at SDN Jombang 3. The results showed no significant difference in

students' vocabulary before and after being taught using Educaplay as a teaching media, indicating that Educaplay is not practical in teaching English vocabulary for young learners. Researchers assume that the situation occurs due to: 1) time limitations in game-based learning implementation. 2) the differences in the pretest and post-test forms.

Highlighting some limitations found during the study, such as the short duration of the intervention, the lack of a control group, and the possible influence of different test forms on the student's performance, which affected the results of the present study, some suggestions addressed to future researchers. For future research, it is suggested that the duration and frequency of the intervention be extended and the effects of other variables, such as motivation, attitude, and learning materials, be controlled or measured. Additionally, using similar forms for data collection is highly recommended to obtain more valid student performance data. It is also recommended to explore other types of games and activities on Educaplay to enhance different aspects of English language learning, such as grammar, pronunciation, and communication skills.

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