

THE USE OF THE DUOLINGO PLATFORM IN DEVELOPING SEVENTH GRADE'S VOCABULARY MASTERY

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Abstract

The motivating basis of this study was the fact that many students struggle to learn vocabulary. The study seeks to investigate the effect of the Duolingo platform on Junior High School students' vocabulary mastery. To this end, the study carried out a quasi-experimental investigation in which fifty students were assigned to the experimental and control group 25, respectively. The students in both groups were given pre-test and post-test before and after the instruction. The data were calculated statistically assisted by SPSS 24. The finding showed that Duolingo positively contributed to developing the students' vocabulary. The possible explanation for this contribution is probably due to the relevance of the applications towards the nature of the students to require more visual material. This study concludes that the involvement of technology helps in vocabulary learning.

Keywords: *Application, Duolingo, Vocabulary*

INTRODUCTION

One factor that supports students in mastering language skills is vocabulary. According to Desi (2020), vocabulary is considered the most important unit needed to master a second language. Learning vocabulary first will make a person better able to master other skills such as reading, listening, speaking, and writing. It will be challenging to understand a second language or communicate with native speakers without knowing the vocabulary. Without sufficient vocabulary, it will be difficult for a student to attain the language competence described above. Therefore, it is one important aspect of language competence mastery (Hansot.E, 2004).

However, many students who struggle to learn vocabulary are still minimum, especially in seventh grade. Furthermore, without learning vocabulary, the students may not understand the conversation in listening, communicate properly, understand the text, and be unable to write their ideas. So the problem is a lack of vocabulary. Without sufficient vocabulary, it will be difficult for a student to attain the language competence described above (Yusda, Nanda, Mahdi Pratiwi, & Hainun, 2020).

The above problem can be caused by uncommunicative learning and lack of motivation in vocabulary acquisition. Jams (2020) described that many teachers are still monotonous in teaching vocab because they only focus on books, even though many teachers rarely come to class. Time and place are among "the limitations" which are associated with the term (Gumilar, 2008). Some of these problems negatively impact young learners due to lack of practice and limited time to study. Moreover, the students needed to master about 2000 words to communicate with people (Fatah C. A., 2018). Therefore, teaching techniques and methods ought to be strengthened to support the learners recover enthusiasm for English learning.

Nowadays, the platform has been evolving and creating numerous devices that are useful in helping students learn languages. The platform can be defined as using a software program designed to run on a mobile device. Numerous applications are implemented to develop language learning to improve their English proficiency (Howard Gardner, 2013). One example is Duolingo, an app and website created to facilitate learning various languages, such as English. Besides, this application can motivate young learners to know the basic vocabulary and make communicative learning between students and teachers.

As a language learning platform, Duolingo is one of the most popular apps. Based on the website, Duolingo is a free language learning app. The Duolingo application has several features that can help participants learn vocabulary. Existing features make it fun for participants to use the Duolingo application in their learning process. As mentioned by Yusda (2020), students are interested in learning with visual features, but playing is like guessing a picture, and if you can answer, you can win prizes such as points. Based on the above expressions, the Duolingo feature is beneficial in learning by guessing the picture and helping you remember the vocabulary you learned.

Some research on the influence of Duolingo has been done by several researchers, for instance, by Addal Muddil, a researcher from Banda Aceh. First, the study was conducted to determine the effect of using Duolingo in teaching English to improve students' ability to master vocabulary and to know the students' perception toward implementing Duolingo in teaching English subjects at MA. The results show a positive effect on students' ability to master vocabulary using Duolingo (Addal, 2018). The second study is taken from Cecep Abdul Fatah. The research discusses The Effect of Using the Duolingo Application to Develop Students' Vocabulary Knowledge. The result of that research showed a positive effect to be implemented on students, especially for the tenth-grade students of SMA at East Jakarta (Fatah, 2019). The following study is taken from Alvons Habibie's IAIN Sultan Amai Gorontalo research. The research was conducted with Duolingo as an educational language tool to enhance EFL students' writing motivation. The result of the study showed that Duolingo is an app where every beginner can start learning a second language as it motivates them to keep on making progress (Habibie, 2020). Moreover, this app showed a positive connection between the amount of time spent on Duolingo and learning gains. In addition, most participants agreed that the gamification setting satisfies learners' learning goals.

From those three previous studies, there are some differentials that need to be addressed. The first, Addal Muddil is regarding the level of the students in which in those study they still focus in MA, they also used Duolingo to be applied in writing. The second, Alvons Habibie's research is regarding the use of Duolingo to motivate students in writing. The last one is in Fatah's study, he used Duolingo for Students Vocabulary Knowledge at SMA. The effectiveness of Duolingo in seventh grade's vocabulary mastery is not yet investigated. Even though there are some differences described above, this research and those research have the same variable, Duolingo. Based on students' vocabulary problems and the gap in the previous study, this research aims to examine the

effect of Duolingo in developing seventh-grade students' vocabulary. Specifically, this study investigates the following research question:

1. Does the Duolingo platform affect junior high school students' vocabulary mastery?

METHODS

This study was conducted using quantitative approach and used a quasi-experimental design to investigate the effect of Duolingo on students' vocabulary mastery. According to Barry Gribbons (1997), a quasi-experimental design is especially useful in addressing evaluation questions about the effectiveness and impact of programs. This research design investigated whether the Duolingo application develops young learners' vocabulary mastery. This study involved two classes of seventh-grade students with different treatments- the A class as the experimental class and the B class as the control class. In the practical class, we was applied the treatment of Duolingo application to the A class. At the same time the B class was the control class taught without using the Duolingo application.

The population of this research was carried out of seventh-grade students. This research population was chosen for several reasons: One of the researchers comes from the area and she is quite familiar with the conditions of educational development in the researched area, which become one of the elements of the affordability of the research location by researchers. Most of the samples come from villages far from the city and are they are less interested in English.

This study was conducted in Junior High School in Garut. The number of seventh grades that were sampled for this study was 50 students. They were chosen by using random sampling. Random sampling was used as a sampling technique because according to Arikunto (2010), where the sampling process is carried out, it should be done all if the research subject is less than 100 people. But if the research subjects are more than 100 people can be taken 10 to 15% or 20 to 25%.

In regard to the instrument, this study used a pre-test and a post-test. The pre-test was done to determine the students' initial ability regarding vocabulary mastery and know their initial abilities before using the Duolingo application. Post-test was done to get an idea of the abilities achieved after students can use the Duolingo application as a tool to expand vocabulary. In addition, this test used to determine the success of the learning process and measure students' mastery of learning a language using Duolingo.

Typically, a pre-test was given to students at the beginning to determine their initial understanding of the measures stated in the learning objectives. At the same time, a post-test was conducted just after completion of the course to determine what the student has learned. This study has conducted a pre-test before the activity takes place. After the pre-test, a sample of students was carried out the learning process for 4 meetings in 2 weeks using mobile learning media with indicators of material content about vocabulary.

After the researcher collected the data from the pre-test and post-test, the researcher compared the result of the pre-test and post-test scores. Then, the data was analyzed and determined with the statistical calculation of the t-test formula by a 5% degree of significance and gained scores. The T-test in this study was used to test the mean difference score between the experimental and controlled classes, whether there is a significant difference or not.

Furthermore, the gained score was the difference between the pre-test and post-test scores of each class of the experimental and controlled groups. Gain scores are used to determine the increase or decrease in scores and the effectiveness of the application used. However, before the tests, the hypothesis was necessary to analyze prerequisite tests first, namely the distribution of normality and homogeneity tests.

FINDINGS AND DISCUSSION

In this segment, the researcher discussed the findings and the discussion gathered during the investigation. Pre-test and post-test scores were available for both control and experimental classes. The researchers used the t-test method to recognize the efficacy of Duolingo in developing students' vocabulary. First, for each category, the researcher calculated the t-value. Second, the t-value was correlated with the t-table to learn the important difference. If the t-value is higher than the t-table, the difference is significant. On the other hand, if the t-value is lower than the t-table, the difference is not substantial. Lastly, this study showed that the t-test findings revealed a significant impact on learning with Duolingo, then the effect size was investigated by Cohens'd.

After several phases of analyzing the data, the result presented that Duolingo positively contributed to developing the students' vocabulary. To provide a clear explanation; the findings of the study were elaborated as follows:

Control Group Data Analysis

Table 1. T-test analysis of Control Group

	Mean	N	Std. Deviation	Std. Error Mean	df	Sig. (2-tailed)
Pre Test	30.72	25	8.142	1.628	24	.000
Post Test	47.72	25	8.716	1.743		

Before the result of comparison between pre-test and post-test, the result of pre-test showed that there is no significant difference in students' prior knowledge.

Table 1 presented the control group's mean pre-test and post-test scores and their significant result. Based on the table above, it showed that the pre-test mean score was 30.7 (SD = 8.1), and the post-test mean score was 47.7 (SD = 8.7). The difference between the mean scores was found to be statistically significant, with df got 24. Following the fact, the significant level in Sig. (2-tailed) value was $.000 < \alpha 0.05$, which means significant results have been achieved for the control group after learning with conventional technique.

Experimental Group Data Analysis:

Table 2. T-test analysis Experimental group

	Mean	N	Std. Deviation	Std. Error Mean	df	Sig. (2-tailed)
Pre Test	52.20	25	9.760	1.952	24	.000
Post Test	87.52	25	7.578	1.516		

Table 2 provided the experimental groups' mean scores for the pre-test and post-test. The table above showed that the pre-test mean score was 52.2 (SD = 9.7), and the post-test mean score was lifted to 87.5 (SD = 7.7). The difference between the mean scores was found to be statistically significant. Following the fact, the significant level in Sig. (2-tailed) value was $.000 < \alpha 0.05$, which means significant results also have been achieved for the experimental group after learning with the Duolingo application. It may be inferred that Duolingo's treatment can help seventh-graders develop their vocabulary.

Based on the result above, the experimental group has performed better than the control group. It can be seen from the mean score of the experimental group (see table 2), which got 87.5 (SD = 7.5), while the control group (see table 1) got 47.7 (SD = 8.7). However, the significance level of both sample groups showed a positive significance differences as Sig. (2-tailed) value was .000, which is not less than or equal to .05. It meant a significant difference between the two sample groups in the post-test score.

In regards to the students' voice about Duolingo, the students agreed that Duolingo helped them to memorize the English words easily. Also, most students feel comfortable with the app as they can practice pronouncing the English words confidently on the phone rather than in front of people. Consequently, the alternative hypothesis (H_a) that stated Duolingo application could improve seventh-graders vocabulary skills is accepted, and the null hypothesis (H_o) that stated Duolingo application could not improve seventh-graders vocabulary skills is rejected.

Discussion

This study found several findings. The first one is regarding the effectiveness of Duolingo. In this study Duolingo can effect the students' vocabulary mastery. This supports the finding of Fatah (2019) that game-based learning provided in Duolingo features for language learning, especially in vocabulary improvement, showed a positive, beneficial result. In addition, these findings are also in line with Addal (2018), the results showed a positive effect on students' ability to master vocabulary using Duolingo. Furthermore, the gamification setting provided by the application can encourage and maintain students' motivation to achieve good learning results. This can be seen when the researcher applied the Duolingo treatment to the experimental group as they agreed in the interview that Duolingo helps the students memorize the English words easily as the word repeatedly appears in the exercise section.

A previous study conducted by Habibie (2020) proved that learning a language through mobile platforms can assist students as their learning assistants and become autonomous learners as they can manage their own learning time to be more valuable with an enjoyable learning style. Furthermore, the second reason why Duolingo contributes to the development of vocabulary is probably due to the benefit that was covered by Duolingo, in which it gives comfort to the students' learning. The experimental students confirmed that learning with Duolingo was comforting compared to regular teaching without using any digital media. This happens because the students were engaged in collecting the lingot (Duolingo's reward) to foster their English level achievement.

The use of Duolingo in the classroom is very interesting for students, so the class becomes very interactive in language learning. The attention of students is needed in receiving lesson materials from the teacher. Djamarah (2006) mentioned that one of the efforts to attract students' attention is using media that can develop the students to think.

One media that can develop students' attention is media learning with the Duolingo app. Duolingo attracts the students to learn English because they can enjoy learning, and using the Duo app is not boring. Munday (2016) stated that Duolingo is preferred over assignments and regular media because of its convenience given, based on his research. This means Duolingo is easy to use and friendly media used in teaching and learning. In this case, the researcher is confident that the learner's experience of using Duolingo to learn English would give students greater experience through a mobile application.

A limitation of this research study is the limited of participants. Further research is required with a larger sample and from several areas and various types of school.

CONCLUSION AND SUGGESTION

Conclusion

As verified by the findings and discussion above, it can be concluded that the Duolingo application can improve junior high school students' vocabulary mastery. This has been proven by the mean score and the significance calculation in post-test results. In this study, the researchers have two results on why Duolingo influenced the English vocabulary learning process.

First, Duolingo was a language learning platform that contains various language skills, including an interactive visual interface, such as a leader board, skill tree, accomplishments, rewards, and levels that support students in improving their English learning process.

Second, the Duolingo application was easy to used, had a good review, and had flexible schedules to learn at any time. The students showed enthusiasm when the treatment was offered. The platform also provided a clear understanding of the content.

Finally, the researchers summarized that the use of Duolingo is beneficial in developing junior high school vocabulary mastery since the platform is valuable in the learning process.

Suggestion

From the conclusion above, a range of recommendations can be derived from this research that could be helpful to the reader, the teacher, and the students, as well as other researchers. Here are the suggestions as follows:

1. For the teacher

Teachers should make the teaching process more innovative to increase vocabulary mastery. In this digital era, the teacher can use relevant media and applications to make learning more innovative.

2. For the students

The students are responsible for learning vocabulary based on the material provided in the classroom and must practice more at home. Now the students have a new media game-based language learning, Duolingo.

3. For future researcher

This study intends to provide new knowledge for those who read it and as a guide for other researchers. Further research is required with a larger sample and from several areas and various types of school. Since there might be a lack in this analysis, the researchers hope there will be another study in the same English skill or elements provided by Duolingo to improve teaching and learning awareness.

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