

THE USE OF DUOLINGO AS A DIGITAL TOOL FOR ENCHACHING JUNIOR HIGH SCHOOL VOCABULARY MASTERY

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INTRODUCTION

1. According to R. Fakhurriana (2024) The Duolingo software is a useful resource for improving English language fluency since it makes studying easier and increases student interest by offering a fun and interesting learning environment[2]
2. According to Prayudha (2023) It is impossible to stop the rapid advancement of technology. Building excellent character requires active participation from all instructors, including parents. An essential part of the educational process is learning media. Learning media are necessary for a teacher's instructional process. Even with a variety of instructional resources, it can help teachers explore more expansive concepts [9]
3. According to Gustika,et al (2024) The use of suitable media, such as animation videos, is one of the secrets to effective learning in the classroom. One form of media that enhances the learning process is animation, which may be used in the classroom to provide a range of methods for enhancing students' listening comprehension [12].
4. According to Suryandari (2021) During the COVID-19 pandemic, media learning tools have been extensively studied for students studying at home, particularly during non-class hours. Digital platforms and methods have been used to enhance learning experiences and provide adaptable opportunities. Instructional films are a popular online learning tool that allows students to learn at their own pace and revisit challenging material. However, for challenging subjects, direct instruction with films should be combined to prevent misconceptions [10].

LITERATURE REVIEW

- According to (Ouyang 2024) The article does not specifically focus on the effectiveness of Duolingo for improving students' vocabulary. Instead, it primarily examines the broader impacts of Duolingo on EFL learners' willingness to communicate and their overall engagement in online classes
- In this article is focuses on the effectiveness of using Duolingo to improve student vocabulary using pre-experimental design in junior high school

RESEARCH QUESTIONS/GOAL


Does the Duolingo app help junior high school students become more proficient in English vocabulary?

RESEARCH METHOD


1. This research approach uses a quantitative approach.
2. This type of research is Pre-Experimental design. The participant of this research is the 32 student 7 grade at SMP Negeri 9 Mojokerto
3. The experiment used pre test and post-test, where Duolingo's application was used as an experimental medium while word cards were used as control tool, then tests were performed and analyzed using independent tests.

Data Collection

1.Pre-test: The pre-test was conducted in one class, 7th grade, that consists of 32 students who have already been chosen by the researchers as participants. Researchers teaching about schedule to know student ability vocabulary acquisition before the treatment and than the participant will be given quiz about “schedule”



1.Treatment: The researcher taught the “Schedule” material in front of the class and introduced the Duolingo application. The participants conducted an experiment by completing a quiz in the Duolingo app in part 3, unit 10, about “Schedule.” In this session, they were able to complete one level. After the treatment session, the students were able to continue learning independently using Duolingo, which helped them in learning and memorizing new vocabulary



1.Post-tets: To take post-test scores, make quiz questions using g-form about “schedule”. for questions must be by the Duolingo level itself or more than one level level from Duolingo. After researcher teach, the participant can applying the practice, researchers began to apply quizzes using g-form to get post-test scores.

Procedure

1. Pre-test

Using multiple choice question in google form

https://docs.google.com/forms/d/e/1FAIpQLSdMca0q4GDFYQPt_8s9wqMwnSGYc7HGYsyZFcZqMoZEWVyiLw/viewform?usp=sharing&oid=110946867990918684617

2. Treatment



- 3. Post-test

Using multiple choice question in google form

https://docs.google.com/forms/d/e/1FAIpQLSezxxFMCJHx2auMtAG05TTi2Elb3hBaCNLsjxJn4IQJn3_R2Q/viewform?usp=sharing&ouid=110946867990918684617

Data Analysis

- There are two processes in processing quantitative data. Normality test and statistical requirements for hypothesis generation, are the first step. Utilizing the hypothesis test is the next step after the necessary tests are complete. This study examined the effectiveness of Duolingo in improving Student mastery vocabulary skills among 32 grade 7 student (14 boys 22 girls) at SMP Negeri 9 Mojokerto. In addition, researchers also conducted data analysis to asses the impact of the intervention, which will be explained below:
- **Normality Test:** To ensure that the data to be analyzed has a normal distribution, a normality test is conducted.
- **Hypothesis Test:** Following the completion of the normality tests, which guarantee that the data are normally distributed, the next step is to examine and validate the hypothesis. To ascertain if the hypothesis should be accepted or rejected, hypothesis testing is done. The paired sample t-test was utilized to assess the hypothesis and ascertain whether a significant difference in the mean scores existed.

Normality Test

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pre-Test	.147	32	.076	.935	32	.055
Post-Test	.188	32	.006	.931	32	.042

From the normality test result in table.1, it shows than Kolmogorov-Smirnov the data obtained for the Experiment *Pre-test* is 0.055, and the Experiment *Post-test* is 0.042. That is, 0.055 and 0.042 > 0.05, so the data is declared not normaly distributed because the value of 0.055 and 0.042 less than 0.05.

Hypothesis Test

- H0 : Duolingo media does not improve students' vocabulary mastery in learning English.
- H1 : Duolingo media improves students' vocabulary mastery in learning English.

Ranks

	N	Mean Rank	Sum of Ranks
Post-Test - Negative Ranks	0 ^a	.00	.00
Pre-Test Positive Ranks	31 ^b	16.00	496.00
Ties	1 ^c		
Total	32		

a. Post-Test < Pre-Test

b. Post-Test > Pre-Test

c. Post-Test = Pre-Test

Test Statistics^a

	Post-Test - Pre-Test
Z	-4.910 ^b
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

Hypothesis Test

According to the findings the test significant value (2-tailed) is 0.000, or less than 0.05. As a result, the null hypothesis (H_0) is opposed and the alternative hypothesis (H_1) is accepted. Upon analyzing the pretest and posttest results, it was discovered that the use of Duolingo as media greatly enhanced students mastering vocabulary. This is demonstrated by the comparison of the pretest and posttest scores.

Discussion

- The treatment phase involved two 40-minute sessions where students engaged with interactive learning activities using the Duolingo application, focusing on vocabulary related to time and schedules. The post-test results showed a significant improvement. This increase in scores suggests that students' vocabulary mastery improved with the use of the Duolingo application.
- This research is supported by Ajisoko research[23] Duolingo works well as a learning tool since its gamification strategy may increase students' motivation. Duolingo successfully captured students' attention and motivated them to participate actively in their learning. Additionally, the interactive exercises, which include listening, speaking, reading, and writing tasks, provide a comprehensive language learning experience, reinforcing overall vocabulary acquisition.
- This research is supported by Irawan research[24] The findings of this study are consistent with previous research on the effectiveness of technology-based language learning tools

Discussion

- This research focuses on the use of Duolingo as media in English language teaching at Junior high school. The results show that this media can be widely used to improve students' mastery vocabulary. Previous research supports these finding this study are consistent on the effectiveness of technology-based language learning tools. For instance, [24] In this article, the vocabulary is general in nature, but the sample is not specified and it is also not clearly explained whether the statistical method used is the same or not but, while Ajisaka[23] also the population level used is elementary school

Conclusion

- The study at SMP Negeri 9 Mojokerto found that using Duolingo in English classes significantly improved students' mastery vocabulary. The study confirms that Duolingo, as a gamified mobile-based learning application, effectively enhances student engagement and learning outcomes in junior high school settings. It also highlighted the importance of creative teaching strategies in fostering student engagement and academic achievement. The study highlights the adaptability and influence of Duolingo as media an effective learning tool for encouraging curiosity and exploration in the classroom, ultimately enabling students to succeed in their English language learning journey.