

The Effectiveness Of Duo Lingo Application In Vocabulary Mastery Through Eight Grade Student

Mohammad Reza Adi Saputra¹, Yulia Nugrahini²

^{1,2} Bhinneka PGRI University, Indonesia

Corresponding Email: adireza219@gmail.com¹; yn.max88@gmail.com²

Abstract, This study aims to determine how effective the duo lingo application is in improving the English vocabulary skills of SMP Islam Al Azhar Tulungagung students in the 2023/2024 school year. In this study, researchers used an experimental method, and was conducted at SMP Islam Al Azhar Tulungagung, researchers chose eighth grade students in the 2023/2024 school year as the population. The total sample in this study was 20 eighth grade students. This study found that students' English vocabulary skills improved after using the duo lingo application in eighth grade students' English learning. The effectiveness of this study is evident from the difference between the pre-test and post-test results, with a mean pretest score of 67.75 and a post-test score of 85.00 indicating the effectiveness of the app. By using paired samples t-test. The result obtained is 0.001. In the rules of the paired t-sample test if the significance is 0.05. From all the results of the analysis, it can be concluded that the use of duo lingo application is effective on students' English vocabulary addition ability.

Keywords: Duo lingo, Effectiveness, Vocabulary

Abstrak, Penelitian ini bertujuan untuk mengetahui seberapa efektif aplikasi duo lingo dalam meningkatkan kemampuan kosa kata bahasa Inggris siswa SMP Islam Al Azhar Tulungagung tahun ajaran 2023/2024. Pada penelitian ini peneliti menggunakan metode eksperimen, dan dilaksanakan di SMP Islam Al Azhar Tulungagung, peneliti memilih siswa kelas delapan tahun ajaran 2023/2024 sebagai populasi. Total sampel dalam penelitian ini adalah 20 siswa kelas delapan. Penelitian ini menemukan bahwa kemampuan kosa kata bahasa Inggris siswa meningkat setelah menggunakan aplikasi duo lingo dalam pembelajaran bahasa Inggris siswa kelas delapan. Maka Efektivitas dalam penelitian ini terlihat dari perbedaan antara hasil pre-test dan post-test, dengan nilai rata-rata Pretest sebesar 67,75 dan nilai post-test sebesar 85,00 yang mengindikasikan keefektifan aplikasi tersebut. Dengan menggunakan paired samples t-test. Hasil yang diperoleh adalah 0,001. Dalam kaidah uji paired t-sample test jika signifikansi 0,05. Dari semua hasil analisis tersebut, dapat disimpulkan bahwa penggunaan aplikasi duo lingo efektif terhadap kemampuan penambahan kosa kata Bahasa Inggris siswa.

Kata kunci: Aplikasi, Duo lingo, Efektivitas, Penambahan kosa kata,

1. INTRODUCTION

English language education in Indonesia has become an important part of the education system, along with the growth of globalisation and the need for international communication (Zein, 2020). To achieve good English competence, it is important for students to develop strong vocabulary mastery skills. Improving vocabulary mastery can help students understand texts in English, develop vocabulary, as well as enhance understanding of various topics.

The use of technology in teaching and learning is becoming increasingly common. Duolingo and other language learning apps have become popular and easy-to-use learning tools for many students. Duolingo provides vocabulary, grammar comprehension, and reading tasks to help students enhance their English skills. SMP Islam Al Azhar is one of the secondary schools in the region that implements technological methods in the learning process. In this research, researchers will conduct research by utilizing technology by using the Duo Lingo application as a reference in learning methods. Although this step is promising, it is important to conduct more in-depth research to understand the impact of using the Duolingo app on enhance students' vocabulary mastery skills. The teacher proposes competition or collaboration between students, creating a spirit of healthy competition and cooperation in achieving a common language goal. Progress Monitoring: teachers utilize the monitoring feature within Duolingo to track individual student progress. This helps teachers provide specific feedback, highlight areas that need more attention, and provide appropriate guidance for each student. The application of duolingo is not limited to a specific time and place. have free time, or outside of class hours. This provides flexibility that allows students to make optimal use of time. students can do learning anytime through the duo lingo application, with this application students will feel learning without being bored and be able to increase their vocabulary skills in a row.

Applying Duolingo Application to students is not just about utilizing technology, but also about forming a learning ecosystem that is stimulating and responsive to the unique needs of each student. Through this approach, language learning can be more inspiring, dynamic and effective.

2. LITERATURE REVIEW

Productive vocabulary knowledge includes the words that an individual is able or chooses to use appropriately and accurately through speaking or writing (Nation, 2001). In other words, Receptive knowledge carries the idea that people receive language input from listening, speaking, and trying to comprehend information while productive knowledge implies that people produce language forms by speaking and writing to convey messages to others (Nation, 2003).

Receptive vocabulary knowledge includes the words that an individual is able to remember the meaning of and understand while listening to or reading a word (Schmitt, 2000). Productive vocabulary 10 knowledge includes the words that an individual is able or chooses to use appropriately and accurately through speaking or writing (Nation, 2001). Applied to the study of vocabulary, receptive knowledge suggests that receptive vocabulary is gathered from

listening, reading, and retrieving their meaning whereas productive vocabulary use occurs when a person wants to express vocabulary through written or spoken forms (Schmitt, 2000). Based on research conducted Applying Duolingo in enhance students' vocabulary mastering enhance the students' ability in mastering vocabulary. It can be proven by the findings that the mean of the post-test scores was higher than pre-test scores. The mean of the pre-test was 67.75 while mean of pre-test was 85.00. From the results of these data showed that this study was able to achieve an increase in students' vocabulary.

3. RESEARCH METHOD

According to Arikunto (2019, p. 136) research methods are the main ways that researchers use to achieve goals and determine answers to the problems posed. This research employed a quantitative methodology. Thus, gathering empirical data is necessary for researchers. The experimental class as sample groups in the research design that the researchers utilized. The purpose of the lessons was to find out how students' vocabulary development was affected by using the Duolingo application. The experimental group was the one that used Duolingo for treatment, This design is also called the before-after design. Because, the research begins with measuring the dependent variable that already has a subject. After gave the treatment, the dependent variable will measure again with the same instrument. The Experimental method consists of a pre-test, treatment, and post-test. The instrument or tool used in this study is a test sheet in the form of multiple-choice questions. This test is used to measure the level of vocabulary mastery of students of learning material that has been learned with the duo lingo application within a certain period of time. The form of the test used is a multiple-choice form.

4. RESULT AND DISCUSSION

The results of the effectiveness duo lingo application in vocabulary mastery eight grade student can be seen in the following:

Table 1.1 Students' Percentages pre-test

Pretest		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	55	4	20.0	20.0	20.0
	60	2	10.0	10.0	30.0
	65	4	20.0	20.0	50.0
	70	4	20.0	20.0	70.0

75	3	15.0	15.0	85.0
80	1	5.0	5.0	90.0
85	2	10.0	10.0	100.0
Total	20	100.0	100.0	

Based on table 1.1, before receiving treatment, the student's English vocabulary mastery skill scores were as follows: 10.0% of students scored 85; 5.0% scored 80; 15.0% scored 75; 20.0% scored 70; 20.0% scored 65; and 10.0% scored 60; 20.0% scored 55. In this finding show that students' grades still need to be improved and still lacking

Table 1.2 Students' Percentages post-test

Posttest

		Frequenc y	Percent	Valid Percent	Cumulative Percent
Valid	75	2	10.0	10.0	10.0
	80	5	25.0	25.0	35.0
	85	7	35.0	35.0	70.0
	90	3	15.0	15.0	85.0
	95	3	15.0	15.0	100.0
	Total	20	100.0	100.0	

Based on table 1,2. after receiving the treatment, the students' English vocabulary mastery skill scores were as follows: 15,0% of students scored 95; 15.0% scored 90; 35,0% scored 85; 25,0% scored 80; 10,0% scored 75. From the data, it can be concluded that the students' scores improved greatly.

Based on the data obtained from the pre-test and post-test of vocabulary mastery skills of eight grade students of SMP Islam Al Azhar Tulungagung in academic 2023/2024 year before and after the learning intervention using the duolingo platform, there are several things that can be noted

In the course of this research endeavor, a total of 20 students actively participated in the Pre-test phase. Productive vocabulary knowledge includes the words that an individual is able or chooses to use appropriately and accurately through speaking or writing. In other words, Receptive knowledge carries the idea that people receive language input from listening, speaking, and trying to comprehend information while productive knowledge implies that people produce language forms by speaking and writing to convey messages to others. n this study students can apply a method of using duo lingo application in learning their vocabulary.

The researcher conducted a post-test session, shows the results of post-test data analysis indicate that English vocabulary mastery skill of eight grade students SMP Islam Al azhar tulungagung has reached an average score of 85.00 with a standard deviation of 6.070. The highest score was 95 and the lowest score was 75. The results show that students' that English vocabulary mastery became better after the learning vocabulary with duolingo application was used, Duolingo provides vocabulary practice and provides opportunities for students to evaluate their knowledge and identify needs for continuous improvement. This means Duolingo comes as an educational tool that can be used in the classroom to provide a new learning experience for students. So, Duolingo app is essential for students to learn languages to increase their motivation and make this app more fun.

Therefore, this study conducted a paired sample t-test collaborating these findings, with a two-tailed significance value of 0.01, thus leading to the rejection of the null hypothesis (Ho) and acceptance of the alternative hypothesis (Ha), from all the results of duo lingo application is effective in students' English vocabulary acquisition ability.

Hypothesis Testing

With the normality test results showing that the normal distribution assumption is met for both data, researchers can use parametric statistical analysis methods to test the difference between pre-test and post-test scores. The following data analysis that has been obtained using SPSS 29 program.

Paired Samples Test

	Paired Differences					t	df	Significance		
	Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference Lower	Upper			One-Sided p	Two-Sided p	
Pair 1	Pretest - Posttest	-17.250	9.525	2.130	-21.708	-12.792	-8.099	19	<,001	<,001

The results of paired samples t-test showed a significant difference between the pre-test and post-test scores of students' english vocabulary mastery skill after the intervention using Duo lingo application platform the hypothesis is accepted if the Asym Sig <0.05. The hypothesis is rejected if the Asymp Sig>0.05. According to the "Statistics Test" results, the value of Asymp Sig (2 tailed) is 0.001. The statement "the hypothesis is accepted" denotes

that there is a difference between the outcomes of the Pre-test and Post-test because the value of $0.000 < 0.05$

5. DISCUSSION

In the academic year 2023/2024, an observational study was conducted to evaluate the vocabulary mastery skills of eighth-grade students at SMP Islam Al Azhar Tulungagung. A total of 20 students actively participated in the pre-test phase, which served as the baseline for assessing their initial vocabulary knowledge. The study aimed to distinguish between two types of vocabulary knowledge: productive and receptive. Productive vocabulary knowledge entails the ability to use words appropriately and accurately in speaking or writing. In contrast, receptive vocabulary knowledge involves understanding language input through listening and reading comprehension.

The students employed the Duolingo application as a method to enhance their vocabulary learning. Duolingo, a widely recognized language learning platform, offers interactive exercises and gamified elements that make vocabulary acquisition engaging and effective. Throughout the intervention period, students regularly used the application to practice and reinforce their English vocabulary. Following the intervention, a post-test session was conducted to measure the impact of Duolingo on the students' vocabulary mastery. The results revealed a significant improvement in their scores. The average English vocabulary mastery score increased to 85.00, with a standard deviation of 6.070. The highest score recorded was 95, and the lowest was 75, indicating a noticeable enhancement in the students' vocabulary knowledge. These results demonstrate the effectiveness of using the Duolingo application in vocabulary learning.

The findings suggest that Duolingo not only serves as an effective educational tool but also enhances students' motivation and enjoyment in language learning. The interactive and engaging nature of the application likely contributed to the students' increased interest and participation, which in turn positively impacted their vocabulary acquisition. To statistically validate the effectiveness of the Duolingo intervention, a paired sample t-test was conducted. This test utilized a two-tailed significance value of 0.01, which is a stringent criterion for confirming statistical significance. The results of the t-test led to the rejection of the null hypothesis (H_0) and the acceptance of the alternative hypothesis (H_a). This outcome confirms that the observed improvements in students' vocabulary mastery were not due to random chance but were a direct result of the Duolingo application's influence.

6. CONCLUSION

Based on the results of this research is to investigate about use duo lingo in english enhance student's vocabulary, and also to find put the influence of duo lingo on students. Based on the result and discussions in chapter IV, the conclusion can as the following Applying Duolingo in enhance students' vocabulary mastering enhance the students' ability in mastering vocabulary. It can be proven by the findings that the mean of the post-test scores was higher than pre-test scores. The mean of the pre-test was 67.75 while mean of pre-test was 85.00. From the results of these data showed that this study was able to achieve an increase in students' vocabulary. One of the best resources for teaching and studying vocabulary for pupils at the introductory level is Duolingo. Students found this material to be quite fascinating, as seen by their good comments. The material is simple to understand, and Duolingo gives every student an equal opportunity to practice it. It also helps students learn new concepts and eliminates learning monotony. From the data obtained by the researcher that students really have an attraction to learn because of the application, in other words, students have a variety of resources to increase the number of new vocabulary for students. the researcher summarized that using Duolingo is effective through students' vocabulary mastery, specifically for the eighth grade students of SMP Islam Al Azhar Tulungagung in academic year 2023/2024.

REFERENCES

- Ajisoko, P. (2020). The use of duolingo apps to improve English vocabulary learning. *International Journal of Emerging Technologies in Learning*, 15(7), 149–155. <https://doi.org/10.3991/IJET.V15I07.13229>(Ajisoko, 2020)
- Aulia, H. R., Wahjuningsih, E., & Andayani, R. (2020). EFFECT OF DUOLINGO APPLICATION ON STUDENTS' ENGLISH VOCABULARY MASTERY. *ELTR Journal*, 4(2), 131–139. <https://doi.org/10.37147/eltr.v4i2.71>(Aulia et al., 2020)
- Bongers, H. (1947). *The History and Principles of Vocabulary Control as it affects the Teaching of Foreign Languages in general and of English in particular* (Vol. 1). Wocopi.
- Fatah, C. A. (2017). The Effect of Using Duolingo Application To Develop Students ' Vocabulary Knowledge. *International Journal of Media, Journalism and Mass Communications (IJMJMC)*, 3(3), 1–120. <https://repository.uinjkt.ac.id/dspace/handle/123456789/50289>(Fatah, 2017) (Fatah, 2017)

- Gribbons, Barry; Herman, Joan., "Practical Assessment, Research & Evaluation", Electronic Journal. Vol. 5, No 14, (1997.2019)
- Hernadijaya, N. S. (2020). The Use of Duolingo Application to Enhance Junior High School Student's English Vocabulary. *RETAIN*, 8(2), 17-24.
- Jack R. Fraenkel, Norman E. Wallen & Helen H. Hyun, *How to Design and Evaluate Research in Education*, (McGraw-Hill, 2012), 8th Ed., P. 92
- Jaelani, A., & Sutari, D. R. (2021, January). STUDENTS' PERCEPTION OF USING DUOLINGO APPLICATION AS A MEDIA IN LEARNING VOCABULARY. In *Bogor English Student and Teacher (BEST) conference* (Vol. 2, pp. 40-47). application in Call at the seventh grade of SMP. *U-JET*, 5(1).
- John Bacon-Shone, *Introduction to Quantitative Research Methods*, (Hong Kong: University of Hong Kong, 2015. 2019), p.2
- Louis Cohen, Lawrence Manion, & Keith Morrison. *Research Method in Education*. (Newyork: Routledge, 2007). P.396.
- Meyer, L. L., & Schmitt, N. (2002). Vocabulary in Language Teaching. *TESOL Quarterly*, 36(2), 235. <https://doi.org/10.2307/3588334>
- (Meyer & Schmitt, 2002)
- S. P. Nation, *Learning vocabulary in another language*. (Cambridge, England: Cambridge University Press, 2001), p. 23.
- Schmitt, N., & McCarthy, M. (Eds.). (1998). *Vocabulary: Description, acquisition and pedagogy*. Cambridge university press.
- Schmitt, N., & McCarthy, M. (Eds.). (1998). *Vocabulary: Description, acquisition and pedagogy*. Cambridge university press.
- Zein, S., Sukyadi, D., Hamied, F. A., & Lengkanawati, N. S. (2020). English language education in Indonesia: A review of research (2011–2019). *Language Teaching*, 53(4), 491-523.
- Zein, S., Sukyadi, D., Hamied, F. A., & Lengkanawati, N. S. (2020). English language education in Indonesia: A review of research (2011–2019). *Language Teaching*, 1, 33.