

THE USE OF DUOLINGO TO INCREASE THE STUDENTS' VOCABULARY MASTERY AT JUNIOR HIGH SCHOOL

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Abstrak

Tujuan dari penelitian ini adalah untuk mendapatkan bukti empiris tentang pengaruh penggunaan Duolingo untuk meningkatkan penguasaan kosakata siswa. Penelitian ini menggunakan jenis kuantitatif dengan metode Pre-eksperimen dengan melibatkan 24 orang siswa kelas tujuh SMP Nahdhiyat Makassar sebagai sample penelitian. Teknik pengumpulan data dalam Penelitian ini menggunakan pre-test dan post-test. Hasil penelitian ini menunjukkan bahwa pada hasil pre-test nilai mean yang dimiliki adalah 56,67 yang menunjukkan bahwa kemampuan siswa pada pre-test masih sangat rendah sedangkan nilai mean pada post-test adalah 67,29 yang menunjukkan bahwa penguasaan kosakata siswa mulai meningkat. Hasil data yang dianalisis dengan menggunakan independent sample t-test, menunjukan bahwa Sig.(2-tailed) adalah 0.000 lebih rendah dari 0.05 sehingga hipotesis alternatif (H_a) diterima dan hipotesis nol (H_0) ditolak. Penelitian membuktikan bahwa ada peningkatan pada penguasaan kosakata siswa melalui penggunaan aplikasi Duolingo. Berdasarkan hasil penelitian ini dapat disimpulkan bahwa penggunaan Duolingo dapat meningkatkan penguasaan kosakata siswa kelas tujuh SMP Nahdhiyat Makassar.

Kata Kunci : Kosakata,Duolingo,Meningkatkan

Abstract

The purpose of this research was to obtain empirical evidence about the effect of using Duolingo to increase students' vocabulary mastery. This research used a quantitative type with a pre-experimental method involving 24 seventh grade students of SMP Nahdhiyat Makassar as a research sample. Data collection techniques in this research used a pre-test and a post-test. The results of this research indicate that in the pre-test results the mean value was 56.67 which indicates that the students' ability in the pre-test was still lack while the mean value in the post-test is 67.29 which indicates that students' vocabulary mastery was starting to increase. The results of the data were analyzed using an independent sample t-test, showing that Sig. (2-tailed) was 0.000 which was lower than 0.05 so that the alternative hypothesis (H_a) was accepted and the null hypothesis (H_0) was rejected. Research proves that there was an increase in students' vocabulary mastery through the use of the Duolingo application. Based on the results of this research, it can be concluded that the use of Duolingo can increase the vocabulary mastery of seventh grade students at SMP Nahdhiyat Makassar.

Keywords: Vocabulary, Duolingo, Increase.

INTRODUCTION

Vocabulary is all the words contained in a language, the wealth of words that a speaker or writer has, and the words used in a field of mastery (Soedjito Hilaliyah, 2018). Vocabulary is one aspect of language that must be considered and mastered in order to support fluency in communicating using Indonesian both orally and in writing. Thus, vocabulary cannot be separated from words. Words are units of language in free form. Words are the most important elements in language. Vocabulary consists of words that have meaning.

In addition, vocabulary plays an important role in everyday human life. Vocabulary is a very important element of language, because one's thoughts can only be understood clearly by others if what is expressed using vocabulary. The development of one's vocabulary mastery affects the ability and skills to express ideas and language appropriately. Vocabulary is one of the important things that need to be understood to learn a language, because without understanding vocabulary it will make it difficult for us to learn. While the meaning of the word itself is an element of spoken or written language which is the embodiment of the unity of feelings and thoughts that can be used in language (Hasanah, L. 2016).

Vocabulary is important for learning English however, there are still many students who lack knowledge of English vocabulary nowadays. The students tend to feel bored in the classroom due to the use of media and the teacher's lack of skills which is monotonous during teaching and the process of learning vocabulary. Therefore, students find it difficult to understand a sentence or to express themselves in spoken language. But in this era of globalization, technology plays an important role in all sectors of human life, including education. Through technology, education is more diverse and provides students with various opportunities to enhance their knowledge, learning and access to online learning/educational resources (Cholik, 2021).

Explained that with the rapid development of technology like this, technology can be utilized optimally for progress in various aspects of life (Cholik, 2021). The use of learning media in the teaching and learning process can generate new interests and desires, generate motivation and stimulate learning activities, and even bring psychological influences on learning (Febrita & Ulfah, 2019). The rapid development of the world of technology has made media a component of the latest learning tools. It was also continued that the world of education also received a positive impact in the use of supporting media for learning English that was effective, easy, and unique (Abi Hamid et al., 2020)

To overcome this problem, it is suggested that teachers have several types of teaching techniques and media, so that students can enjoy mastering vocabulary. To make vocabulary learning fun and interesting, we can use media. Media is usually used as an additional support in teacher-centered teaching. According to (Klimova, 2020), there are many media to choose from either in the form of text, audio, video, or visuals. Currently, many students use mobile applications (apps) to support their language learning both inside and outside the classroom. Media in learning is very important in helping convey information. Because teaching vocabulary without using any media will not give good results. One application that can be used to increase vocabulary mastery is Duolingo. Duolingo is an educational mobile application and also a website which consists of many activities with a mix of listening, reading, writing, vocabulary, grammar and speaking. And Duolingo is also one of the most popular language learning applications among the people (Ahmed, 2016).

Duolingo is one of the application media that adheres to the Mobile Learning concept. (Ardiansyah & Nana, 2020) revealed that mobile learning is unique learning because users can access learning materials, directions and matters related to learning, anytime and anywhere.

Duolingo is a language learning android-based program that will guide users step by step. In this application there are many variations of questions to choose from. The Duolingo application is very useful for language learning activities because it is equipped with materials. This application is highly recommended for students, both elementary and middle school, high school. Because it is equipped with visual and audio material so that students can easily grasp new vocabulary. Visual materials such as pictures make it easier for students to remember English vocabulary and audio makes it easier for students to produce or improve pronunciation even better (Luffianti Gina Puspita, 2021:12).

Learning a foreign language through Duolingo, provides a different experience. Each learning system has elaborated a number of methodological aspects, which guarantee successful learning. These aspects monitor progress, motivation, feedback and vocabulary. Game mechanics strategy to create incentives to keep students learning. It is built very much like a computer game in which the participants must pass a certain level. A learner walks through the levels of the language tree. The next lesson will be opened after the students have mastered the previous material. Use can complete different types of exercises including multiple choice, writing and also speaking into the microphone.

Duolingo mainly uses exercises in lessons. In the learning process, both teachers and students have their respective roles. Learners must use various strategies to be successful in the learning process and teachers also have a responsibility in ensuring the success of student acquisition. It can be said that vocabulary mastery does not only depend on how the learner learns but also how the material is delivered (Ismail et al. 2017).

Based on research conducted by Jaelani & Sutari (2020), Duolingo can help grade Seven junior high school students understand learning content; besides using Duolingo students are also more enthusiastic and motivated to learn English especially to increase vocabulary. Then they also stated that the Duolingo platform can also eliminate student boredom in learning. Aulia et al (2020) also said that the use of the Duolingo Platform had a significant effect on junior high school students' vocabulary mastery.

Duolingo has been studied by several researchers for its effectiveness in helping students learn languages. A study by Rachels et al. (2017) showed that Duolingo has a good influence on students' language achievement. Further evidence of the positive impact of Duolingo comes from a study reported by Guaqueta et al (2018), where it is proven that Duolingo helps junior high school students to increase their vocabulary and develop a better attitude towards language learning due to its fun and dynamic nature. Vocabulary is a key component that junior high school students must master when learning English. By mastering vocabulary, it is easier for the junior high school students to understand the language they are learning, especially in spoken and written conversations.

Based on the results of observations while participating in the batch 4 teaching campus program at SMP Nahdiyat Makassar, researcher found several problems related to the learning process. Most the students still lack vocabulary mastery written in reading texts, making it difficult to find main ideas. Especially in seven grade. Therefore, they cannot understand what is in the reading text. So they always ask the researcher what the meaning of the word means. This problem must be resolved because it can make it difficult for students to continue to the next level or class. They also have low motivation in learning English because they think English is difficult. And the teacher also uses the lecture method, so students experience boredom in English class.

In several previous research, researchers saw that there were some similarities in the problems faced by students. And in that research the researchers used Duolingo to overcome these problems. Because Duolingo is one of the preferred applications, especially for the seven grade. Because Duolingo has a system gamification which makes students more interested and not bored in learning. Therefore, researcher interested in researching about "The Use of Duolingo to Increase the Students' Vocabulary Mastery of the Seven Grade at SMP Nahdiyat Makassar ". Instrumen of The Research test , pre-test, post test, and documentation. All teaching process used lesson plans and focus on learning English using Duolingo. In the treatment, students are given material focused on learning English by using Duolingo to improve vocabulary mastery. After the data were collected, the researcher analyzed the score from those tests by calculating the mean of the pre-test and post-test. The data collected was analyzed in quantitative ways by using SPSS.

METHOD

Research Design provided a suitable framework for research. This research was a quantitative research with pre-experimental design. In this research experimental there are two variables they are Independent variable and dependent variable. The population in this research were all grade students seven grade at SMP Nahdiyat Makassar with 24 students. Based in this research because the number of population was not more than of the 100 respondents, the researcher took 100% of the total population in Seventh grade students of SMP Nahdiyat Makassar as many as 24 respondents. In this research, researcher was conducted research at SMP Nahdiyat Makassar located at hallway 9 No.12a, Buakana, Kec. Rappocini, Makassar City, South Sulawesi(Ramli,2023). This research was carried out for two months from March to April 2023. Where the researcher focused on the vocabulary mastery of seven grade students at SMP Nahdiyat Makassar.

RESULTS AND DISCUSSION

Table 1. Students' score pre-test

No	Value interval	Categories	Frequency (F)	Percentages (%)	Minimum Completeness criteria score: 70
1	86 – 100	Excellent	-	-	-
2	71 – 85	Good	5	20,8	-
3	56 – 70	Fair	5	20,8	Failed
4	41 – 55	Poor	9	37,5	Failed
5	<40	Very poor	5	20,8	Failed
Total			24	100%	0 (pass the score of 70)

Based on Table 1, above, it can be seen that in the pre-test of 24 students, there were 9 (37.5%) students whose vocabulary mastery was classified as poor. Then there are still 5 (20.8%) students whose vocabulary mastery was still lack. Based on the results of student scores, there were 5 students who achieved a minimum completeness score or score of 70. So that it can be said that students' abilities in the pre-test were still lack.

The researcher used a post-test to determine student achievement after implementing Duolingo to increase the vocabulary mastery of seventh grade students at SMP Nahdhiyat Makassar. The description of the students' pre-test results can be seen in the table below:

Table 2. Students' score post-test

No	Value interval	Categories	Frequency (F)	Percentages (%)	Minimum Completeness criteria score: 70
1	86 – 100	Excellent	-	-	-
2	71 – 85	Good	12	50,0	Successfull
3	56 – 70	Fair	7	29,2	Failed
4	41 – 55	Poor	3	12,5	Failed
5	<40	Very poor	2	8,3	Failed
Total			24	100%	0 (pass the score of 70)

From Table 2, above it can be seen that the results of the students' posttest scores increased. In the students' posttest scores, there were 12 (50.0%) students who had a good vocabulary mastery classification, 7 (29.2%) students had an adequate classification, 3 (12.5%) students had a poor classification and there were still 2 (8.3%) students who have a very bad classification. Based on the table it is known that there are 12 (50.0%) students who have a score of more than 70. This means that there is an increase in students in the minimum valid criteria of completeness. An increase in students who meet the minimum graduation standard proves that the treatment given is effective in boosting student scores.

Table 3. Descriptive Data Analysis

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Pretest	24	35	85	56.67	15,299
Posttest	24	35	85	67,29	14.141
Valid N (listwise)	24				

Source : IBM SPSS Statistics Version 22

Based on table 3, above it can be seen that N = Valid 24 and 0 students are not present in class. The pre-test average was 56.67 and the post-test was 67.29. std. The pre-test deviation was 15.299 and the post-test was 14.141. The minimum score for the pre-test is 35 and the post-test is 35. The maximum score for the pre-test is 85 and the post-test is 85. Based on the data, it can be seen that there is an increase between students' pre-test and post-test.

Table 4. Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Pre-test Experiment	.127	24	.790	.127	24	.223
Post-test Experiment	.207	24	.221	.207	24	.030

a. Lilliefors Significance Correction

Source : IBM SPSS Statistic Version 22

From the results of testing the normality of the data using the Kolmogorov Smirnov formal indicator with an exact approach to the pre-test and post-test data, the results are consistent. The exact approach to the KS test was used because the sample is relatively small (<100 subjects). With statistical calculations for the two tests, the p-value for each variable for the pretest was $0.790 > 0.05$ and the p-value for the post-test was $0.221 > 0.05$. With these results the decision to Fail to Reject H_0 was obtained, namely at a confidence level of 95% (alpha 5%) it was said that there was sufficient evidence to accept H_0 or in other words that the data meets the assumption of normality.

Table 5. Variance Homogeneity Test Results
Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
data	Based on Mean	.237	1	46	.629
	Based on Median	.158	1	46	.693
	Based on Median and with adjusted df	.158	1	45.498	.693
	Based on trimmed mean	.234	1	46	.631

Source : IBM SPSS Statistic Version 22

Based on the output above, it can be seen that the significance value based on means for the pretest-posttest group has a value of > 0.05 which was equal to 0.629. Because the significance value is greater than the test level (0.05), it can be said that there was sufficient evidence to make a decision to fail to reject H_0 . Or in other words, the variance of the data between groups (experiment) is homogeneous.

T -test

Table 6. T-Test Test Results
Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	pretest_exp	56.67	24	15.299	3.123
	posttest_exp	67.29	24	14.141	2.886

Based on the output table of the paired sample test above, it was known that the absolute t-count value was 4.584, the T-table value in this test with $df = 23$ is 1.714. With this, the T-count $>$ T-table or sig (2-tailed) value was 0.000 for the difference in the average pretest and posttest scores. If T-Count $>$ T-Table and the significance value of p-value < 0.05 then the decision took was

Reject H_0 . So it can be concluded that there was a significant average difference between the values before (pretest) and after (posttest). In other words, in this case it can be stated that the treatment is effective in increasing the post-test scores. These results were confirmed by statistical calculations where the average value of the pretest before being given treatment (pretest) was 56.67 points and after being given treatment it was 67.29 points.

This research was conducted to find out whether the use of Duolingo was effective in increasing the vocabulary mastery of seventh graders at SMP Nahdijat Makassar. Researcher used Duolingo as a medium in improving students' vocabulary mastery so that students are interested and easily understand lessons.

In this research the researcher used a pre-experimental design using the One Group Pretest-Posttest Design. In the process of this research, the researcher gave the students an initial test or pre-test before giving treatment using Duolingo to find out the extent to which students had mastered vocabulary. Then, the researcher gave a final test or Post-test after being given treatment using Duolingo. To find out whether the use of Duolingo has an increase in vocabulary mastery.

The population in this research were all students of class VII. The purpose of this research was to determine the effectiveness of using Duolingo on the vocabulary mastery of seventh grade students at SMP Nahdijat Makassar. In this research, four meetings were held to conduct treatment. In this treatment, students are given material entitled Basic Expressions, General Expressions, food and animal names, and Plural words.

Based on the results of research regarding the comparison of statistical values, the number of samples is 24 students. The pretest score for the lowest score is 35 scores and the highest score is 85 scores with an average of 56.67. This means that the ability of students before being given treatment is still lack. Based on previous observations, this happened because most of them lacked motivation and were bored with learning English. The lowest posttest score was 35 and the highest score was 85 then the average was 67.29 which means that there was an increase in students' vocabulary mastery using Duolingo. Based on research conducted by Jaelani & Sutari (2020), Duolingo can help grade VII junior high school students understand learning content; besides using Duolingo students are also more enthusiastic and motivated to learn English especially to increase vocabulary.

The previous idea is in line with previous research by Rachels et al. (2017) showed that Duolingo has a good influence on students' language achievement. Further evidence about the positive impact of Duolingo comes from the research reported by Guaqueta et al (2018), where it was proven that Duolingo helps junior high school students to improve their vocabulary and develop better attitudes towards language learning because it is fun and dynamic. It can be said that the hypothesis is accepted, namely that the use of Duolingo effectively increases the students' vocabulary mastery of the seventh grade at SMP Nahdijat Makassar.

Increase in the use of Duolingo in vocabulary mastery can be seen through hypothesis testing, namely by statistical analysis which stated that the value of Sig was $0.000 < 0.05$ and t_{count} of Sig < was $0.000 < 0.05$. Thus, H_a was accepted and H_0 was refused. So there was a significant increase in students' vocabulary mastery after being taught using Duolingo for seventh grade students at SMP Nahdijat Makassar.

CONCLUSION

Based on the results of the research that has been done and the discussion that has been discussed, it can be concluded that there is an effect of Duolingo on increase students' vocabulary mastery. Because students' vocabulary mastery in the experimental class before and after being given treatment has increased. It can be seen from the results of the research that the mean value of the pre-test was 56.67 which indicated that the students' ability in the pre-test was still lack, while the mean value in the post-test was 67.29 which indicated that the students' vocabulary mastery was starting to increase. Thus, the researcher can conclude that the answers to the research question prove that Duolingo is an effective application for increase the vocabulary mastery of seventh grade students at SMP Nahdijat Makassar. So that the alternative hypothesis

(Ha) was accepted, namely that there was an effect of using duolingo on increase the vocabulary mastery of seventh grade students at SMP Nahdiyat Makassar.

BIBLIOGRAPHY

- Akhromchenko & Shutilo, (2021). (2557). Vol. 7/ Nomor1/ April 202145The Correlation Between Students' Vocabulary Mastery and Reading Comprehension: A Meta Analysis., 4(1), 88–100.
- Abi Hamid et al., (2020)., Bangsa, B., Glen, E., Kaligis, R., Purwantini, L., & Rikmasari, R. (2022). Meningkatkan kemampuan kosakata bahasa inggris terhadap tenaga pengajar melalui aplikasi duolingo. 01, 83–92.
- Alvons Habibie. (2020). To Enhance Efl Students ' Motivation in Learning. Jurnal Bahasa Dan Literature, 9(1), 13–26.
- Ambara, I. W. (2020). The Effect of Using Duolingo Application in Learning Vocabulary at SMAN 2 Karangan. Journal Of English Language Teaching Learning and Literature, 3(1), 48–55.
- Asbi, A. A., Studi, P., Pendidikan, T., Keguruan, F., Ilmu, D. A. N., & Makassar, U. M. (2019). Keefektifan penggunaan media pembelajaran berbasis audio visual terhadap hasil belajar bahasa indonesia siswa kelas viii di smp negeri 1 bontonompo.
- Baker, S., Waterfield, J., & Bartlam, B. (2018). Saturation in qualitative research : exploring its conceptualization and operationalization. Quality & Quantity, 52(4), 1893–1907. <https://doi.org/10.1007/s11135-017-0574-8>
- Bulan, A., & Idhar, I. (2021). Developing Noun Words Domino Card (NWDC) Learning Media to Improve English Vocabulary Mastery of Junior High School Students. VELES Voices of English Language Education Society, 5(2), 192–205. <https://doi.org/10.29408/veles.v5i2.4028>
- Fatah, C. A. (2019). The Effect of Using Duolingo Application to Develop Students' Vocabulary Knowledge (A Quasi-experimental Study at the Seventh Grade of SMP Islam Taman Quraniyah Jakarta Selatan in Academic Year 2018/2019).
- Hasanah, L. 2016, & Syafryadin. (2020). Penguasaan Kosakata Bahasa Indonesia Anak dari Segi Umur, Jenis Kelamin, Jenis Kosakata, Sosial Ekonomi Orang Tua, dan Pekerjaan Orang Tua. Seminar Nasional Pendidikan Bahasa Dan Sastra, 1(1), 187–198. <https://ejournal.unib.ac.id/index.php/semiba/article/view/13675>
- Helson, H., Radut, E., Dahlan Bahang, M., & Hb, L. (2022). Increasing Students Vocabulary Mastery By Using Personal Vocabulary Notes (Pvn). 3783(April), 15–25.
- Herlina, E., Yundayani, A., & Astuti, S. (2019). No Penggunaan Duolingo sebagai Media Pembelajaran Berbasis Teknologi dalam Meningkatkan Keterampilan Berbicara SiswTitle. Carbohydrate Polymers, 6(1), 5–10.
- Hussain, Z. (2018). the Effects of Ict-Based Learning on Students' Vocabulary Mastery in Junior High Schools in Bandung. International Journal of Education, 10(2), 149–156. <http://dx.doi.org/>
- <https://id.scribd.com/document/395693009/Rubrik-Penilaian-Vocabulary>
- John W. Creswell, Research Design: Pendekatan Kualitatif, Kuantitatif dan Mixed (Edisi III; Yogyakarta: Pustaka Pelajar, 2010), h.5
- John W. Creswell, Research Design, h 22.
- Ladjagang, R., Nasrullah, R., & Alfredo, M. (2022). Research Methods in Teaching Listening Skills Utilizing Technology Media. 3(1), 69–83. <https://doi.org/10.51454/jet.v3i1.140>
- Lelawati, S., Dhiya, S., & Mailani, P. N. (2018). The Teaching Of English Vocabulary To Young Learners. PROJECT (Professional Journal of English Education), 1(2), 95–100.
- Makassar, U. N. (n.d.). Teachers ' Teaching Belief in Vocubular.
- Niah, S., & Pahmi. (2019). The Utilization of Duolingo to Improve the Speaking and Listening Skills of Junior High School Students in Pekanbaru. 373, 54–59. <https://doi.org/10.2991/iccelst-ss-19.2019.12>
- Palangngan, S. T. (2022). The Implementation of Hello English Smartphone Application in Enhancing Students' Vocabulary Mastery. IDEAS: Journal on English Language Teaching and

- Learning, Linguistics and Literature, 10(1), 415–423.
<https://doi.org/10.24256/ideas.v10i1.2741>
- Profil Pendidikan SMP NAHDIYAT (16-01-2023 08_20_33). (n.d.).
- Ratnawati, D. (2006). The Correlation Between Vocabulary Mastery and Reading Comprehension : the Case of the Seventh Grade Students of Smp N 13 Semarang in the Academic Year 2005 / 2006. 1–84. <http://lib.unnes.ac.id/1172/1/2072.pdf>
- Sari, R., Tinggi, S., & Ekonomi, I. (2016). Pengaruh NPM, Roe, Eps terhadap return saham pada Sugiyono PENDAHULUAN. 5, 1–18.
- Sipayung, R., & Aristianti, A. (2022). Improving Students' Listening Skill Through Watching English Movie For The Eleventh Grade Students Of SMA Dharma Budi Sidamanik. Bilingual : Jurnal Pendidikan Bahasa Inggris, 4(1), 1–12. <https://doi.org/10.36985/jbl.v4i1.375>
- Susanti, P. T. (2017). The Effect of Using Word Clap Game on The Vocabulary Mastery of The Fifth Grade Students at SD Negeri 1 Banjar Jawa in Academic Years of 2017/2018. Journal of Psychology and Instructions, 1(3), 162. <https://doi.org/10.23887/jpai.v1i3.12578>
- Sugiono 2016 dalam Fakhri. (2021). Metode Penelitian Purposive Sampling. 2021, 32–41
- Sugiyono, Metode Penelitian Kombinasi (Mix Methods) (Bandung: Alfabeta, 2012), h.404.
- Syarifudin, A., Marbun, R., & Novita, D. (2014). Analysis on the Students' Vocabulary Mastery a Descriptive Study on the MTs. Jurnal Pendidikan Dan Pembelajaran Khatulistiwa, 3(9), 1–10.
- Yahrif 2018 Pendidikan, P., Inggris, B., Megarezky, U., Pendidikan, P., Inggris, B., & Megarezky, U. (2022). Education , Language , and Culture (EDULEC) The Correlation between Students ' Vocabulary Mastery and Reading Comprehension of Students at SMA Negeri. 3, 205–218.