IMPROVING THE VOCABULARY OF THE STUDENTS BY USING DUOLINGO APPLICATION AT THE SECOND GRADE OF SMP NEGERI 1 KELARA (A Pre-Experimental Research)

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ARTICLE INFO	ABSTRACT
	This research aims to find out whether Duolingo Application can improve the vocabulary of the students especially in verb (transitive and intransitive verbs) in Second Grade of SMP Negeri 1 Kelara. The researcher applied Pre-Experimental Method by using one group pre-test and post-test design and collected data by giving pre-test and post-test. The sample for this research was Class VIII.3 of SMP Negeri 1 Kelara that consisted of 18 students. The sample was taken by using Purposive Sampling Technique and the data was analyzed by using IBM SPSS statistics version 26. Based on the research findings, the improvement of students' vocabulary by using the Duolingo Application in second grade of SMP Negeri 1 Kelara was good, because before using the Duolingo application the average score of students was 27.22, but after the students used the Duolingo application, the average score of students increased to 76.78. This significant improvement occurred because the Duolingo Application gave a good effect in teaching vocabulary. The Duolingo Application can make student learning more enjoyable because Duolingo can help students easily acquire new words with interesting picture features to understand the meaning of words. This makes students more active and enthusiastic in improving vocabulary. Therefore, based on these results, it is recommended to use the Duolingo Application in improving students' vocabulary especially in verbs. *This is an open access article under the <u>CC BY-SA</u> license.*

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INTRODUCTION

English has a position as a foreign language in Indonesia. One of the most important foreign languages to be learned in Indonesia is English (Maduwu, 2016). This makes English one of the foreign languages that is a subject in school that must be studied by students at the level of formal education from the lowest to the highest and is also tested in the national

examination. There are several skills that must be known in English, namely writing, reading, listening, and speaking skills. But before learning these four skills, students must first know the vocabulary in English. According to Alqahtani (2015) the most important part in learning foreign languages is vocabulary learning because there are new words that must be emphasized both in books and in class.

Teachers need to choose effective medium to support students' vocabulary development. One application that makes it easy for students to learn English is the Duolingo Application. The company's mission is to make education free, enjoyable, and accessible to everyone. In previous studies Ajisoko (2020) he found that to improve English learning especially in vocabulary, Duolingo could be one of the most effective applications to use. He found that students were interested in using this application seen from the very good responses.

There are still many students who have very limited vocabulary mastery. In previous studied Jaelani & Sutari (2021) they said that most students in Indonesia still lack mastery of English vocabulary, and this is a big problem that must be overcome. They found that students find it difficult to learn English due to several factors. First, students cannot understand the meaning and some terms in English because of a lack of vocabulary. Second, the media used does not make students interested in learning because of the conventional way of teaching. This will make students lazy and bored in learning English and especially not optimal students in learning vocabulary.

According to previous studies and the results of the researcher's earlier interview of one of the students in the Second Grade of SMP Negeri 1 Kelara via WhatsApp chat about vocabulary, some students still lack vocabulary. An interview with an English teacher also revealed that not all students are active and have a good vocabulary. Based on this explanation and interviews with some students in the Second Grade of SMP Negeri 1 Kelara, they experienced a lack of vocabulary so that students had difficulty understanding the material given by the teacher. This is a problem that must be overcome by the teacher. Therefore, the researcher is interested in conducting research entitled "*Improving the Vocabulary of the Students by Using Duolingo Application at the Second Grade of SMP Negeri 1 Kelara*".

RESEARCH METHOD

In this research, the researcher used a Quantitative Research Approach. Each variable in the study was measured on the instrument, so the data could be analysed using statistical procedures. For the research method, the researcher used a pre-experimental design so that only one class was used as a place to research. The treatment was carried out after the pre- test. After that, the researcher gave treatment by applying the Duolingo Application, and gave a post-test to determine the improvement in students' vocabulary. Then at the end of

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the meeting, students were given a questionnaire to determine students' perceptions after using the Duolingo application in improving vocabulary. The location of this research was conducted in SMP Negeri 1 Kelara. The subjects of this research were students of class VIII.3 of SMP Negeri 1 Kelara.

Normality Test

Normality test is used to determine whether the data set is normally distributed or not. The researcher used IBM SPSS Statistics Version 26 for normality test provided that if more than > 0.05 of the normality test, the data could be categorized as normally distributed, but if the score was < 0.05 then it could be categorized as abnormal data.

2. Homogeneity Test

The homogeneity test was carried out after the normality test results were obtained. The researcher calculates the homogeneity of the data from the results of the normality test. Homogeneity test is used to determine whether the data is homogeneous or not. This test was also carried out using IBM SPSS Statistics Version 26 to obtain data homogeneity with a significance of more than = 0.05.

3. T-test

The t-test is a data analysis process used to determine whether there is a significant difference in students' vocabulary knowledge before and after using the Duolingo Application. This t-test also uses IBM SPSS Statistics Version 26. If the result shows Sig. (2- tailed) > sig = 0.05 (5%), then the null hypothesis is accepted. **But, if Sig. (2-tailed) < sig = 0.05 (5%), then the alternative hypothesis is accepted.**

RESULT AND DISCUSSION

The results of the data that have been obtained indicate that there is an increase in the vocabulary of the students' post-test scores, this is also strengthened by the results of the questionnaire which shows a good response from the students, therefore the use of the Duolingo application can increase students' vocabulary. Further explanation of the data can be seen below:

1. **The Total Scores of Students Vocabulary Test**

Table 1. The Total Scores of Students Vocabulary Test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE-TEST	27.22	18	7.464	1.759
	POST-TEST	76.78	18	5.796	1.366

Table 4. Pre-test and Post-test Learning Outcomes at SMP Negeri 1 Kelara

Based on the table above, it can be seen that the maximum pretest score obtained by the second grade students of SMP Negeri 1 Kelara is 40, while the minimum score is 20. The mean obtained is 27.22 with a standard deviation of 7,464. Meanwhile, the maximum post-test score obtained was 86, while the minimum score was 66. The mean obtained was 76.78 with a standard deviation of 5.796.

2. Normality Test

Table 2. Normality Test

One-Sample Kolmogorov-Smirnov Test

		PRE-TEST	POST-TEST
N		18	18
Normal Parameters[a,b]	Mean	27.22	76.78
	Std. Deviation	7.464	5.796
Most Extreme Differences	Absolute	.278	.266
	Positive	.278	.187
	Negative	-.225	-.266
Kolmogorov-Smirnov Z		1.179	1.130
Asymp. Sig. (2-tailed)		.124	.155

a. Test distribution is Normal.

b. Calculated from data.

From the table above, the researcher used the Kolmogorov-Smirnov Test for the normality test, and it can be seen that the significance of the data in the Kolmogorov- Smirnov table from pre-test is 0.124 and from post-test is 0.155. It means that the pretest data is normally distributed, because the significance value is greater than = 0.05.

3. Homogeneity Test

Table 3. Test Homogeneity

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Hasil	Based on Mean	3.482	1	34	.071
	Based on Median	2.093	1	34	.157
	Based on Median and with adjusted df	2.093	1	30.938	.158
	Based on trimmed mean	3.249	1	34	.080

Data analysis on SPSS using homogeneity calculation, obtained p-value = 0.080. The conditions that must be met as a condition for the data to come from a homogeneous population are the t value > , = 0.05. Because p-value = 0.080 > = 0.05, based on the calculation results, it can be concluded that the population variance comes from the same population (homogeneous).

4. Hypothesis Testing

Table 4. Paired Sample Test

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	PRE-TEST - POST-TEST	-49.55556	7.27787	1.71541	-53.17475	-45.93636	-28.888	17	.000

Based on the "Paired Samples Test" output table above, the Sig. (2-tailed) is 0.000<0.05, then H0 is rejected and Ha is accepted. So it can be denied that there is an mean score difference between the Pre Test and Post Test learning outcomes, which means that there is "Duolingo Application" Application enriches English vocabulary of the second-grade students of SMP Negeri 1 Kelara.

5. Statistics Questionnaire

Table 5. Statistic Questionnaire

Statistics

		No.1	No.2	No.5	No.6	No.8	No.9	No.3	No.4	No.7	No.10
N	Valid	18	18	18	18	18	18	18	18	18	18
	Missing	0	0	0	0	0	0	0	0	0	0

The researcher used a questionnaire to obtain data about the interests of students who had been taught using the Duolingo application. This can also be described in terms of the percentage of students who are interested in using the Duolingo Application. For example in the statement about "Students like Using the Duolingo Application in Learning Vocabulary" in table 4.7, there are 16 students who answered strongly agree with a percentage of 88.9%, and there are two students who answered quite agree with a percentage of 11.1% as well. The statement shows that students like to use the Duolingo application in learning vocabulary because there are no students who answer disagree and strongly disagree. Then in the statement "The Students Can Easily Memorize Vocabulary Using the Duolingo Application" in table 4.11, there are 14 students who answered strongly agree with a percentage of 77.78%, three students answered agree with a percentage of 16.7%, and one student answered disagree with a percentage of 5.6% . The statement shows that on average students are easy to memorize vocabulary by using the Duolingo application.

CONCLUSION

The use of Duolingo Application is effective in increasing students' vocabulary because it has a good effect on vocabulary teaching. The Duolingo Application can make student learning more enjoyable because Duolingo can help students easily acquire new words with interesting picture features to understand the meaning of words. This makes students more active and enthusiastic in improving vocabulary. Students can also learn vocabulary anytime and anywhere so they don't get bored in learning. This is indicated by the comparison between the pre-test and post-test of class II students of SMP Negeri 1 Kelara in Class VIII.3 which shows an increase. In addition, it can be seen from the average value of the pretest is 27.22 to 76.78 in the post test. As a result, Duolingo Application is effective in increasing students' vocabulary.

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