



## **Utilizing Duolingo Application as a Learning Media in Teaching English to Enhance the Students' Vocabulary Mastery of the Second Grade SMPIT Bina Insan Parepare**

**Nurul Istiqamah A<sup>1</sup>, Am Mang Latifa<sup>2</sup>, Siti Hajar Larekeng<sup>3</sup>**

*Universitas Muhammadiyah Parepare*

[nurulistiqamahasad@gmail.com](mailto:nurulistiqamahasad@gmail.com)<sup>1</sup>

### **Abstract**

*Vocabulary is a list of words in a particular language. The objective of this research is to find out the effectiveness Duolingo application for enhancing the students' vocabulary mastery of the second grade SMPIT Bina INSAN Parepare and its effect on students' vocabulary achievement. The design of this research was experimental research which belongs to the quantitative method. The population of this research was the entire second-grade SMPIT Bina INSAN Parepare. There were two classes, they were VIII B consisted of 25 students who got treatment using Duolingo application and VIII A consisted of 26 students who got treatment using conventional teaching. Then, the data were analyzed by using SPSS (Statistical Product and Service Solutions) for Windows version 22.0. The results of this study showed that students had a positive motivation to Duolingo as English learning media in Android. The participants stated that Duolingo is easy to be used. The results of this study also revealed that learning English through Duolingo in Android was attractive to motivated learners who had no interest in learning English. Next, the results of this study showed that both participants from the interview tended to keep using Duolingo as English learning media in Android.*

**Keywords:** *Utilize, Vocabulary, and Duolingo Application.*

### **1. Introduction**

To master the communication of language learning, learners are guided to enrich their vocabularies to own plenty of words so that they can comprehend them with their rules. Fatah (2019) explains that vocabulary is the basic knowledge that is one of the considered elements for learners in practicing the language. As a combination of media learning for effective vocabulary enrichment, teachers, so that, utilize the app of android in supporting the learners to avoid difficulties and rules control of gear.

The reason why the learners were not in a full condition of learning the new vocabulary even though they were taught by some pictures of other media prepared by the teachers. The way their teachers redelivered the subject was not fully understood by the students. There was no clear explanation of the word delivered, or the technique, even more, the students taught were still in Elementary School and need more patience and big passion of learning. Material that is being taught should pay attention to the students' convenience of feeling happy and enthusiastic to learn so that they will feeling conconfusedaboutthe lesson's progress.

So, teachers need to be creative and more concern to enhance their learners' vocabularies so that after they learn a new word in language, it will not be easier to be forgotten by them.

The one that have to be considered after the researcher did the observation, then it showed that the averages of students' learning achievement were 40 of rate score. This score was taken based on the education score standard of Depdikbud. This categorized as very poor or in the failed score. After asking about this reason for getting failed in English, the students just told the researcher that the technique and media used for learning had not motivated them to study English.

The category presentation of students' scores resulted in some reasons for not feeling motivated and enthusiastic about learning their English subject: 65% of students as the respondent answered that the media applied were not interested them to learn. The other result of their responses shows that there were 35 of % students percentage shows the chosen that there is no supporting method of learning prepared by the teachers.

As the solving problem, the researcher has observed that the method being taught in her school In utilizing a new way of media technology is being applied. One of the learning apps from Android has been used to define further information about the effectiveness and its effect challenges on the learners' vocabulary achievement. Duolingo the explanation of Jaskova (2014) is an open language learning application from the play store by using Android where the users are free to download and find the education and learners no need many instructions to understand the way to use it.

This app of language learning seems to have good feedback on the learners' vocabularies output because the assessment of the test not only prepares the vocabulary to be translated but also contains a test for completing sentences that must be fulfilled by the learners. Rafni (2017) In other words, this app can measure the learners' accomplishments. Vocabulary learning from this app focuses in many information of basic and advanced users so that the learners can master those aspects with enthusiasm because of the enjoyable learning.

Interactive learning as the support system to enhance students' vocabulary and motivation of fun learning will enthusiast them in learning language through the application from their phone which will help them easier understand the meaning of the vocabulary, pronouncing the words easily as the native, and correcting the incomplete words or learn the structure of some sentences from the upgrade application level of users.

To this end, the researcher has practiced some new ways of teaching vocabulary however still made the same result of similarity of the learners' vocabulary improvement. Because of feeling bored and there is no novelty in the technique and considering the learning technology tools will be very helpful for the learners' knowledge, the school then decided to apply this learning app in which many helpful tools can replace teachers' complicated explanations.

Therefore, in finding further and clear data, the researcher intends to do her research on the second-grade students at SMP IT Bina Insan Parepare. Considering this app is useful to be applied as the measurement in enhancing the learners' vocabularies that works with assessing the learners' answers from the real test of vocabulary, grammar, and listening components. The researcher decided to find its function after assessing the learners' testing from the exercises of vocabulary and another English component of the Duolingo app.

Based on the description of the learning tools utilizing of Dualingo app, the researcher then formulated the problems statement:

1. Is the utilization of Duolingo application able to enhance the students' vocabulary mastery of SMPIT Bina Insan Parepare?
2. How is the students motivation after they are thought English Duolingo Application

## **2. Method**

This research was characterized as a quantitative study using a Quasi-experimental design. The research was already done in the even semester 2022-2023. The location of the research was taken place in SMP ISLAM TERPADU BINA INSAN PAREPARE Jl. Jendral Sudirman South Sulawesi focuses on the first year of the academic year 2021.

This study's participants were first-year students at SMPIT Bina Insan Parepare for the 2021–2022 academic year. The study's sample will be a single class—classes VIIIA and VIIIB , with 25 and 26 students, respectively—and will be used by the researcher. The lottery method was used by the researcher to select the treatment group. so that each class could have a chance to serve as a sample.

The purpose of this study was to determine, based on the test results, whether or not the Duolingo application improves students' vocabulary skills.

The following information will be gathered from each instrument:

1. Pre Test

A series of exercises will be used to administer the test, which will assess students' vocabulary mastery in English Before treatment begins, the pre-test will be finished. The purpose of the pretest is to assess the students' comprehension of the lesson. The exam is a multiple-choice type. There are twenty items that match the levels of the students. This test consists of four points: Pronouns include greeting, to be, family, and occupation. Test items 1, 4, and 9 incorporate greetings. Pronouns are required for test items 3, 8, 13, 16, 17, 18, and 19. Families are addressed by test items 7, 10, 11, 12, 14, and 15. Items 4, 5, and 20 of the test deal with the job.

2. Post Test

The term "posttest" refers to the examination that will be carried out following treatment. It is used to assess the abilities of students and determine whether the treatment has made any difference. The post-test result will serve as the study's answer to the research question. Similar to the pre-test, the type of test, level of difficulty, and number of questions are all the same. This test consists of four points: Pronouns include greeting, to be, family, and occupation. Test items 1, 4, and 9 incorporate greetings. Pronouns are required for test items 3, 8, 13, 16, 17, 18, and 19. Families are addressed by test items 7, 10, 11, 12, 14, and 15. Items 4, 5, and 20 of the test deal with the job.

The researcher gathered the pre- and post-test results for the study. The following are the steps for gathering data:

1. Observation is utilized during the teaching and learning process, particularly when teaching vocabulary. It is used to learn about the conditions of the students.
2. Determining the sample and population.
3. By developing a learning tool in accordance with the lesson plans that will be examined, it is helpful to support the activities during research.
4. The purpose of the instrument test research is to ascertain the learning outcomes. The test has multiple-choice questions.
5. Validating the instruments.
6. Using the Duolingo app to teach and practice vocabulary in class experiments, as well as using a textbook instead of the Duolingo app to teach vocabulary in the control class. Find an example plan in Supplement 2, page Following the test, drafting.
7. Putting a sample of treated students through a test.
8. conclusion and analysis of the data

3. Results

3.1. Findings

Pre-test in experiment class

On Monday, October 2, 2022, the researcher administered a multiple-choice pre-test in two classes at different times at SMPIT Bina INSAN Parepare. One lesson, or sixty minutes, was necessary to pass the pre-test. The pre-test had to be explained by the researcher first. The researcher administered a 20-question multiple-choice test to the students as the pre-test.

**Table 3.1:** "The Score of Pre-Test in Experiment Class"

NO	Kode Partisipan	NILAI Pre – Test
1	EX1	70
2	EX2	75
3	EX3	30
4	EX4	35

5	EX5	65
6	EX6	75
7	EX7	70
8	EX8	60
9	EX9	70
10	EX10	85
11	EX11	70
12	EX12	60
13	EX13	75
14	EX14	30
15	EX15	50
16	EX16	75
17	EX17	40
18	EX18	55
19	EX19	55
20	EX20	75
21	EX21	50
22	EX22	65
23	EX23	55
24	EX24	50
25	EX25	75
	Score	1515
	Mean	60.6

According to Table 3.1, the experimental class's pre-test mean was 60.6. 30 and 75 were the lowest and highest pre-test scores, respectively.

#### Pre-Test in Control Class

On Thursday, October 5th, 2022, the researcher administered a multiple-choice pre-test in two classes at different times at SMPIT Bina INSAN Parepare. One lesson, or sixty minutes, was required for the pre-test. The pre-test had to be explained by the researcher first. The researcher administered a 20-question multiple-choice test to the students as the pre-test.

The control class's total score is, whereas the experiment class's is 1475. Table below demonstrates this clearly.

**Table 3.2:** "The Score of Pre-Test in Control Class"

NO	Kode Partisipan	NILAI Pre – Test
1	CO1	45
2	CO2	50
3	CO3	45
4	CO4	60
5	CO5	30
6	CO6	70
7	CO7	50
8	CO8	50
9	CO9	65

10	CO10	60
11	CO11	65
12	CO12	20
13	CO13	55
14	CO14	90
15	CO15	55
16	CO16	55
17	CO17	40
18	CO18	60
19	CO19	55
20	CO20	80
21	CO21	65
22	CO22	60
23	CO23	80
24	CO24	60
25	CO25	45
26	CO26	65
	Total score	1475
	Mean	56.73

The mean of the pre-test in the control class was 56.73, as shown in table. The lowest and highest pre-test scores were 20 and 90

**T - test ( Pre – test )**

With a t-count of 0.933 and a price of t-count below 2.021, the independent sample T test is used to determine whether the treatment class and the control class have significantly different learning outcomes. Once the normal distribution of the data is established, Ha is rejected, but H0 is accepted. Students' abilities in the experiment and control classes are not significantly different, as can be inferred.

**The Effect of Students' Post-Test Vocabulary Achievement in Control and Experiment Class at SMPIT BINA INSAN Parepare**  
Control class

Table below displays the post-test results for the control class in the second grade of SMPIT Bina INSAN Parepare:

**Table 3.3:** The Result of Post-Test in Control Class

NO	Kode Participant	NILAI Post-Test
1	CO1	75
2	CO2	70
3	CO3	60
4	CO4	60
5	CO5	50
6	CO6	85
7	CO7	70
8	CO8	50
9	CO9	65

10	CO10	60
11	CO11	75
12	CO12	40
13	CO13	65
14	CO14	100
15	CO15	70
16	CO16	70
17	CO17	60
18	CO18	85
19	CO19	65
20	CO20	100
21	CO21	80
22	CO22	70
23	CO23	70
24	CO24	75
25	CO25	55
26	CO26	80
	Total score	1725
	Mean	66.34

The table above displays the post-test results for the second-grade control class at SMPIT Bina INSAN Parepare. The highest score is 100, while the lowest is 40. After that, the total score is 1725.

As a result, it was possible to draw positive conclusions regarding the vocabulary proficiency of second-grade students at SMPIT BINA INSAN Parepare who did not utilize the Duolingo application. As a result, students in the control class who did not use the Duolingo app had significantly lower vocabulary achievement in second grade at SMPIT BINA INSAN Parepare between the first and second tests. The expert used SPSS 22 to convince the number, and the result is shown in the reference section.

#### *Experiment Class*

The following tabel displays the outcomes of the second-grade experiment class's post-test at SMPIT Bina INSAN Parepare:

**Table 3,4:** The Outcome of the After-Test in the Experiment Class

NO	Kode Participant	NILA I Post-Test
1	EX1	90
2	EX2	90
3	EX3	85
4	EX4	80
5	EX5	90
6	EX6	100
7	EX7	90
8	EX8	90
9	EX9	100
10	EX10	95
11	EX11	90

12	EX12	90
13	EX13	95
14	EX14	80
15	EX15	85
16	EX16	100
17	EX17	90
18	EX18	90
19	EX19	90
20	EX20	100
21	EX21	90
22	EX22	100
23	EX23	95
24	EX24	90
25	EX25	90
	<b>Score</b>	<b>2285</b>
	<b>Mean</b>	<b>91.4</b>

The above table displays the SMPIT BINA INSAN Parepare second-grade score for the experiment class. 80 is the lowest score, while 100 is the highest. After that, the total score is 2285.

Therefore, the vocabulary proficiency of the Duolingo students in the second grade at SMPIT BINA INSAN Parepare could be described as excellent. Students using the Duolingo app in the experiment class at SMPIT BINA INSAN Parepare demonstrated significant differences between the second-grade pre- and post-test calculations.

### ***T-test ( Post test )***

The independent sample T test, which has a t-value of 7.279, is used to determine whether there are significant differences in learning outcomes between the control class and the treatment class after the normal distribution of the data has been established., in significant  $\alpha = 5\%$ .  $H_a$  is accepted and  $H_0$  is rejected because the price of t-count is higher than that of t-table 2,021. It is possible to conclude that experiment and control class students have significantly different abilities. According to Cohen's effect, the use of Duolingo to improve students' vocabulary in the second grade at SMPIT BINA INSAN Parepare falls into the high category. It suggests that the application functions effectively.

### ***The result of students' motivation after using the Duolingo application***

The students' motivation after using the Duolingo application has slightly changed. The student who had provided the initial response and had only been using it for a little less than a year, I used Duolingo. The respondent said that Duolingo's layout was fun and interesting. Additionally, the respondent deemed Duolingo's content and difficulty levels useful and pertinent. The respondent claimed that they no longer use any other app because Duolingo made it easier for them to write and listen.

The student's second respondent had been using Duolingo for more than a year. The respondent referenced Duolingo's alluring and charming design, very much like the principal respondent. Additionally, the respondent and the first respondent agree on Duolingo's layout. The respondent found Duolingo to be appealing. In addition, the respondent asserted that Duolingo aids in the acquisition of new vocabulary, which in turn improves their English proficiency. The respondent answered:

*"Don't have any desire to utilize another application,"*  
(P2, Jan 2023)

Both people who answered the interview said that Duolingo was fun and related to their English class. The primary respondent expressed that Duolingo aided the procurement of composing and listening abilities, and the subsequent respondent expressed that Duolingo aided the revelation of new jargon. In their conclusion, they both stated that they would prefer not to use another application. Based on this finding, the researcher concludes that the treatment, interview, and test all contribute to one another

### 3.2. Discussion

In this stage, the researcher reviews the resulting research by using the Duolingo application in teaching students vocabulary in the second grade. According to the statistics, the null hypothesis,  $H_0$ , was rejected, while the alternative hypothesis,  $H_a$ , was accepted. Because the T count is worth more than the T table (the value of the critic "t"), the following conclusion may be drawn when students in class VIII used the Duolingo app before and after the test, there was a significant difference in their vocabulary proficiency. Students' vocabulary varied significantly between those who used the Duolingo app and those who did not at SMPIT BINA INSAN Parepare. The Duolingo app is effective with a high Cohen's D Effect Size Category. If the control class did not use it, it was not superior to using the Duolingo application in the experiment class.

Depending on the outcome, the highest and lowest post-test scores varied. The test score for students who used the Duolingo application was 100, while the score for students who did not do so was 100. Students who utilized the Duolingo application received a score of 80, while those who did not receive one received a score of 40. One possible conclusion is that the Duolingo app helps students improve their vocabulary. Likewise, Munday, P. (2016), as referred to in Natanael (2017), accepts that Duolingo is a simple to-utilize application with potential, regardless of the way that its essential illustrations do not zero in on open capability. The app's accessibility on mobile devices, gamification component, and variety of tasks make it popular with students. In addition, Ryu's (2013) study demonstrates that gamers can learn languages while playing games and can discuss those languages after the game is over. The highest and lowest scores differ significantly according to the post-test results. Gaming or gamification could, in general, make learning more enjoyable. On the test, five students who used the Duolingo app received the highest vocabulary score, 100. Only two of the students who did not use the Duolingo app received a score of 100 on the vocabulary test. The Duolingo app users' vocabulary scores were at their lowest point at 80. The lowest score for vocabulary students who did not use the Duolingo application was 40.

The researchers also found that students who used the Duolingo application had a different mean score than those who did not. The fact that students who used the Duolingo app got a mean score of 91.4 shows that their vocabulary is excellent.

On the other hand, the average score of the students who did not use the Duolingo app was 66.35, indicating that their vocabulary knowledge was adequate. The next step is the collection of numerical data for statistical analysis.

According to Mulyana (2003), Duolingo also works with games and simulations and falls under the media category of visual, audio, and visual-audio media. It is argued that the students were already proficient users of Duolingo based on the previous findings. They were also aware that, depending on their requirements, Duolingo can serve as a medium for learning all or some English skills.

As can be seen from the preceding explanation, the Duolingo app is one of the most effective tools for junior high school students to improve their vocabulary mastery and has positive effects on the students.



#### 4. Conclusion

At SMPIT BINA INSAN Parepare, using the Duolingo app to teach vocabulary to students in the second grade is effective.

Based on the statistical hypothesis, the result of the T value was greater than the table ( $7.279 > 2.021$ ), as shown by the significance level of 0.05. As a result, the null hypothesis,  $H_0$ , was rejected, and the alternative hypothesis,  $H_a$ , was accepted. Independent t-test results indicate that using the Duolingo application to teach vocabulary is more effective than not using the application at all. Additionally, the experiment class's post-test mean score of 91.4 is higher than that of the control class's post-test score of 66.35. As a result, there was a significant distinction.

The reason why the Duolingo application has a positive effect on students is that some benefits of having plenty of vocabulary words will help learners to be easier in comprehending both the written and communication process. Besides that, The other important aspect of having many vocabularies are very needed to accomplish their grammar and spoken target. Knowledge of language learning could not be separated from vocabulary because of its essential and main point to build language communication.

The Duolingo app is one of the best ways to help junior high school students master vocabulary, and the Duolingo app also has a positive effect on the students.

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