

# The Effect of Duolingo Application on Students' Vocabulary Mastery

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## Abstract

The goal of this study was to determine if there was any significant difference in vocabulary mastery between seventh-grade students at SMP Negeri 3 Belitang Mulya who were taught using the Duolingo program and those who were taught using the conventional approach. Quantitative research, an experimental technique, and a quasi-experimental design were employed. In the academic year 2021/2022, seventh graders from SMP Negeri 3 Belitang Mulya were the population. The sample was collected by purposeful sampling, and it consisted of an experimental group of 27 students and a control group of 28 students. The data were collected using a multiple-choice exam and analyzed using the independent t-test in SPSS 22. This investigation found a significant distinction between the experimental and control groups. This meant that students in the seventh grade at SMP Negeri 3 Belitang Mulya may use the Duolingo App to teach and acquire vocabulary.

**Keywords:** *Effect, Duolingo Application, Vocabulary.*

## INTRODUCTION

In Indonesia, English is taught as a foreign language. According to Fitri (2018), English is crucial in many aspects of life, including education, the economy, international relations, and technology, among others. This is why the government of Indonesia has made English the primary foreign language taught in schools and colleges. Therefore, English is taught at all educational levels, from elementary to university. According to Ambara (2020), four language skills comprise English: listening, speaking, reading, and writing. In addition to these competencies, students must master vocabulary, pronunciation, and grammar. This research focuses exclusively on vocabulary as one of these linguistic elements. Vocabulary is a collection of meaningful words that may be used to communicate verbally and in writing (Aziza & Syafei, 2018). Words are markers or symbols for ideas, and without them, there would be no language.

Vocabulary is an essential aspect of the four language skills (Richard and Renandya, 2002) in (Pitriana & Jufri, 2013). It implies that a lack of vocabulary hinders one's potential for efficient communication. Consequently, this illustrates the significance of words. Moreover, Basuki et al. (2018), cited in (Ambara, 2020), argued that vocabulary is essential since it is at the core of linguistic challenges and acts as a springboard for language learners. Consequently, mastering vocabulary is essential for language learners.

Despite the importance of vocabulary to language development, many pupils continue to lack it. When learning a language, students confront several obstacles (Vitasromo, Jatmiko, & Chandra, 2019). They feel bored and disillusioned when presented with the vast quantity of words in English. Students are usually frustrated when they cannot remember their language for a lengthy period. It is about a problem with vocabulary that seventh-grade students at SMP Negeri 3 Belitang Mulya experienced. Based on the writers' teaching experience and based on the interview with the English teacher of SMP Negeri 3 Belitang Mulya, it was found that some problems make them difficult to learn vocabulary. *First*, the students are difficult to understand and memorize the English vocabulary, because many words have the same meaning, and also the differences between writing and pronouncing the English vocabulary make them difficult to master it. *Second*, the students have trouble using vocabulary, because when they have got some words they only remember the meaning

not how to use it. *The last*, the students have less focus and motivation in the classroom, so they get bored and passive in learning English.

Recognizing the significance of vocabulary, the solution to these issues is for the instructor to make available to the students an engaging learning medium to pique their interest and encourage them to become more motivated to study the language. The use of engaging media in the teaching and learning process has two goals: the first is to ensure that students easily comprehend the material being taught, and the second is to ensure that students do not become bored while the material is being taught. Using media that can increase students' enthusiasm for learning English vocabulary and enrich their vocabulary is the most effective way to build students' interest in learning English vocabulary (Aziza & Syafei, 2018). This is because media can teach students new words and expand their vocabulary.

In this age of information and computing, technology plays a vital part in the classroom as an aid to the teaching and learning process. Interpretation, recent advances in technology, specifically the proliferation of mobile multimedia devices and applications, have made it possible for individuals to acquire English as a second language (Fauzan & Kasim's, 2020). There are many benefits of technology that can be utilized in education. One of these benefits is that teachers can easily find teaching support materials through the internet (Kusumadewi & Widyastuti, 2018). These materials can take the form of online articles, softcopy books, video and audio learning, and so on. As a result, it is essential to use technology as the medium to support the teaching and learning resources that are not constrained by time.

One of the applications of technologies that can be used in learning English vocabulary is Duolingo. It is an educational mobile application and also a website that consists of many activities with a mix of listening, reading, writing, vocabulary, and grammar, with the option for speaking. It could be seen in the link ([duolingo.com](https://www.duolingo.com)). Duolingo is one of the applications for learning English that includes a website and application which offers written lessons and dictation, enabling more experienced users to develop through speech practice and a vocabulary segment where they can practice learned words (Hernadijaya, 2020). Meanwhile, Krashen (2014) cited in (Rejeki, Kristina, & Wijayanto, 2020) stated that Duolingo is a web-based self-paced language teaching program that guides students step-by-step through a sequence of tasks based on translation.

The writer of this piece believes, based on the reasoning provided above, that using the Duolingo application would have a major influence on the pupils' understanding of vocabulary. Concerning the study that Hermariyanti Kusumadewi and Myta Widyastuti carried out and titled "The Effect of Using Duolingo Towards Student's Vocabulary Mastery," the writer draws the conclusion, based on the results of the data analysis, that there is a significant influence on the students' ability to master English vocabulary when it is taught using the Duolingo android application media.

It is possible to draw the following conclusion from the information provided above: Using the Duolingo app can assist students in developing a greater command of vocabulary. As a result, the writer has an interest in carrying out the research with the working title, "The Effect of Duolingo Application Towards Students' Vocabulary Mastery at The Seventh Grade Students of SMP Negeri 3 Belitang Mulya. A vocabulary is a group of words with meanings that can be used to talk to and write about people. Words mark or stand for ideas, and without them, there would be no language (Aziza & Syafei, 2018). Basuki et al. (2018) also stated as mentioned in (Ambara, 2020), vocabulary is important because it is at the heart of language problems and helps people start learning a new language. Because of this, anyone who wants to learn a new language needs to study vocabulary.

According to the definitions above, a vocabulary is a group of words that can be used to communicate. It is one of the most important parts of learning a language that students need to master to get the four language skills. If students have a big vocabulary, they will be able to say what they want to say better.

Utilizing media in the classroom is nothing new for the educator. The bulk of educators utilizes media to help them impart specific knowledge to their students. (Irawan, Wilson, & Sutrisno, 2020)

said that the word media derives from the Latin word *medius*, which means "introduction" or "intermediary." It is an informative introduction device that connects the owner of the information to the recipient of the information. Teachers use media as an attraction or tool in teaching and learning to facilitate the distribution of educational content to students.

It may be stated that media is a tool that assists instructors in the classroom by communicating a message and inspiring pupils to absorb English material. The use of learning media can help the teachers to transfer the knowledge in an interesting way to language teaching in the classroom and make the learning environment more enjoyable. It also easily motivates the students because it enhances the students' attention to the teaching-learning process. In addition, Duolingo Application is included in the types of quiet audio-visual media, because this application shows a sound and quite a picture.

Duolingo App was established in 2012 by Luis Von Ahn and Severin Hacker as a free language learning tool for smartphones and iOS. It offered 68 unique language courses in 28 separate languages (Astarilla, 2018). According to its website, it has around 300 million registered users globally. It is one of the most popular and well-regarded language learning applications accessible. As a result, it has won several awards for the best education startup and best play and learning application. Moreover, (Ambara, 2020) explained that Duolingo is an app designed to assist students to learn languages fast and easily while having fun with the application. Students finish a sequence of lessons in one of the six available languages. Each lesson consists of a series of questions requiring students to type down translations, respond to audio prompts, decide which photographs correlate to certain words or sentences, and select from a list of multiple-choice answers.

As one of the language study tools, the Duolingo Application may aid students in boosting their vocabulary knowledge. Using the Duolingo program, students will learn new vocabulary terms fast and at their speed. Aside from that, the Duolingo App provides students with a unique language-learning experience based on the quality of the material, feedback, and motivation. As a consequence, students may use Duolingo to increase their vocabulary because it is a useful and interesting tool.

### **Teaching Procedures for Using Duolingo Application**

To assist students in comprehending the function of each section of the Duolingo program, the following procedures might be used in the classroom (Teske, 2017):

1. To begin using the app on a mobile phone, students must first download it from Google Play or the App Store and install it using Android or iOS. Users do not need to register an account to participate in activities. Users may only save their progress when they create an account.
2. After making an account, students may choose the English language to learn and begin activities right away.
3. Following that, students might take a placement test to move to more advanced classes. The learning experience is divided into themed units that begin with "Basics" and progress through thematic vocabulary sections like "Food" and "Family."
4. Finally, via the classes or modules, students may track their progress. Each session consists of 10 to 20 questions aimed at strengthening vocabulary abilities such as pronunciation, translation, listening comprehension, and vocabulary knowledge. When each lesson is finished successfully, it is leveled up to the following lesson, unlocked, and rewarded with a crown.

### **METHODOLOGY**

This study was carried out through the utilization of quantitative research, and the method used was the experimental method. In experimental research, the independent variable is tested to determine whether or not it affects the dependent variable (Creswell, 2012). In addition to this, he

mentioned that when doing an experimental study, one can choose from a variety of research designs, such as a real experimental design, a quasi-experimental design, or a factorial design. The author of this study utilized a design that may be considered quasi-experimental to evaluate whether or not the Duolingo application could help students increase their vocabulary knowledge. A quasi-experimental design includes the assignment of individuals to groups, but the assignment is not random. The sample consists of two groups: the experimental group and the control group (Creswell, 2012). These two groups are known as the experimental group and the control group, respectively. In the experimental group, a pretest is given to measure the students' achievement of vocabulary mastery before the treatment, and posttest is given to measure the students' achievement of vocabulary mastery after the treatment. Both of these tests are conducted to determine the students' progress toward vocabulary mastery. In contrast, the researcher will only administer a pre-and post-test to participants in the control group; they will not provide any treatment.

In addition, the subject of this investigation is "The Effect of Duolingo Application Towards Students' Vocabulary Mastery at The Seventh Grade Students of SMP Negeri 3 Belitang Mulya." As a result, the Duolingo application will serve as the independent variable in this research, while the students' vocabulary achievement will serve as the dependent variable. The pupils of SMP Negeri 3 Belitang Mulya in seventh grade made up the study's population. The research was conducted with three classes from that grade level. In this study, the sample was gathered by the use of the technique of purposive sampling, and there were only two classes used as the sample for the data collection. There are a total of 28 students in this class.

In this study, the author collected the data by administering a written test to the participants. The activities required the students to respond with their vocabulary knowledge. The test consists of 20 multiple-choice questions and should take approximately 40 minutes to complete. The data were analyzed by the author using SPSS version 22.

## RESULTANDDISCUSSION

The data should be tested for normality and homogeneity before being analyzed. Kolmogorov-Smirnov was utilized to determine the data. The following table shows the results of the posttest score normalcy test in the experimental and control groups:

**Table 1**  
**Test of Normality**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statisti c	df	Sig.	Statisti c	df	Sig.
Using Duolingo Application	.124	28	.200 <sup>*</sup>	.942	28	.123
Without Duolingo Application	.102	28	.200 <sup>*</sup>	.957	28	.297

*a. Lilliefors Significance Correction*

The results of the normality test indicated that vocabulary mastery using the Duolingo application had a significant value above the 0.05 threshold, which has 0.2. It meant that the distribution of data in vocabulary mastery using the Duolingo Application was typical. There was a significant result of 0.2 for vocabulary mastery without the Duolingo Application, which was also greater than 0.05. The distribution of vocabulary knowledge without the Duolingo application was equally typical, thus we may conclude that The writer also utilized the homogeneity of variances test to determine if the samples were homogeneous or not. Using SPSS 22, the writer was able to come up with the following results:

**Table 2**  
**Test of Homogeneity of Variances**

Levene Statistic	df1	df2	Sig.
1.170	1	53	.284

The value of sig. was determined to be 0.284 by using SPSS 22 to perform the Levene Statistic computation shown in the table above. It was more than the sig. value (0.05). In other words, it indicated that samples from both the experimental and control groups were uniform.

It is the most often used approach for comparing the mean differences between the experimental and control groups. There were substantial disparities in vocabulary mastering accomplishment between control and experimental groups, thus the writer employed an Independent Sample t-test to compare post-test results. The following is a description of what the SPSS 22 calculation revealed:

**Table 3**  
**Independent t-test**

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Posttest	Equal variances assumed	1.170	.284	13.344	53	.000	28.069	2.103	23.850	32.288
	Equal variances not assumed			13.387	52.017	.000	28.069	2.097	23.862	32.276

There is a discrepancy between the t-obtained value of 13.344 and the t-table value of 2.021. The two-tailed significance level is 0.000 smaller than the two-tailed significance level (0.05). This study's alternative hypothesis (Ha) was accepted, but its null hypothesis (Ho) was rejected, according to the author's conclusion.

## CONCLUSION

Based on what was found in the last chapter, the writer concluded that there wasn't a big difference between the students who were taught with the Duolingo app and the students who were taught with the traditional method at SMP Negeri 3 Belitang Mulya in seventh grade. Based on the results of the statistical analysis, it could be seen that the independent t-test of the post-test score in the Experimental and Control Group gave the value obtained was 13.344, and the value of sig. (2-tailed) was 0.00. This meant that the value obtained was higher than the table (13.344 > 2.021), and the value of sig. (2-tailed) was less than the value of significance level ( = 0.05). So, the alternative hypothesis is true and the null hypothesis is false. From the data, it was also found that the Duolingo app is a good way to help students learn new words and improve their vocabulary mastery.

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