

THE EFFECTIVENESS OF THE DUOLINGO APPLICATION IN LEARNING ENGLISH VOCABULARY FOR HIGH SCHOOL STUDENTS

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ABSTRACT

The use of learning media is one of the important things in the era of increasingly rapid technological development. It makes learning interesting and effective. An effective English language and teaching media in this new era is Duolingo. It provides methods of learning while playing games, which certainly attracts the attention of language learners. The effective use of Duolingo application is described based on the result of pretest and posttest comparison. The research method is quantitative based on the participants' scores. The test is vocabulary test which addressed into the students of class XII SMA N 1 PERUMNAS BATU 6 as the participants. Data analysis indicate that Duolingo application is an effective English language and teaching media. The average score in pretest is 64.53 and it becomes 91.13. This research concluded that Duolingo help the participants to improve English vocabulary knowledge.

Keywords: *Effectiveness, Duolingo, Vocabulary,*

Introduction

English is an international language that is used in almost all fields such as business, technology, education and international communication, this reason makes English one of the most important languages to learn. In learning a language, vocabulary is a collection of words in a language, vocabulary is the core component of a language. (Hsieh, 2020) Mastering vocabulary is certainly an important thing that can help improve language skills, especially in English, vocabulary helps English learners improve reading, listening, speaking and writing skills.

However, difficulty in mastering vocabulary is one of the (Enayat, 2021) problems that is often experienced when learning English, this is because vocabulary learning methods tend to lead to memorizing vocabulary techniques one by one which makes English learners sometimes forget the vocabulary that has been memorized before, besides that, another reason is that using the memorization technique seems boring for English learners so it is less effective in learning vocabulary, in learning foreign languages, especially English, innovation or interesting

learning styles are needed to make it easier for language learners to quickly understand the structure of the language being studied.

As technology develops, we can expect more innovative and effective language learning applications to emerge. (Mondal, 2025) Artificial intelligence (AI) and machine learning will play an important role in these developments, enabling apps to do so: By analyzing individual learning patterns and preferences, AI-powered apps can tailor content and exercises to meet the specific needs of each learner. AI can instantly assess a learner's pronunciation, grammar and vocabulary, providing immediate feedback to help them improve. The advent of smartphones and tablets has ushered in a new era in language learning, making it easier for anyone to learn anywhere and anytime.

With the emergence of many exciting and interesting applications that can help facilitate anyone who wants to learn a foreign language. One application that is quite popular among language learners, Duolingo, is an (Ajisoko, 2020) application designed to help users learn foreign languages independently with a fun audio-visual

method. (Ajisoko, 2020) Duolingo also provides English tests that can be used to test language skills.

In addition, Duolingo is an accessible and affordable platform for language learning. With many fun and interesting features such as duolingo offers 38 languages that can be learned by language learners, has levels ranging from beginner to advanced so it is perfect for adjusting the level of language skills, has a feature to answer interesting questions to help improve vocabulary skills, Duolingo makes motivation their mission, and with that goal comes Lingots, Crowns, and Streaks. You'll earn Streaks as you complete daily tasks while earning Crowns that you earn after completing a topic. Lingots act as virtual points that you earn when you level up, complete skills, or have a 10-day streak, and there are many other features that make learning languages more fun and engaging. Using the Duolingo application is expected to improve the vocabulary of language learners, with the increasing ability to master a lot of vocabulary will greatly help in the process of learning English.

Duolingo is one of the apps that can be used to improve vocabulary in English. Duolingo is a free application that we can access via website, laptop, or a smartphone. This app supports students to improve English vocabulary. Then, it facilitates students to focus on developing English vocabulary learning. This application can also attract students' interest in learning English, such as features to improve students' reading, speaking (pronunciation), listening, and writing. Based on students' experience, learning by using Duolingo is very important for students. Developing English language learning. Duolingo app has a creative learning method. The app connects lessons with games that can build interest in learning. In addition, Duolingo combines audio, visual, and, in addition, fun questions that cover vocabulary and synchronic linguistics.

By learning to use the duolingo application in learning English, it is hoped that students who are difficult to respond to English lessons will be helped to understand little by little about English lessons in class, besides that the advantage of duolingo itself is that the audio visual displayed will trigger students' attraction to be more enthusiastic and not easily bored with the existing learning methods at school. By using the duolingo application students also easily learn English wherever and whenever it is, and in the duolingo application there are also features to remind users to learn English, such as a reminder

time where the user can set whenever he will use the application at what time and what day the user likes, it is also included in the advantages of duolingo, many students are self-taught with text books but do not last long enough because they are easily bored and bored and the division of student time for learning English is not necessarily used properly and to the maximum extent possible, in contrast to duolingo which when users forget or do not remember to study, there will be a notification inviting users to study again and the system for dividing user learning time will be systematized and well realized.

The purpose of the author conducting the research is to encourage students to be more active in improving the ability of students in English, and the author's goal is also none other than to inform the reader that using the Duolingo application can help change learning, especially in learning English. The author hopes that the presence of this duolingo application can help students improve their English language skills, especially in improving their vocabularies, the author also sees that this duolingo application is efficiently used among students in improving their abilities in the field of English.

(Muhedeen & Mahmood, 2023) Many problems encountered in learning English such as speaking, reading, listening, and writing, are generally caused by the lack of vocabulary mastery of the students and the lack of knowledge of the learners to place vocabulary in the practice of speaking, reading, listening, and writing. (Gatev, 2024) The more vocabulary they have, the more vocabulary they learn/master, the greater the chance they can play a role in the international arena. Tarigan (1993) states that a person's language skills depend on the quantity and quality of his/her vocabulary. The richer the vocabulary a person has, the more likely that person is skilled in language. On the other hand, Finocchiaro and Brown (1973) state that vocabulary only has meaning when it is used in its context of use. Similarly, Joe et al. (1996) added that the meaning of a word can be known through cues from the context in which the word is used in a sentence. On the other hand, Burton's (1982) explains that a large vocabulary will help express ideas more clearly without using many repetitions of words.

From some of the views expressed above, it can be concluded that vocabulary is the main important point in learning English, the more one's vocabulary in English, the more it will be a great opportunity for someone to master English. However, the level of vocabulary possessed by a

student can be seen as very minimal because the attraction and interest in reading and interest in learning is now very low, it is all inseparable because it is easy to get bored in a person to learn English and has not found a method that is favored by students who make their interest in learning. (Gaffas, 2024) Students are also now more dominant in choosing to play social media than to read the book. for that Duolingo is expected to help students to attract students' interest to want and not easily bored in learning, this duolingo application can be accessed easily by students because they only need to download the application on all cellphones, the author hopes that by offering this duolingo application will help students add their insights to understand learning English and away from the word bored and bored while learning. Because the latest features provided by duolingo are more fun and learning will be more fun. By using this duolingo application, it is also hoped that students will make better use of their time in (Zhu, 2022) learning using cellphones and not only for playing social media which makes their time wasted.

In addition, with a large vocabulary one can speak English better. Therefore, all students must have a large vocabulary to make it easier for them to learn a foreign language. In increasing one's vocabulary, it is necessary to pay attention to effective ways that can increase student motivation in increasing one's vocabulary. One of the ways suggested by the author is to use AI applications that can help students to know and find new vocabulary and improve one's memory in remembering new vocabulary. Today's rapidly growing technology helps people to find out effective ways to improve their vocabulary in English.

Teaching vocabulary to students is a challenge for teachers, where teaching vocabulary is the first thing that teachers use to determine the level of ability that students have in English. (Fadić, 2020) Teachers must be more careful in conveying vocabulary to students both in writing and orally because students are more dominant in remembering what they receive from teachers and they will make it a memorization in themselves. Vocabulary that students receive well will help them understand learning English more easily, and make it easier for students to remember or understand what the teacher explains when the teacher conveys the teaching material using English.

Teaching vocabulary is the process of teaching new words to language learners.

Vocabulary is one of the important aspects of language learning, as an extensive vocabulary allows one to understand and use language more effectively. A wide vocabulary helps learners understand reading texts, be it books, articles or conversations. With a rich vocabulary, learners can express their thoughts and feelings better. Good vocabulary mastery is the key to achieving fluency in language. According to Thornbury (2002) word teaching is a fundamental aspect of learning a language as a language as a language based on words. This means that teaching vocabulary is the first activity teachers should do before teaching students the four language skills, namely speaking, writing, reading and listening. By knowing more vocabulary, students will find it easier to learn the four language skills.

Method

The sources and types of data in this study are quantitative data, as well as primary data. This article focuses on discussing how effective the use of the duolingo application is in increasing one's vocabulary. This article also discusses how to improve one's vocabulary with the development of technology, with the use of applications such as duolingo. The research uses a qualitative descriptive method, with data sources in the form of questionnaires

According to Sugiyono (2017) a questionnaire is a data collection method that is done by giving a set of questions or written statements to respondents to answer. In collecting data, researchers asked questions to students by sending questions through the WhatsApp group and asking students to write the right answers on a piece of paper, with a total of 15 data, the number of respondents who gave answers to the questions given by researchers was 30 respondents, namely students of class XII SMA Negeri 1 Siantar Perumnas Batu 6. The researcher gave the first test to see the extent of the respondent's vocabulary ability after the test was carried out the researcher introduced the duolingo application to the respondent as a language learning tool, especially in honing vocabulary skills, after using the duolingo application for about a week the researcher again invited 30 respondents to do the second test this was done to see if the application compared the respondent's answers before and after using the duolingo application.

This research consists of three stages, namely: (1) How to collect data, (2) How to analyze data, and (3) How to present the results of data analysis. The three methods of research stages can be described as follows: Data collection in

qualitative research can be done in several ways, namely by using various backgrounds and points of view. Data can be collected from various sources, both primary sources and secondary sources. Data collection methods or techniques can be done by means of observation, interviews, recording, and questionnaires According to Sugiyono (2016), Revealed by Nazir 2014) that the descriptive research method is a way of examining the state of a group of people, an object, a situation, a system of thought, or a class of events in the present to make descriptions, descriptions or paintings systematically, factually, and accurately about the facts, characteristics, and relationships between the phenomena under study.

The data was taken from the test results conducted by students of class XII of SMA N 1 Perumnas Batu 6 twice, namely a pre-test conducted before introducing the Duolingo application and a post-test conducted after approximately a week of introducing the Duolingo application. The research data was taken from the results of tests conducted by XII grade students of SMA N 1 Perumnas Batu 6 twice, namely the pre-test conducted before the introduction of the Duolingo application and the post-test conducted after approximately a week of introduction of the Duolingo application by using a test to test students' vocabulary skills on text media.

To collect the data, the author first gave ten items of multiple-choice questions where the questions can be said to be easy because the questions are like combining hollow words and students must be able to choose suitable answers to the questions given. This first test was conducted before they were introduced to the Duolingo application, from the results of this first test the author examined the results of the answers they had done and the author saw that many students got low scores, after that the author introduced to students an application that could help students in recognizing new vocabulary and could increase students' knowledge in English. After the author introduced the application, the author asked them to use their free time more often using the suggested application. After a week of introducing the application, the author gave ten items of the same question that they had done before to see whether the application that had been introduced was quality and efficient to use or not, and from the results of their answers, the average student got quite satisfactory results. with that, the author stated that the Duolingo application was efficient to use in improving their English language skills, especially in increasing their

vocabulary.

Findings and Discussion

In collecting data on answers to test questions made by researchers, researchers first provide the questions before they use the Duolingo application. This aims to determine the comprehension skills of each student, and after that, researchers understand the same students to use the Duolingo application to improve English language skills, especially to improve vocabulary owned by students. After students use the Duolingo application for approximately a week after the initial test, the researchers then re-conduct the final test on students who previously took the first test and had used the Duolingo application for approximately a week and with the same questions. In this section, the researcher presents the scores on the initial test and the final test of students, as follows:

Table 1
Students' Pre- and Post-test scores

Participant initials	Pre-test	Post-test
AH	86	100
AM	66	86
AS	60	100
AFS	73	100
AF	66	93
BS	40	93
CS	60	93
CES	73	100
CDS	66	73
DP	73	100
DS	40	66
S	66	100
IP	86	93
IN	46	80
JS	40	73
JM	80	100
KE	80	100
MA	73	100
MS	40	80
RS	66	100
RBS	33	73
RHS	60	86
RVS	46	73
RPS	66	100
RG	73	100
SS	80	93
TM	86	93
TL	66	100
YS	73	86
YRS	73	100

In the table above shows the students' scores before and after the use of the duolingo application, with the highest score before the use of the application reaching 86 with many students who achieved it as many as three students, with a score of 80 as many as three students as well, with a score of 73 as many as seven students, before the use of the application the highest score achieved was only 86, 80, and 73, besides that the student's

score was included in a very low score and the lowest score reached a score of 33 as many as 1 student. From the results of each student's score, the researcher calculated the average value obtained before the use of the duolingo application, the average student score was 64.533. By looking at this value, the researcher stated that the student's score was included in the low score category.

After conducting the second test after the introduction and after students used the duolingo application, the researcher again analysed the students' answers and made new scores for each student and obtained the highest score of students at 100 obtained by 14 students, and the lowest score fell at 66 obtained by only 1 student. In this second test, the researcher also calculated the average score obtained by students after using the duolingo application with the average score obtained by students was 91.133, by looking at the difference in scores obtained by students after and before using the duolingo application, then from the results of this analysis the researcher concluded that the use of duolingo was effectively used to improve students' English learning skills, especially in improving students' vocabulary.

Conclusion

From the results of the research on the use of the duolingo application in increasing the vocabulary of students of SMA negeri 1 Siantar perumnas batu 6, it was successfully proven to be useful in increasing students' vocabulary knowledge after the researcher suggested using the duolingo application correctly for approximately one week. By using duolingo students can enjoy learning English for 30 minutes or even more a day. The students are very interested in using the duolingo application, because in the application many features can attract students' interest in learning in improving skills in English, especially in improving students' vocabulary. In fact, not a few students think that the duolingo application makes students more enthusiastic in learning English. This can be seen from the results of the average scores obtained by students before and after using the duolingo application. In the article, it can be seen that the scores obtained by students are higher after using the duolingo application than before students used the duolingo application. It can be seen that the highest score obtained by students before using the duolingo application was 86 and the lowest score before using the duolingo application was 33, while the highest score obtained by students after using the duolingo

application was 100 and the lowest score obtained after using the duolingo application was 66. From the results of the scores obtained, the average value of students before using the duolingo application was 64.533 while the average value obtained by students after using the duolingo application was 91.133. From these results, the researcher concluded that the duolingo application is effectively used to improve skills in English, especially in improving students' vocabulary.

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