



DUOLINGO : AN APP TO BOOST STUDENTS' VOCABULARY IN SPEAKING

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Abstract: *The purposes of this study are to determine the improvement and perception of students about the use of the Duolingo application as an English learning tool. This research uses quantitative method. The sample of this study was 22 students in IPAS-3 class of the academic year 2023/2024. Data was obtained through the collection of test results and distribution of questionnaires. The test contains one topic about "family", while the questionnaire contains 10 closed questions. Based on data analysis of test, students' vocabulary skills in speaking have improved. Before the treatment, students' vocabulary ability in speaking had an average score 36.82, while after the treatment, students' vocabulary ability in speaking improved as much as 65.45. In addition, based on the questionnaire data, it was revealed that there are 4 very high categories, namely Duolingo is easy to use for beginners (83%), animated displays on Duolingo can attract attention (83%), students are excited to learn English through the Duolingo application (83%), and this application can help students learn English (85.2%). It is suggested that teachers can use Duolingo application in the teaching of vocabulary for speaking purposes.*

Keywords : *Duolingo, vocabulary, students' perceptions.*

Abstrak: Tujuan dari penelitian ini untuk mengetahui peningkatan dan persepsi siswa tentang penggunaan aplikasi Duolingo sebagai media pembelajaran Bahasa Inggris. Penelitian ini menggunakan metode quantitative. Sample penelitian ini sebanyak 22 siswa semester ganjil tahun akademik 2023/2024 kelas IPAS-3. Data di peroleh melalui pengumpulan hasil test dan pembagian angket. Test berisikan satu topik tentang "keluarga", sedangkan angket berisikan 10 pertanyaan tertutup. Berdasarkan data test, kemampuan vocabulary siswa dalam berbicara mengalami peningkatan. Sebelum adanya perlakuan, kemampuan vocabulary siswa dalam berbicara memiliki nilai rata-rata 36,82, sedangkan sesudah adanya perlakuan, kemampuan vocabulary siswa dalam berbicara mengalami peningkatan sebanyak 65,45. Selain itu, dari hasil angket juga mendukung adanya peningkatan pada kemampuan vocabulary siswa dalam berbicara. Berdasarkan data angket terungkap bahwa ada 4 kategori sangat tinggi yaitu Duolingo mudah digunakan bagi pemula (83%), tampilan animasi dapat menarik perhatian (83%), siswa bersemangat mempelajari Bahasa Inggris melalui aplikasi Duolingo (83%), dan aplikasi ini dapat membantu siswa mempelajari Bahasa Inggris (85,2%).

Kata kunci : *Duolingo, kosakata, persepsi siswa*

INTRODUCTION

English is one of important languages to know and to learn by people. The countries such of the former British colonies, put English as a second language to be learned and must be mastered by students after the countries native languages. However, Indonesia is not the former British colony. Instead, Indonesia is a

country that was once colonized by the Netherlands. Therefore, English in Indonesia is not a second language, it is a foreign language. English is taught to students starting from elementary to tertiary levels.

Studying English helps students improve their speaking skills. Speaking is one of the English skills that is difficult to master. Chirea and Ungureanu (2015), state that students have difficulties in learning to speak, one of which is that students feel afraid and shy to make mistakes when speaking. Therefore, students need to learn several aspects of speaking to make it easier for them to speak. Two important aspects that must be understood in speaking are accuracy and fluency. According to Derakhshan et al (2016), accuracy and fluency are the most important parts of speaking skills, where these aspects can help individuals to master a foreign language. Accuracy in speaking a foreign language deals with the ability to convey information accurately and precisely. To convey the right sentences in speaking English, good and wide range vocabulary mastery is needed. It means that vocabulary used must be in accordance with the ideas and information to be conveyed. If someone is fluent in speaking this means she or he can convey his or her ideas fluently. Someone who can convey their ideas easily to understand their speaking in the target language. To be able to improve the students' accuracy and fluency in speaking especially English, this is often done by reading books or newspapers and by communicating with someone using English.

Learning a foreign language such as English provides benefits for students. Hromova, 2019 states that the effectiveness of foreign language learning is considered to depend on the students' abilities (motivation and talent) and also the teachers' aspect (the professional and personal qualities of the teacher). He adds that motivation is a desire from students to achieve learning goals. While talent is a skill that exists within a person. Talent can be used to learn certain things more easily and smoothly compared to people who do not have talent in certain fields. To improve students' motivation and talent is very closely related to the role of the teacher. As a teacher, it takes an understanding of appropriate and interesting learning methods such as making students active in class and inviting students to be able to solve a problem.

Even though students have studied English from elementary school to high school, many students still have difficulty in mastering English, especially in speaking. The obstacle that is usually experienced by students is lack of self-confidence. This is because students have limited vocabulary mastery. According to Rahmawati and Harahap (2023), some of the reasons that influence students having limited vocabulary are students have no exposure to English, they are afraid of making mistakes, so this may affect their confidence to speak. Factors that influence students' lack of confidence are fear and embarrassment if they make mistakes in speaking English. Speaking is a skill that is difficult for English education students to master due to their lack of vocabulary skills. According to Ishtiaq Khan et al (2018), communication can be hampered due to lack of vocabulary knowledge, therefore, English learners must have a good vocabulary so that students can communicate fluently. With the lack of students' vocabulary knowledge, learning speaking in the classroom becomes ineffective, students find it difficult to respond to lessons taught by teachers. So that, the students' mastery of vocabulary is crucial in speaking activity.

Hence, learners are suggested to use appropriate learning tools in order to help them improve their vocabulary. One example of learning tool that can improve vocabulary is the Duolingo application. Duolingo is a free online language platform available on web and mobile apps. This app can support students' abilities to be more proficient and master foreign language. According to Munday (2016), Duolingo serves as an additional English course that can be used for students at school and university. It provides various languages to be learned including English. Duolingo deliberately has the concept of "learning while playing" so that, students can experience learning in a comfortable and fun way and Duolingo is also easily use for all ages. After learning vocabulary using Duolingo, students immediately get their grades Jiang et al (2020) By knowing their grades, the students as the users can track their progress then they can actively improve their vocabulary mastery.

There are some previous studies have been done in using Duolingo for learning purposes. One of them is a study by (Nushi and Eqbali, 2017). This research contains of the use of technology to assist the language teaching and learning process. One of the technologies used is the Duolingo application. Their study reveal that Duolingo is a language learning application that is easy for anyone to use independently. This application provides practical learning steps to learn a new language. Duolingo has a language learning pedagogy that is different from other free language apps, it teaches foreign languages through translation. Even though this app has several advantages, this study also reveals some disadvantages of Duolingo application. First, Duolingo may negatively impact students who are familiar with translation, so it can affect learning in classroom. Secondly, the conversations used on the app does not sound natural and students will speak in a way that sounds weird to native speakers of the language. And lastly, although technology can affect learning, it is not the best solution for teaching and learning process. Generally, their study shows that Duolingo is effective for use in improving mastery of English. Equipped with easy-to-understand translations, what makes it easier for students to understand new vocabulary.

Other study was conducted by Falk and Götz (2015), who examined about interactivity in language learning application based on Duolingo. They conducted research about digital developments in the modern era like today. They said that the use of technology has a good impact on its users, such as the use of the Duolingo application for English language learning. They evaluated how the students use features in this app. The features contained in Duolingo are related with listening, speaking, and writing. Students will complete challenges and improve the level of game by answering several questions, these challenges are such as translating sentences, constructing sentences and writing sentences that students have heard.

From previous studies, researchers have only revealed that the use of the Duolingo application is very effective for use by foreign language learners because of its convenience and practicality. Therefore, for this study the researcher wants to examine more specifically whether the use of Duolingo can boost the students' vocabulary for speaking activity.

LITERATURE REVIEW

Vocabulary

There are four skills in language, namely speaking, listening, writing and reading. However, According to Suryani et al., (2022) before learning language skills, students must first learn vocabulary. Vocabulary is a word used in a language, that has the meaning. So, it is understood by people who use it. Vocabulary usually consists of verbs and adjectives used in any language include word, especially English. The more someone masters the vocabulary, the more easier to communicate and understand a language, especially a foreign language. According to Dakhi and Fitria (2019), a vocabulary knowledge has been viewed as a prior ability that has to be mastered to improve other language abilities. Someone especially student who study foreign language, must master vocabulary.

Vocabulary is very important for English learners to construct sentences in English. Chappelle (2013) states that developing a deep vocabulary usually involves the accumulation of knowledge such as how one uses words in different contexts to learn the meaning and usage of vocabulary. In addition, Chappelle agrees that Good vocabulary mastery will help someone especially student speak a foreign language fluently, so that the meaning of words spoken can be understood by listeners (2013).

The existence of vocabulary in the language is crucial, such as English. Students must be able to master English vocabulary because English has become one of subjects that must be studied. In English-speaking countries and non-English speaking countries, English has become one of subjects in schools and universities (Dang, 2018). In the era of globalization, English has been widely used in various fields, not only in education but in technology and business. Therefore, the main factor that must be learned in mastering English is vocabulary

Apart from education, mastery of English is important in work. According to Agca and Özdemir (2013), mastering English provides benefits for social and business life, as well as to learn and speak English. Besides that, (Rini, 2014) states that in Indonesia, English is a foreign language which has become one of the requirements in finding job vacancies. It means, having a good understanding of English is not only beneficial in education but in the work environment.

There are several aspects that must be mastered by students. According to Irianto and Hadi (2022) the aspect of vocabulary that the students should be included spelling, pronunciation, and use of word, so they can be considered to have mastered vocabulary, especially in English. someone who has mastered aspects of vocabulary learning will find it easier to communicate. The words and sentences that are spoken can be heard clearly, so that when someone speaks there are no errors in the meaning of the words conveyed. Therefore, with mastery of vocabulary students will find it easier to understand text and speech from someone who speaks a foreign language, especially English.

Speaking Skill

Speaking is one of the skills that must be learned by English learners. According to Parmawati (2018),

speaking is the main target in communication and becomes a function of learning in learning English. Besides that, Fauzan (2016) asserts in learning English, speaking skills are considered significant because through verbal language, a person can express their ideas and thoughts by speaking and being able to speak clearly is an indicator of language mastery (Fauzan, 2016).

Speaking ability is one of the skills to convey ideas or thoughts to others orally. In fact, English has been used as an international language to make it easier for people to communicate with other people. Rao (2019) states that English has been used all over the world as a means of communication. Besides, speaking can be interpreted as verbal pronunciation, giving speeches, communicating and making requests (Leong and Ahmadi, 2017).

There are many students who do not have good speaking skills. According to Lazarton (2001) as cited by Menggo (2016) students are having difficulties and not ready to communicate directly using English, thus the teaching and learning process is not as effective as it is. In other words, students do not know how to be able to speak well. So that in the end they choose to be silent and not respond to the learning given by the teachers. Hosni (2014) state that interaction in the classroom cannot take place properly if students do not have sufficient communication competence. Someone who learns English must master the ability to speak. According to Juliansyah (2018) as cited in Anggayana (2019), in learning any language, speaking ability is one of the most important skills because this skill is often used to communicate. Therefore, as a teacher is required to be able to master English so that students can understand and be motivated in learning English. Hidayat and Aprilianto (2019) state that a teacher must master the knowledge and skills of the English language to support students' learning abilities in class.

Learning Strategies

Learning vocabulary requires appropriate learning strategies. Tosun (2015) state that vocabulary skills can only be achieved with interesting learning strategies and for various learning styles. Learning strategies are a design activity designed in an effort to achieve learning. Learning strategies aim to obtain learning effectively and efficiently. Noormohamadi (2009) states that strategies are referred to as learning techniques, behaviors, actions, problem solving and learning skills. Cameron (2001) as cited by Gorgoz and Tican (2020) said that vocabulary learning strategies refer to actions that help learners to remember and understand vocabulary elements. These strategies help language learners to guess the meaning of unknown words.

This study focuses more on vocabulary learning strategies. There are several vocabulary learning strategies that can be used to improve student's vocabulary skills. Asgafi and Mustapha (2011) state that in general, vocabulary learning strategies are divided into two strategies, namely discovery strategies and consolidation strategies. However, the arrangement of vocabulary into correct sentences is often regarded as one of the problems faced by students. Therefore, support from the teacher is needed in order to be able to provide appropriate learning strategies to students. Ohalebi et al (2020) states that a teacher must be more skilled in building students learning motivation and providing appropriate learning strategies in the classroom. So that the teaching and learning process can take place effectively.

Students who have determined learning strategies for themselves can be responsible for the success of mastering the language they learn. They have the ability to investigate the causes of their failures and successes and can define new strategies. Therefore, students who are able to determine learning strategies for themselves will find easier to learn foreign languages, especially English. According to Chia et.al (2016), with mobile device, students can be more active in improving language learning wherever and whenever they intend to learn.

Duolingo

Duolingo is one of the language learning application, Duolingo includes variety of languages that can be learned. According to Dominika (2019), Duolingo is a popular educational application with more than 300 million users (Lardiois,2018). In this application, there are various of learning features, such as writing, speaking, reading and listening. Duolingo provides several questions in the language you would like to learn, if the answer you have chosen turns out to be wrong, this application will tell you the correct answer. Therefore, we can fix the error. Duolingo is also a free application that makes it easier for all people to be able to use it as a medium for learning languages. Jiang et al, (2020) states that Duolingo is a free online language teaching platform available on web and mobile apps. Duolingo has the concept of accountability and transparency, and Duolingo aims to share the results of their students' skills. According to Fhonna (2024)

Duolingo is one of the free learning sites. According to Jašková (2014), “Duolingo is al free language learning appl or website, it is designed so that as users continue learning, they simultaneously help translate various websites and other documents”. This application was developed to translate the web, and its various side effects are that millions of people can learn foreign languages. Furthermore, according to Ajisoko (2020), Duolingo is preferred by people who are going to learn a foreign language rather than task-based learning and regular media. This means that Duolingo is easier to use and more interesting, so that it will be comfortable to be used as one of the media used in classroom learning

MELTHOD

This study employsl a quantitative method for data collection and analysis. The objectives are to assess students' vocabulary mastery and their perspectives on using the Duolingo application to enhance vocabulary inl speaking activities. A pre-experimental design was chosen since the school permitted experimentation with only one class. The research was conducted at Senior High School 12 in Banda Aceh, a public school located on Panglima Nyak Makam Street, Kuta Alam. The population consisted of all 10th-grade students at SMA 12 Banda Aceh, while the sample included 22 randomly selected students from class X IPAS-3. Data analysis was performed using SPSS.

RESULT AND DISSCUSION

Result

This study adopted quantitative methods. Quantitative data wasl obtained from test and questionnaire. Then, the results of the datal were usedl to measure the improvement of students' vocabulary in speaking through the

Duolingo application. This study measures the comparison of pre-test and post-test by adopting the average formula. Lastly, the students' perceptions of Duolingo to boost their vocabulary were analyzed.

The Result Of Test

The test results were obtained from grade X students IPAS-3 of SMA Negeri 12 Banda Aceh. The test was carried out in pre-test and post-test. The table below was the result of pre-test and post-test.

Table 1. the result of pre-test and post-test

No	Name of students	Score	
		Pre-test	Post-test
1	Student 1	20	45
2	Student 2	35	50
3	Student 3	60	90
4	Student 4	45	60
5	Student 5	50	85
6	Student 6	40	70
7	Student 7	30	55
8	Student 8	25	55
9	Student 9	40	70
10	Student 10	50	80
11	Student 11	40	65
12	Student 12	30	60
13	Student 13	40	70
14	Student 14	40	80
15	Student 15	35	60
16	Student 16	25	45
17	Student 17	40	75
18	Student 18	25	55
19	Student 19	45	80
20	Student 20	25	60
21	Student 21	30	55
22	Student 22	40	75
	Total score	810	1440
	Average	36,82	65,45
	Minimum Score	20	45
	Maximum Score	60	90

The number of students who took the pre-test was 22 students. The overall total score of students on the pre-test was 810 and the average score of students was 36.82. Based on the test results, it shows that students' vocabulary mastery in speaking is not good or it can be said that students' vocabulary skills are not sufficient enough to be able to talk to friends and teachers in class. Based on the post-test results, it can be seen that students' vocabulary mastery in speaking has increased compared to the pre-test results. Therefore, students' vocabulary mastery can improve from the lowest score of 20 in the pre-test to the lowest score of 40 through learning using the Duolingo application in the post-test.

This result obtained from pre-test and post-test scores was the basis to see the improvement of students' vocabulary skills in speaking before and after using the Duolingo application. The changes in scores obtained by students can be seen in the following table:

Table 2. Statistical summary of pre-test and post-test scores

No	Descriptive Statistics	Pre-test	Post-test
1	Minimum	20	40
2	Maximum	60	90
3	Mean	36,82	65,45

Based on Table 2, it can be seen that the lowest score of the students the pre-test is 20 36.82. After using the Duolingo application, the score of post-test increased from pre-test scores, namely the lowest score was 40 and the highest was 90 with an average of 65,45. The improvement of students' speaking skills with the Duolingo application can be seen from the average difference where the post- test average is higher than the pre-test.

The Analysis of The Questionnaire

The questionnaire is used to determine students' perceptions of using the Duolingo application to improve students' vocabulary in speaking. There were 10 questions related to students' perceptions. The analysis of questionnaire will be presented below:

Tabel 3. The analysis of questionnaire

No	Statement	%	Category
1	Do you think this application is interesting?	79,5	High
2	Duolingo is an easy application to use for beginners	83	Very High
3	The animation display in the application is interesting	83	Very High
4	With an application- based learning model, I feel excited to learn English	83	High
5	I do not get bored while studying use this app	77,3	High
6	This app can help me to learn English	85,2	Very High
7	My confidence to speak English can improve after using this app	78,4	High
8	My vocabulary understanding has improved after using this app	79,5	High
9	After using this app, I can make simple sentences to speak	76,1	High
10	I find it easier to communicate with my classmates after learning vocabulary in English	81,8	High

Of the above categories, there are four statements with very high categories. This is said to be very high if this category has a percentage result of 83%-100%. The results of this questionnaire data analysis show that the statements in numbers 2,3,4,6 are included in the very high category. The four statements represent the fine features and usage of the Duolingo application. This means that the Duolingo application is one of the appropriate language learning tool to help improve students' vocabulary mastery in speaking.

Discussions

This study aims to determine whether the use of the Duolingo application can improve students' vocabulary skills in speaking, and to know the students' perceptions of the use of the Duolingo application. To collect data, this study provided treatment to students and conducted pre-test and post-test before and after implementing learning using the Duolingo application. In addition, this study distributed questionnaires to students to find out students' perceptions of using Duolingo to boost students' vocabulary in speaking. This aims to answer 2 research questions

On the first research question, this study wants to find out whether Duolingo app can boost the improvement of students' vocabulary in speaking. This was proven by the results of the pre-test and post-test. The pre-test results on students' vocabulary skills showed low results. It can be seen from the lowest score of 20 to of 60 and the average score of pre-test 36.82. While the post-test results showed that the application of the Duolingo application as a tool for learning students' vocabulary in speaking had a positive impact on IPAS-3 grade students.

This statement can be seen from the lowest score on the post-test 40 and the highest 90, and the average score 87.95.

Based on the results of the analysis above, the scores obtained on the pre-test showed that students lack mastery of vocabulary in speaking. This is because students did not get an effective English learning when they are in junior high school. According to Astika (2016), exposure to English at school is very limited, so students did not master vocabulary optimally. This lack of vocabulary also affects students' speaking fluency. This is hindered by their limited vocabulary mastery in the school environment and daily life, so it becomes one of the causes of students' difficulty in speaking.

Many students feel less confident when they speak. Being afraid of pronouncing the wrong vocabulary is one of the reasons why students are not confident when speaking. This can be seen in the fluency and weak intonation of speech of students indicating that they are not confident. However, students can understand the topic taught well. Students are able to understand the discussion that has been taught well so that they are able to carry out the instructions they must do during the pre- test.

While the post-test results showed there is an improvement. This can be seen in the student's lowest score before using Duolingo was 20 and after using it was 40. Likewise, the highest score before treatment was 60 and became 90. Students' fluency and confidence showed improvement. This is because the use of the Duolingo application as a tool for learning students vocabulary in speaking makes it easy for students to learn new vocabulary and understand its meaning. This is supported by Dominika (2017) that Duolingo is a vocabulary learning application that is easy to use for beginners, and the students believed they had improved their speaking skill. The data above has answered the research question, that the Duolingo application can help students to improve their vocabulary mastery in speaking.

Based on the second research question, this study wants to know students' perceptions about using Duolingo application. The results of analysis showed that students agree that the Duolingo can be an English learning tool that is easy to use for beginners. This is supported by Jaelani and Sutari (2021) that students are interested in using Duolingo because it is easy to use and can help students to be more active in learning vocabulary in speaking. Students' self-confidence can improve and students can make simple conversations with their classmates. This showed that almost all students believe that Duolingo is an appropriate vocabulary learning application to improve students' speaking skill.

This study concludes that the Duolingo application as an English learning tool significantly improved the vocabulary and speaking skills students of IPAS-3 at SMA 12, Banda Aceh. This is supported by the average results of tests and questionnaires that show improvement. It states that students are very interested in learning English using the Duolingo application. Through this application, students learn English not only in class, but they can learn English anywhere and anytime through the Duolingo application, so that students have plenty of time to learn vocabulary in English.

CONCLUSION

Based on the results and discussion presented in the previous chapter, this study concludes that the treatments significantly improved students' vocabulary mastery in speaking. The comparison of pre-test and post-test scores indicates that Duolingo effectively enhances vocabulary skills in this area.

Furthermore, students expressed a largely positive perception of using Duolingo. Many participants agreed that the application is a valuable tool for improving vocabulary mastery in speaking. They found the app user-friendly and appreciated its engaging animations. Additionally, students reported feeling more enthusiastic about learning English and recognized that the app plays a significant role in supporting their language learning journey.

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