



Duolingo Application for Advancing English Speaking Skills

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Abstract: The aspects of speaking are crucial to the effectiveness of speaking instruction, and the enhancement process can be done through applying technology in learning. This research aims to find out students' perception of using Duolingo in improving English speaking skills and to explore which aspects can be enhanced by students in learning using the Duolingo application. This research employed a descriptive qualitative design. The samples in this study were students from a senior high school in Banda Aceh, totaling 20 students. To collect data, researchers used questionnaires and interviews as instruments. The result of the questionnaire in this research was analyzed by using percentages. The research results find that 90% of students claim that learning through the Duolingo application helps them improve their English speaking skills. Besides, the most improved aspect of speaking skills is vocabulary, followed by other aspects which increase significantly, such as pronunciation, grammar, and fluency. In this study, students responded positively; hence, the Duolingo application effectively improves students' speaking skills.

Keywords: speaking skill, EFL learners, duolingo application, digitalized education

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INTRODUCTION

Speaking problem is still a significant problem faced by EFL learners in Indonesia, including in Aceh. According to Putri and Ismiati (2018), one aspect that students need help with is speaking. Everything is involved when speaking, and students struggle to learn how to use grammar, vocabulary, and pronunciation. Speaking and writing are considered expressive skills (productive), and they are included in the four skills that students must master because they demonstrate that students can speak English and express ideas or thoughts that they will say. According to Haryudin and Jamilah (2018), speaking English is a world language that needs much exercise to master. Students must practice both inside and outside of the classroom and can use the appropriate media to develop their ability to speak English fluently. Regarding students' ability in English, learners mostly use a specific platform to support their learning, such as Duolingo. They use this application to help them practice speaking. However, some other students still have different problems in speaking for some reasons, such as lack of confidence, lack of vocabulary, and fear of making mistakes in pronunciation and grammar.

It is essential to emphasize that speaking is a skill that demonstrates a person's proficiency in a particular language (Syahputri & Ismail, 2022), in this instance, English, and enables direct self-expression. When speaking, a person acts as a translator or interpreter of what they are saying to another person, which requires the brain to process information twice: first in the correct Indonesian form and then in the proper English form. According to Eliyasun and Urai (2018), speaking is a method of verbal communication or idea exchange. In addition, Brown and Yule (2006) state that the complexity of the information to be communicated affects communication. However, sometimes, students need help comprehending what they mean. They need to consider their words more carefully, and their ability to communicate with others may be problematic. Hence, teachers and instructors must deliberate the learning environment to be more conducive and learning-friendly (Ismail & Yoestara, 2022). In addition, according to Efrizal (2012), students must recognize that speaking entails three areas of knowledge mechanics (pronunciation, grammar, and vocabulary) so that problems in speaking can be resolved by mastering these mechanics.

According to Hormailis (2003), four aspects are having a great influence on speaking skills, they are grammar, vocabulary, pronunciation, and fluency. First, it is grammar. Besides expressing the meaning, learners must also compose correct and appropriate sentences during conversations. Grammar forges students in the correct way to be able to speak in oral and written form without miscommunicating the points of their messages. If a person wants the students to communicate well, then it would be better to use good grammar so that students are trained to be good speakers. Hafifah (2021) says that grammar is a description of the rules that govern how language structures are formed. Second, it is vocabulary. Vocabulary is another critical component because people can only speak effectively and express their thoughts in oral and written form if they have sufficient vocabulary. Lacking vocabulary is one of the biggest obstacles when someone wants to speak or write. In speaking, hardly anything can be conveyed if a learner lacks vocabulary (Hafifah, 2021).

The third is pronunciation. Pronunciation is how someone pronounces the word of a specific language clearly when speaking. If the student's pronunciation is constantly wrong and unclear, it will be difficult to understand the messages. If a person wants to say a word, but the pronunciation is incorrect, then there is a misunderstanding due to mispronunciation; therefore, it is vital to pay attention to pronunciation so that the communication process can go fluently. According to Nugroho (2010), pronunciation is a characteristic of speech that includes many speech components that combine to form the pronunciation of a language, such as sounds, syllables, words, and intonation. The last is fluency. Fluency is someone's ability to speak fluently and quickly while still having a smooth and precise intonation. A person who can speak fluently does not need to spend much time thinking because the message or words are ready to be retrieved. There is hardly any need to use long pauses. Hafifah (2021) further states that fluency is the smoothness or flow with which sounds, syllables, words, and phrases are combined when speaking English.

Regarding learning media, it is understood that media is a tool that can assist with necessities and tasks, rendering them simpler for anyone who uses it. Television, radio, mobile phones, internet websites, and other forms of media are frequently used to communicate and disseminate information. According to Darmawan (2013), digital learning is one method for providing alternative learning services anywhere and at any time. It has been demonstrated that there is an increasing amount of educational-related applications, such as educational games and applications. There are numerous excellent applications that learners can use to learn English independently at home, school, or anywhere. Thus, according to Alqahtani (2015), using smartphone technology in learning can encourage and support students' learning processes; one is Duolingo.

The Duolingo application has become very prevalent in mobile learning because it is effortless and effective in improving English and other communication skills. According to Munday (2016), Duolingo is a digital entertainment application currently supported by advanced technology, with a functional and pleasant interface that could be used to practice English. The Duolingo application has many features that can assist users in carrying out their tasks and increasing their understanding in a more comfortable and pleasurable manner. Duolingo consists of a low level to the highest level and is very suitable for Elementary, Junior high school, and High school students and especially for English beginners. This application displays material in text, audio, and visuals. The questions that arise are translating sentences, determining the correct pair of sentences, translating the spoken word, and saying the written word.

Luis Von Ahn and Severin Hacker founded Duolingo in November 2011 on Hot Apps. Duolingo has been downloaded up to 5.6 million and is rated the 4th most popular educational on the Play Store with more than 11 million good reviews. Duolingo is a very successful experiment packaged in a modern and free app that users can download without paying anything. According to Jaskova (2014), the definition of Duolingo is a future in language learning and global communication. The company aims to make language learning free, enjoyable, and available to everyone. Duolingo is a game-like learning platform that has been scientifically proven to be effective. As a result, many new users download it out of curiosity because they would instead take advantage of it. Duolingo has 28 languages that students can learn, including the most popular languages, English, Spanish, and French. Duolingo has many levels, from basic to difficult levels, so that learning can be more effectively completed until the final material. Duolingo also opens at least 19 languages and provides attractive audio and visual features and services that are as fun as a game.

Within a unit or course of study, the Duolingo application additionally offers learners a variety of exercises. Niah (2019) stated that Duolingo has four distinct tasks they are vocabulary, translation, listening, and speaking. In Duolingo, there must be new vocabulary that students do not know in the task; for example, when translating sentences, students can click on the unknown word above, and the meaning will come out. Every new word the students encounter at Duolingo has provided its respective translation. Then, students can record and write vocabulary in notebooks. Besides, Duolingo gives many translation tasks, both from English-Indonesian and Indonesian-English. In the task, there is a random word, and then students can practice translating those words into correct sentences with their vocabulary skills.

Then, students get a listening task and the transcription, where the audio speaker is a native speaker. Here, students practice listening skills and transcript what the audio is talking about. Listening and transcription aim to task students' listening skills while understanding what the speaker is saying. The last test is speaking. In the trial, students find a sentence test and then read to the end while pressing the microphone icon. Read it aloud so that Duolingo can detect students' speaking, such as the correct pronunciation; after it is correct, there will be green and red colors for the words that have been spoken. In addition, Husen (2020) also conducted a study involving the Duolingo application to improve students' translation (pre-experimental research in the eleventh grade of SMA Muhammadiyah 9 Makassar). According to the results, the Duolingo application can improve students' translation, and the Duolingo application is effective in enhancing students' translation at SMA Muhammadiyah 9 Makassar's eleventh grade. Because the score on the speaking test after the researcher did treatment was significantly greater than before using Duolingo in teaching-learning, it can be deduced that the Duolingo application had a substantial impact on students' speaking skills. It is demonstrated by the students'

average post-test score of 80.00. This was greater than the control group's score of 74.25. Later, a study by [Rusli et al. \(2023\)](#) found that the results of the T-test showed that the average post-test score of the experimental class was higher than that of the control class. This indicates that the use of the Duolingo application has an effect on students' pronunciation ability in class X SMA N 2 Rantau Utara. Next, a study by [Redjeki and Muhajir \(2020\)](#) presents that following four days of utilizing Duolingo's online platform, the researchers have identified several significant observations about the language-learning tool. The utilization of Duolingo as a tool for English language acquisition was met with a positive reception among the student population. The platform was enjoyable, intriguing, straightforward, contemporary, and user-friendly, providing the students access to a reliable internet connection and sufficient data allocation. Merely possessing an email or Facebook account is adequate for installing the application. This program is appropriate for individuals of all proficiency levels, enabling individuals with limited English language skills to acquire fundamental language skills. Duolingo possesses distinctive advantages over other language-learning software for learning Spanish. The students exhibited a greater affinity towards the assigned task in comparison to traditional book-based homework, owing to the convenience it provided. The users expressed a positive sentiment towards the multi-format accessibility of the product, with a particular emphasis on the comfort of accessing it through smartphones. The gamification elements of the product were also positively received, as noted by [Munday \(2015\)](#). Furthermore, Duolingo provides users with precise usage or research data by date. To access this information, Duolingo users are required to register online and provide a valid email address. The data is categorized based on various activities, including time spent on lessons, translation, and other activities ([Vesselinov & Grego, 2012](#)). Last, a study by [Matta \(2020\)](#) finds a significant influence between the score of pre-test and post-test (before and after using the app). It can be inferred that the Duolingo application is efficacious in imparting vocabulary knowledge to young learners as well.

Hence, in achieving the aim of the study—which is to find out the effects of Duolingo application on speaking skills—the researchers opted to conduct a study involving Duolingo by involving students at SMAN 16 to determine the students' perspective of using the Duolingo application and what aspects of speaking ability strengthen after using this application. The problems are as formulated below: first, *What are the students' perceptions of using the Duolingo application in improving students' speaking skills?*; and second, *Which aspect of speaking do students perceive to be enhanced in learning by using the Duolingo application?* This study is scoped only to the speaking skill with four subskills: pronunciation, vocabulary, grammar, and fluency. However, much less is known about how this application can affect students in a high school in Aceh regarding their speaking ability. Thus, this emerged as the novelty in this study.

METHODS

This study used a qualitative design. According to [Creswell \(2012\)](#), qualitative research is descriptive and frequently employs analysis. Qualitative research emphasizes procedures and significance. The theoretical foundation is used as a guide to guarantee that the study's focus aligns with the factual information in the field. In this study, the researchers chose students of a senior high school in Banda Aceh as a sample who have used the Duolingo application. The researcher decided on 20 students as participants in the twelfth grade, and sampling for interviews are two students in the twelfth grade. Regarding the research instruments, the researchers used questionnaires and interviews as the instruments to obtain accurate research results. The questionnaire provides fact-based information to the respondents. Conversely, analytical information can be gathered through interviews. [Sugiyono \(2014\)](#) states that a questionnaire is a data collection technique that asks lots of questions or written statements to respondents to be replied to.

Furthermore, the items consisted of statements or questions. The researcher described as follows: strongly agree (SA), agree (A), Disagree (D), and Strongly disagree (SD). The questionnaire consisted of 15 items that were used to research the problem, namely perception, and aspects of increased speaking skills. The interview consisted of 15 questions for research problem perception and aspect speaking skills. The questions were administered via Google Forms. The researcher directly researched the school and asked students to fill out a questionnaire on the Google Form link for 10 minutes. Meanwhile, the type of interview was a structured interview. The researcher interviewed according to the list of questions previously determined. The researcher interviewed two students among the participants in this sample study. Students answered the interviews based on their experience using the Duolingo application. The interview also included questions about aspects of speaking skills, such as grammar, vocabulary, pronunciation, and fluency, to collect research data. This research interviewed students directly for 10 minutes.

Afterward, the researchers analyzed interviews using techniques suggested by [Miles et al. \(2014\)](#), namely data reduction, data display, and conclusion drawing and verification. Data reduction means summarizing, choosing the basic things, focusing on important things, and looking for themes and patterns. In reducing the data, the researcher chose the perception points and aspects of speaking skill of the data that are related to

interview transcriptions, minimized for research purposes. After reducing the data, the next step is to display the interview. These were revealed after the questionnaire's perception of the Duolingo table and aspects of the speaking skills table. After the data was displayed, the researcher showed the final results of the research; namely, the researcher concluded the interview and verified the data to be more concrete. Additionally, to analyze the data and the interview results, the researchers transcribed data word by word from the audio recordings of each student, as suggested by Sugiyono (2014).

RESULT AND DISCUSSION

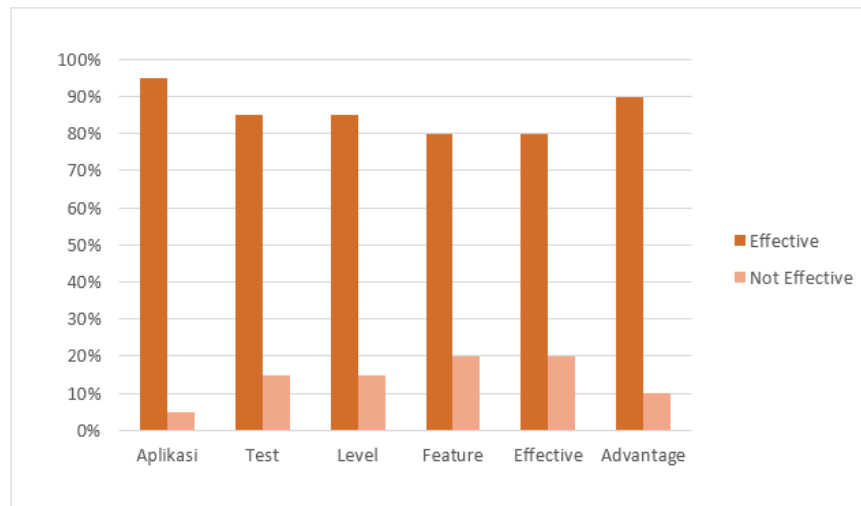
Students' Perception

The result of students' perception of using Duolingo application in improving speaking skills. The researcher gave eight questionnaire items to students of SMA N 16 Banda Aceh. The results of the questionnaire can be described in the following.

Table 1. Results on students' perception

Statements	Agree	Strongly Agree	Disagree	Strongly Disagree
Perception of using Duolingo in improving students' speaking skill				
Learning through the Duolingo App has really helped improve my English speaking skills.	13 (65%)	6 (30%)	1 (5%)	-
Perception relates to tests				
Studying speaking tests on Duolingo is very beneficial for improving my speaking skills	9 (45%)	5 (40%)	2 (10%)	1 (5%)
The tests provided on Duolingo are very interesting and easy to understand to improve your English speaking skills.	7 (35%)	8 (40%)	3 (15%)	2 (10%)
Perception relates to levels				
Completing Levels on Duolingo really improves my English speaking skills	10 (50%)	7 (35%)	2 (10%)	1 (5%)
Perception relates to features				
The features provided by Duolingo are very helpful and useful to train me in learning to speak English.	8 (40%)	8 (40%)	4 (20%)	-
Perception related to effectiveness in improving speaking skill				
Learning through the Duolingo application is very effective for me as a beginner who wants to improve my speaking English	9 (45%)	7 (35%)	4 (20%)	-
While using Duolingo, I have become much more confident in speaking English				
Perception related to the advantage of using Duolingo				
Improving my speaking skills from the Duolingo application is very useful and fun for me to learn anytime and anywhere.	12 (60%)	6 (30%)	2 (10%)	-
The benefit is that while I am using Duolingo, I am much more confident in speaking English	7 (35%)	6 (30%)	6 (30%)	1 (5%)

Based on the table above, 45% of students agree that the Duolingo test is very beneficial to improve their speaking skills. Then, nine students agree that Duolingo is very effective in improving speaking skills. Ten students (50%) agree that completing the levels in Duolingo trains English speaking skills. Twelve students (60%) agree that improving speaking skills from the Duolingo application is entertaining because they can learn anytime and anywhere. Then, 13 students (65%) answer that learning through the Duolingo App helps improve English speaking skills. The results of student perception from the table above can be grouped in the following figure:

Figure 1. Percentage of students' perception

The highest perception is that 95% of the Duolingo application is effective for learning to speak English. Then, it is followed by 90% of the advantage of Duolingo based on students' experience. Next, the student's perception of the level and the test with the same result is 85% effective. The last perception is also with the same result; namely, 80% of students agree that the feature is beneficial and very effective for learning. The results of the students' perception of using Duolingo in improving English speaking skills are also strengthened by the findings from the interviews. In the following are provided some excerpts.

Question: What is your perception of the Duolingo application that can improve your English speaking skills?

Excerpt 1

CA "baik, karena mudah dimengerti dan banyak kosakata yang bisa anda pelajari disetiap harinya" [em okay, because it is easy to understand and a lot of vocabulary that you can learn every day].

Excerpt 2

RA "Di aplikasi Duolingo saya dapat mempelajari kosakata baru di setiap harinya" [In the Duolingo app we can learn new vocabulary every day].

Question: Do you appear more confident in speaking English while using the Duolingo App?

Excerpt 3

CA "iya, saya tampil lebih percaya diri karena saya sudah mampu banyak sikitnya tentang bahasa Inggris" [Yes, I appear more confident because I am already able to a lot and less about English].

Excerpt 4

RA "iya sangat, saya berani tampil dengan percaya diri" [yes really, I dare to appear confidently].

RA "iya, karena saya mengerti" [yes, because I understand].

Question: Do you think the levels provided in Duolingo really help you to improve your English speaking skills?

Excerpt 5

CA "iya, karena setiap levelnya ada kesulitan yang berbeda dan itu semua bertahap" [yes because each level has a different difficulty and it will all be gradual].

Excerpt 6

RA "sangat membantu, karna disetiap harinya banyak level-level yang baru" [very helpful, because every day there are many new levels].

Question: Do you think the Duolingo application is very effective for improving English speaking skills?

Excerpt 7

CA "Sangat efektif karena banyak tes-tes yang sangat berguna setiap harinya dan jika saya tertinggal satu hari saja ada efek nya dari aplikasi itu" [very effective because there are many very useful tests every day, and there if we only have one day left, there is an effect from the application].

Excerpt 8

RA "sangat efektif karna kita bisa belajar dimana saja dan kapan saja" [very effective because we can learn anywhere and anytime].

Language Aspects

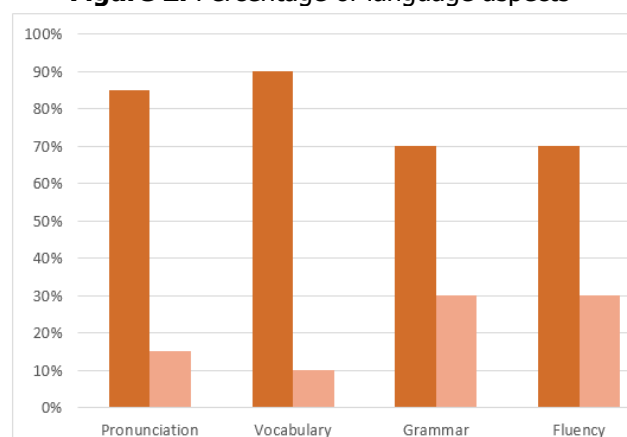
The questionnaire results present students' perception of the aspects of speaking improved in learning by using the Duolingo application. The researcher gave seven questionnaire items to students of SMA N 16 Banda Aceh. The results of the questionnaire can be seen in the following.

Table 2. Results on language aspects

Statements	Agree	Strongly Agree	Disagree	Strongly Disagree
Pronunciation				
Pronunciation on Duolingo really trains me because it provides native-speaker audio, which is very helpful	8 (40%)	9 (45%)	3 (15%)	-
My pronunciation has improved even more while studying on Duolingo	13 (65%)	7 (35%)	-	1 (5%)
Grammar				
Grammar Learning on Duolingo makes my grammar even better	8 (40%)	6 (30%)	6 (30%)	-
With these tools, I can easily understand grammar well.	7 (35%)	6 (30%)	6 (30%)	1 (5%)
Fluency				
My fluency has greatly improved while using Duolingo	8 (40%)	6 (30%)	5 (25%)	1 (5%)
Vocabulary				
My vocabulary has improved while using Duolingo	10 (50%)	8 (40%)	1 (5%)	1 (5%)
There are lots of interesting vocabularies on Duolingo that can be used in everyday life	10 (50%)	5 (25%)	3 (15%)	2 (10%)

From the table, most students agree that there is a different improvement in the aspects of their speaking skills. Then, 13 students (65%) agree that students' pronunciation is getting further improved while learning in the Duolingo application. Ten students (50%) agree that their vocabulary increases while using Duolingo. Then, eight students (40%) agree that studying at Duolingo makes grammar much better organized. Then, eight students agree that their fluency significantly improves while using Duolingo. The results of student perception from the table above can be grouped in the following figure.

Figure 2. Percentage of language aspects



It shows that the aspect of students' speaking skills that the most improve while using the Duolingo application is vocabulary. The result is that 90% of students agree that their vocabulary has increased the most while using the Duolingo application. Furthermore, 85% of students agree that their pronunciation also increases. Then followed by increased Fluency and Grammar, which have the same result, namely 70% of students agree. The results of the students' perception of using Duolingo in improving English speaking skills are also strengthened by the findings from the interviews. Here are the following explanations:

Pronunciation

1. How do you think the audio pronunciation feature provided on Duolingo is very easy to understand?

Excerpt 9

CA "sangat mudah dimengeti, karena bahasa audio tersebut sangat mudah didengar dan pengucapan nya mudah saya ikuti" [very easy to understand because the audio language is very easy for us to hear and the pronunciation is easy for us to follow].

2. Is your pronunciation much better than before while using Duolingo?

Excerpt 10

CA "iya, karena dari fitur audio tersebut ketika saya salah mengucapkan future akan mengoreksinya" [yes, because of the audio feature when we say something wrong they will correct it"]

Grammar

Question: Is it easy for you to understand the grammar provided in Duolingo?

Excerpt 11

CA "mudah karena ketika saya salah, soal itu akan ditanya kembali sampai saya tau dan mengerti dari cara susunan kata itu" [easy because when we are wrong the question will be asked again later, until we know and understand how to arrange the word].

Excerpt 12

RA "sangat mudah" [very easy].

Fluency

Question: Menurut anda apakah kelancaran berbicara anda saat berbahasa inggris sudah meningkat saat komunikasi?

Excerpt 13

CA "tidak terlalu lancar, tapi saya merasa lebih percaya diri saat berkomunikasi menggunakan bahasa Inggris" [not very fluent, but I feel more confident when communicating in English].

Excerpt 14

RA "tidak terlalu lancar, tetapi dari vocabulary yang saya miliki saya bisa berani berkomunikasi" [not very fluent, but from the vocabulary I have I can dare to communicate].

Vocabulary

Question: Has your vocabulary increased while using the Duolingo application?

Excerpt 15

CA "karena banyak kosa kata baru setiap hari yang akan ditampilkan di aplikasi" [because a lot of new vocabulary every day that will be displayed in the application]

Excerpt 16

RA "semakin meningkat" [more increasing].

Based on the above data, the results of this research indicate that the perception of Duolingo application in improving speaking skills, namely 95%, is drawn from 5-point perception. These are general perception related to speaking tests provided on Duolingo, perception related to levels that improve student speaking, perception related to features that support learning speaking on Duolingo, Perception related to effectiveness in improving speaking skills, and perception associated with the advantage of using Duolingo. This aligns with Niah (2019) that Duolingo can be used as a medium for language tests in speaking and listening skills. Certainly also able to improve pronunciation, students' vocabulary will be better. Leading universities worldwide have recognized certificates and received Duolingo test scores for university entry requirements. The data result has similarities with the results of previous research; hence, the Duolingo application was effective in improving students' speaking skills; although this research design is different from other previous studies, the research has the same effective results. Perez (2020) states that Duolingo can help improve speaking skills to some extent. Duolingo provides users with various exercises and activities to help them improve their speaking skills, including other skills such as reading, writing, and listening. The app uses speech recognition technology to evaluate users' pronunciation and provides feedback on their speaking abilities. The speaking exercises on Duolingo can be helpful for beginners who are just starting to learn a new language and want to practice basic phrases and vocabulary. However, it is essential to remember that Duolingo is just one tool among many that can assist foreign language learners in learning a language. Duolingo can be a great supplement to these activities, but it should not be relied on as the sole source of language practice. This aligns with Kroon and Kurvers (2020) and Sukanto et al. (2021) that language practice can maintain language attitude. In this case, human language is still needed to be empowered.

Additionally, Duolingo can enhance pronunciation and grammar ability in several ways, such as through pronunciation, grammar, feedback, and repetition. Duolingo's speech recognition technology evaluates users'

pronunciation and provides feedback on their speaking abilities. This can help users identify areas where they need to improve and practice their pronunciation until they get it right. In concern to grammar, Duolingo's exercises and activities are designed to help users learn grammar rules and structures in the target language (Ajisoko, 2020). The app uses various techniques, such as fill-in-the-blank exercises and multiple-choice questions, to help users learn and practice grammar. Then, regarding feedback, Duolingo provides immediate feedback on users' answers, highlighting any errors in grammar or pronunciation. This helps users identify areas where they need to improve and learn from their mistakes. Last, in an attempt to reinforce the practice, Duolingo's lessons are designed to be repetitive, which helps users reinforce their knowledge of grammar rules and structures. By practicing the same grammar rules and forms multiple times, users can internalize them and apply them more easily in real-life situations (Calderón et al., 2011).

Duolingo can increase confidence in speaking to some extent. One of the benefits of using Duolingo is that it provides users with a low-pressure environment to practice speaking a new language. A low-pressure climate is essential in emerging the sense of learning, as supported by Gani and Damayanti (2018) and Blue and Harun (2003). This can help users build confidence and overcome the fear of making mistakes when speaking with others. Duolingo's speaking exercises use speech recognition technology to evaluate users' pronunciation and provide feedback on their speaking abilities. This can be helpful for users who want to improve their speaking skills but may be hesitant to practice with native speakers or in a real-life setting. By providing immediate feedback on pronunciation, Duolingo can help users identify areas where they need to improve and build confidence in their speaking abilities.

CONCLUSION

Based on the results of the data analysis and discussion, The researcher obtained the following conclusions. First, almost all of the students respond positively to their experience of using the Duolingo application. 95% of students claim that learning through the Duolingo application helps them improve their English speaking skills based on the results of the questionnaire data collection. From the interview data, 90% of students answer that learning through the Duolingo application is very helpful, functional, and flexible. Second, both the results from the questionnaire and interview data collection show that the most improved aspect of speaking skills is vocabulary. 90% of students agree that their vocabulary has increased, and they find lots of new vocabulary displayed daily in the Duolingo application. The second most improved aspect of speaking skills is pronunciation, while fluency and grammar get the same results.

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