

## **Students' Perception of The Use of Duolingo for Learning English**

**Lingga Daniswara\*, Sahuddin, Lalu Jaswadi Putera, Agus Saputra**

English Education Department, Faculty of Teacher Training and Education, University of Mataram, Indonesia. Jl. Majapahit No. 62, Mataram NTB, 83125. Indonesia

\*Corresponding Author: [minclipgon@gmail.com](mailto:minclipgon@gmail.com)

### **Article History**

Received : September 06<sup>th</sup>, 2024

Revised : Oktober 17<sup>th</sup>, 2024

Accepted : November 15<sup>th</sup>, 2024

**Abstract:** This study aims to determine the perception of students majoring in English towards the use of the Duolingo for learning English and to find out which aspects of language improve after using the Duolingo for learning English. The population were 10 English Education Department students who had used or were currently using Duolingo. This research used quantitative method. In collecting the data, this research used a questionnaire. The results of this research showed that most students liked and enjoyed using the Duolingo application for learning English. The students were asked questions regarding their perceptions of Duolingo, particularly about the elements of utility, content, context, control, and connectivity or mobility, and almost all agreed that they liked the Duolingo app because various aspects of it aligned with these five elements. Moreover, most students agreed that Duolingo helped them improve some aspects of their English skills, such as improving their pronunciation, writing, listening, speaking, and vocabulary. Based on the results, it can be concluded that the majority of students have a positive perception of using the Duolingo app for learning English.

**Keywords:** Duolingo, Language Learning, Students' Perception.

## **INTRODUCTION**

In today's era, proficiency in the English language is crucial. The significance of English language proficiency stems from the fact that English serves as the international language for cross-cultural communication worldwide (Sharifian, 2009). Therefore, it is not surprising that proficiency in English is considered a mandatory skill. In Indonesia, English has been taught at various educational levels, ranging from the lowest to the highest. It is a compulsory subject from elementary school to university. The English language teaching and learning process aims to enable students to comprehend and produce English. Consequently, students are required to master the English language. Similar to other languages, English has four fundamental skills: reading, writing, listening, and speaking (Sadiku, 2015). These four skills need to be integrated in an effective manner to develop communicative competence in the English language. Furthermore, these skills also provide students with opportunities to create contexts in which language is used to express information or knowledge, thereby demonstrating their learning capabilities.

Learning English to enhance language proficiency can be achieved through various

methods, one of which is by leveraging technological advancements. With the progression of technology, students learning English are not confined to the traditional classroom setting; they can also benefit from technology and the internet. According to Halverson & Smith (2009), technology has ushered in a new era of teaching and learning, making the process engaging, flexible, heuristic, and enhancing productivity and efficiency. This was particularly evident during the COVID-19 pandemic when everyone transitioned to online learning and utilized technology. Reflecting on the COVID-19 era, learning took place predominantly online. Through online learning, students discovered new methods of learning, such as using Zoom, Google Meets, X Mind, ChatGPT, and various other tools. This transformation was facilitated by technological advancements, offering alternatives beyond traditional physical books. The evolution of technology also led to the creation of programs or media for learning English, with Duolingo being one noTable example.

Duolingo is a platform for learning English that is available on both its website for computer access and as a mobile application. Launched in 2011 by Severin Hacker and Luis von Ahn, this online language learning platform has become

one of the most popular English language programs. As of September 2023, Duolingo stands out as the most popular language learning app globally, evidenced by its record-breaking monthly downloads. During that month alone, over 16 million users downloaded the app onto their mobile devices (Cehi, 2023). This remarkable figure underscores Duolingo's trustworthiness and position as a preferred learning platform for English language acquisition.

As an English language learning platform, Duolingo offers an engaging and enjoyable approach to mastery English. According to Munday (2016), Duolingo aims to teach vocabulary and grammar. Interestingly, Duolingo presents combined activities involving pronunciation skills, word translation, and tasks such as recognizing words from images, writing what is heard, and more. Engaging and enjoyable learning is a distinctive value of Duolingo. By bridging video games and learning, the application can enhance interest in learning. Furthermore, Duolingo integrates audio, visual elements, along with vocabulary and grammar questions in a humorous manner. This undoubtedly serves as an alternative solution for learning English comfortably and pleasurably. Duolingo consistently places emphasis on user satisfaction by enhancing the concentration on information (Ahmed, 2016).

Overall, Duolingo has both advantages and limitations in supporting students' language learning. As a result, students have differing opinions about using Duolingo as a tool in their English learning journey. As students specifically studying English, they have a deep need for and experience with learning the language, making their perceptions of using an application like Duolingo valuable for the research. Knowing students' perception is crucial because it helps educators and developers understand the effectiveness of the application, identify areas for improvement, and tailor educational strategies to better meet students' needs and preferences. Additionally, understanding students' feedback can guide future enhancements to the platform, ensuring that it remains a valuable and engaging tool for language acquisition. Therefore, this research aims to explore students' perceptions of Duolingo as a tool for improving their English language learning abilities. Based on the aforementioned background, the researcher is motivated to conduct research titled "Student's

Perceptions of The Use of Duolingo for Learning English".

## METHODS

This study utilized a quantitative research method as its approach. Quantitative research involves describing and examining social phenomena by gathering numerical data, which is then analyzed through mathematical techniques, including statistical methods (Aliaga and Gunderson, 2002). Therefore, this research employed quantitative research aimed at determining the proportion of students' perceptions about utilizing the Duolingo app for English learning and to identify the language aspects that students improved after engaging with the application.

The population of this research was students majoring in English education at the University of Mataram. In selecting the sample, the purposive sampling technique was used. According to Sugiyono (2019), purposive sampling is a sample selection method based on specific considerations. In this research, the considerations were eighth-semester students who had used or were currently using Duolingo. A total of 10 students were used as the sample in this research.

This research used a questionnaire to collect the data. A questionnaire is a method of gathering data by presenting respondents with a series of written questions or statements for them to respond to (Sugiyono, 2019). According to Arikunto (2010), the questionnaire method is divided into two types: open-ended questionnaire method and closed-ended questionnaire method. The open-ended questionnaire method means researchers give respondents the opportunity to answer in their own words without being restricted or limited by the researcher. On the contrary, the closed-ended questionnaire method means respondents are asked to answer questions by selecting answers provided by the researcher. A closed questionnaire was used in this research.

The distribution of questionnaires in this study utilized Google Forms. The advancement of technology sparked the researcher to leverage Google Forms for questionnaire distribution. With just a smartphone, respondents were able to answer statements without the need for writing. The form link was disseminated to respondents via WhatsApp chat, allowing them to fill it out conveniently.

The research instrument is a measuring tool that generates information for conducting research. In line with the data collection technique used, the instrument employed in this study was a questionnaire. The questionnaire was utilized to obtain quantitative data in the form of the percentage of students' perceptions regarding the use of Duolingo for learning English. The type of questionnaire used was a closed-ended questionnaire, where the answers were limited by the researcher, thus eliminating the possibility for respondents to answer extensively with their own thoughts. The questionnaire consists of 15 questions classified into two parts. The first part (questions number 1-10) pertains to students' perception of using Duolingo. This section encompasses several elements within the Duolingo application (Utility, content, context, control, and connectivity/mobility). The second section (questions number 11-15) relates to the aspects of English that have improved during learning while using the Duolingo application. To measure questionnaire responses, the Likert scale was employed in this study. The Likert scale comprised a set of statements presented as responses to real or hypothetical scenarios (Joshi et al., 2015). On this metric scale, participants were required to indicate their level of agreement (from strongly disagree to strongly agree) with the given statements. In this research, participants

were provided with the option to use a Likert scale with four choices: strongly agree (4), agree (3), disagree (2), and strongly disagree (1).

## FINDINGS AND DISCUSSION

### Findings

In this session students are asked to answer 15 questions consisting of two parts. The first part (questions number 1-10) pertains to students' perception of using Duolingo. This section encompasses several elements within the Duolingo application (Utility, content, context, control, and connectivity/mobility). The second section (questions number 11-15) relates to the aspects of English that have improved during learning while using the Duolingo application. The research results will be more clearly described in the following Table.

#### 1. Students' perception toward the use Duolingo for learning English

##### Utility of Duolingo

- **Duolingo is easy to use.**

To understand the students' opinions regarding the utility of Duolingo, a statement was provided: 'I like Duolingo because it is easy to use.' The responses to this statement are presented in the following Table 1:

Table 1. Students' response of utility of Duolingo

Option	Frequency	Total score	Percentage per scale (%)	Average (%)
Strongly Agree	6	24	60	
Agree	4	12	40	
Disagree	0	0	0	90%
Strongly Disagree	0	0	0	
	10	36	100	

From Table 1 above, it can be seen that out of 10 respondents, 6 students (60%) answered "Strongly Agree" that they like Duolingo because it is easy to use, and 4 students (40%) also answered "Agree" that Duolingo is indeed easy to use. Based on the interval category, it can be seen that an average of 90% of students fall into the "Strongly Agree" category, indicating that Duolingo is easy to use.

- **Duolingo is easy to understand**

To understand the students' opinions regarding the utility of Duolingo, a statement was provided: 'I like Duolingo because it is easy to understand.' The responses to this statement are presented in the following Table:

Table 2. Students' response of utility of Duolingo

Option	Frequency	Total score	Percentage per scale (%)	Average (%)
Strongly Agree	4	16	40	
Agree	6	18	60	
Disagree	0	0	0	85%
Strongly Disagree	0	0	0	
	10	34	100	

From Table 2 above, it can be seen that out of 10 respondents, 4 students (40%) answered "Strongly Agree" that Duolingo is an application that is easy to understand in its use, and 6 students (60%) answered "Agree" that Duolingo is easy to understand. Therefore, based on the interval category, an average of 85% of students stated that they "Strongly Agree" that Duolingo is an easy-to-understand application.

Table 3. Students' response of content in Duolingo

Option	Frequency	Total score	Percentage per scale (%)	Average (%)
Strongly Agree	4	16	40	85%
Agree	6	18	60	
Disagree	0	0	0	
Strongly Disagree	0	0	0	
	10	34	100	

From Table 3 above, it can be seen that out of 10 respondents, 4 students (40%) answered "Strongly Agree" that they like Duolingo because it displays colorful cartoon images and has amusing sounds. Additionally, 6 students (60%) answered "Agree" that they also like Duolingo for its colorful cartoon images and fun sounds. Therefore, based on the interval category, an average of 85% of students stated that they "Strongly Agree" that Duolingo is widely liked by students because it presents a variety of

### Content in Duolingo

- **Duolingo displays colorful cartoon pictures and funny sounds**

To explore the students' preferences related to the content in Duolingo, they were asked to respond to the statement: 'I like Duolingo because it displays colorful cartoon pictures and funny sounds.' The responses are summarized in the Table below:

colorful cartoon displays and a selection of amusing sounds.

- **The content of Duolingo is like a game**

To explore the students' preferences related to the content in Duolingo, they were asked to respond to the statement: 'I like Duolingo because the content in it is like a game' The responses are summarized in the Table below:

Table 4. Students' response of content in Duolingo

Option	Frequency	Total score	Percentage per scale (%)	Average (%)
Strongly Agree	5	20	50	88%
Agree	5	15	50	
Disagree	0	0	0	
Strongly Disagree	0	0	0	
	10	35	100	

From Tabel 4. above, it can be seen that out of 10 respondents, 5 students (50%) answered "Strongly Agree" that they like the Duolingo application because its learning content feels like a game. Additionally, 5 students (50%) also answered "Agree" that they enjoy Duolingo because the content is game-like. Therefore, based on the interval category, an average of 88% of students stated that they "Strongly Agree" that they like the Duolingo app because it allows them to learn English in a way that feels like playing a game.

### Context in Duolingo

- **Duolingo is relates to students' learning experience**

To understand how the context in Duolingo aligns with the students, they were asked to respond to the statement: 'I like Duolingo because it relates to my learning experience.' The summarized responses are presented in the following Table 5:

Table 5. Students' response of context in Duolingo

Option	Frequency	Total score	Percentage per scale (%)	Average (%)
Strongly Agree	1	4	10	
Agree	9	27	90	
Disagree	0	0	0	78%
Strongly Disagree	0	0	0	
	10	31	100	

From Table 5 above, it can be seen that out of 10 respondents, 1 student (10%) answered "Strongly Agree," and in line with that, 9 students (90%) also answered "Agree" that they use the Duolingo application because it aligns with their current studies and learning experiences. Therefore, based on the interval category, an average of 78% of students fall into the "Strongly Agree" category, indicating that they like and choose to use Duolingo because it aligns with their learning needs.

• **The content of Duolingo is relates to studnets' daily activity**

To understand how the context in Duolingo aligns with the students, they were asked to respond to the statement: 'I like Duolingo because the content in it relates to my daily activities'. The summarized responses are presented in the following Table 6:

Table 6. Students' response of context in Duolingo

Option	Frequency	Total score	Percentage per scale (%)	Average (%)
Strongly Agree	3	12	30	
Agree	6	18	60	
Disagree	1	2	10	80%
Strongly Disagree	0	0	0	
	10	32	100	

From Table 6 above, it can be seen that out of 10 respondents, 3 students (30%) answered "Strongly Agree," and 6 students (60%) answered "Agree" that Duolingo provides content related to their daily activities. Therefore, based on the interval category, an average of 80% of students fall into the "Strongly Agree" category.

**Control in Duolingo**

• **Duolingo has a learning reminder**

To examine the students' opinions on the control in Duolingo, they were asked to respond to the statement: 'I like Duolingo because it has a learning reminder.' The responses are detailed in the Table 7 below:

Table 7. Students' response of control in Duolingo

Option	Frequency	Total score	Percentage per scale (%)	Average (%)
Strongly Agree	4	16	40	
Agree	6	18	60	
Disagree	0	0	0	85%
Strongly Disagree	0	0	0	
	10	34	100	

From Table 7 above, it can be seen that out of 10 respondents, 4 students (40%) answered "Strongly Agree," and 6 students (60%) answered "Agree." Thus, based on the interval category, an average of 85% of students fall into the "Strongly Agree" category, indicating that they like using the Duolingo app because it has a study reminder feature.

• **Duolingo provides feedback**

To examine the students' opinions on the control in Duolingo, they were asked to respond to the statement: 'I agree that Duolingo provides feedback that helps me correct errors in English' The responses are detailed in the Table below:

Table 8. Students' response of control in Duolingo

Option	Frequency	Total score	Percentage per scale (%)	Average (%)
Strongly Agree	5	20	50	
Agree	5	15	50	
Disagree	0	0	0	88%
Strongly Disagree	0	0	0	
	10	35	100	

From Table 8 above, it can be seen that out of 10 respondents, 5 students (50%) answered "Strongly Agree" and 5 students (50%) also answered "Agree." Thus, based on the interval category, an average of 88% of students fall into the "Strongly Agree" category, indicating that they like the Duolingo app because it provides feedback on students' language learning errors and also corrects those mistakes.

### Connectivity and Mobility of Duolingo

- **Duolingo is flexible**

To explore the students' opinions regarding the connectivity and mobility of Duolingo, they were asked to respond to the statement: 'I like Duolingo because it is flexible, it can be used anytime and anywhere.' The responses are presented in the following Table:

Table 9. Students' response of Connectivity and Mobility of Duolingo

Option	Frequency	Total score	Percentage per scale (%)	Average (%)
Strongly Agree	8	32	80	
Agree	2	6	20	
Disagree	0	0	0	95%
Strongly Disagree	0	0	0	
	10	38	100	

From Table 9 above, it can be seen that out of 10 respondents, 8 students (80%) answered "Strongly Agree," and 2 students (20%) also answered "Agree." Thus, based on the interval category, an average of 95% of students fall into the "Strongly Agree" category, indicating that the Duolingo app is flexible and can be used anytime and anywhere.

- **Duolingo has free access**

To explore the students' opinions regarding the connectivity and mobility of Duolingo, they were asked to respond to the statement: 'I like Duolingo because it has free access and only requires quota' The responses are presented in the following Table:

Table 10. Students' response of connectivity and Mobility of Duolingo

Option	Frequency	Total score	Percentage per scale (%)	Average (%)
Strongly Agree	2	8	20	
Agree	7	21	70	
Disagree	1	2	10	78%
Strongly Disagree	0	0	0	
	10	31	100	

From Table 10 above, it can be seen that out of 10 respondents, 2 students (20%) answered "Strongly Agree," 7 students (70%) answered "Agree," and 1 student (10%) answered "Disagree." Thus, based on the interval category, an average of 78% of students fall into the "Strongly Agree" category, indicating that they like Duolingo because it provides free access and only requires data for usage.

- **Improvements in English Pronunciation Through Duolingo**

To identify the aspects of English that have improved through the use of Duolingo, students were asked to respond to the statement: 'I agree that Duolingo helps me to know the pronunciation of words in English properly and correctly.' The responses are summarized in the following Table:

## 2. The aspects of English that have improved during learning while using the Duolingo application

Table 11. Students' response of aspects of English that improved during learning while using the Duolingo application

Option	Frequency	Total score	Percentage per scale (%)	Average (%)
Strongly Agree	7	28	70	93%
Agree	3	9	30	
Disagree	0	0	0	
Strongly Disagree	0	0	0	
	10	37	100	

From Table 11 above, it can be seen that out of 10 respondents, 7 students (70%) answered "Strongly Agree" and 3 students (30%) also answered "Agree." Based on the interval category, it can be seen that an average of 93% of the students fall into the "Strongly Agree" category, indicating that Duolingo helps them learn the correct and proper pronunciation of words in English.

• **Improvements in Writing skills Through Duolingo**

To identify the aspects of English that have improved through the use of Duolingo, students were asked to respond to the statement: 'I am confident that Duolingo helps me improve my English writing skills.' The responses are summarized in the following Table:

Table 12. Students' response of aspects of English that improved during learning while using the Duolingo application

Option	Frequency	Total score	Percentage per scale (%)	Average (%)
Strongly Agree	2	8	20	78%
Agree	7	21	70	
Disagree	1	2	10	
Strongly Disagree	0	0	0	
	10	31	100	

From Table 12 above, it can be seen that out of 10 respondents, 2 students (20%) answered "Strongly Agree," 7 students (70%) also answered "Agree," and 1 student (10%) answered "Disagree." Thus, based on the interval category, an average of 78% of the students fall into the "Strongly Agree" category, indicating that Duolingo helps them improve their writing skills.

• **Improvements in Listening Through Duolingo**

To identify the aspects of English that have improved through the use of Duolingo, students were asked to respond to the statement: "I agree that Duolingo provides varied exercises to enhance my English listening skills' The responses are summarized in the following Table:

Table 13. Students' response of aspects of English that improved during learning while using the Duolingo application

Option	Frequency	Total score	Percentage per scale (%)	Average (%)
Strongly Agree	5	20	50	88%
Agree	5	15	50	
Disagree	0	0	0	
Strongly Disagree	0	0	0	
	10	35	100	

From Table 13 above, it can be seen that out of 10 respondents, 5 students (50%) answered "Strongly Agree" and 5 students (50%) also answered "Agree." Thus, based on the interval category, an average of 88% of the students fall into the "Strongly Agree" category, indicating that Duolingo provides varied exercises to enhance their English listening skills.

• **Improvements in English-speaking skill Through Duolingo**

To identify the aspects of English that have improved through the use of Duolingo, students were asked to respond to the statement: "I believe Duolingo is effective in enhancing my English-speaking skills' The responses are summarized in the following Table:

Table 14. Students' response of aspects of English that improved during learning while using the Duolingo application

Option	Frequency	Total score	Percentage per scale (%)	Average (%)
Strongly Agree	1	4	10	
Agree	8	24	80	
Disagree	1	2	10	75%
Strongly Disagree	0	0	0	
	10	30	100	

From Table 14 above, it can be seen that out of 10 respondents, 1 student (10%) answered "Strongly Agree," 8 students (80%) answered "Agree," and 1 student (10%) answered "Disagree." Thus, based on the interval category, an average of 75% of the students fall into the "Agree" category, indicating that Duolingo is effective in enhancing their English-speaking skills.

#### • Improvements in Vocabulary Through Duolingo

To identify the aspects of English that have improved through the use of Duolingo, students were asked to respond to the statement: 'I feel Duolingo helps me develop my English vocabulary effectively' The responses are summarized in the following Table:

Table 15. Students' response of aspects of English that improved during learning while using the Duolingo application

Option	Frequency	Total score	Percentage per scale (%)	Average (%)
Strongly Agree	5	20	50	
Agree	5	15	50	
Disagree	0	0	0	88%
Strongly Disagree	0	0	0	
	10	35	100	

From Table 15 above, it can be seen that out of 10 respondents, 5 students (50%) answered "Strongly Agree" and 5 students (50%) answered "Agree." Thus, based on the interval category, an average of 88% of the students fall into the "Strongly Agree" category, indicating that Duolingo helps them effectively develop their English vocabulary.

#### Discussion

This study was conducted to determine students' perceptions of using Duolingo for learning English. In this research, there were two research questions. The first was to find out students' perceptions of the use of the Duolingo application. The second was to identify which aspects of English have improved after students used Duolingo. Data were collected from 10 respondents who participated over the course of 1 month in August 2024.

For the first research question, the questionnaire results show that most students liked and enjoyed utilizing the Duolingo application for learning English. The students were asked 10 questions regarding their perceptions of Duolingo, particularly about the elements of utility, content, context, control, and

connectivity or mobility, and almost all agreed that they liked the Duolingo app because various aspects of it aligned with these five elements. The students' responses to the questionnaire in this session indicate that they enjoyed and appreciated Duolingo for several reasons. The reasons are that Duolingo is easy to use, easy to understand, features colorful cartoon images and playful sounds, and the content is packaged like a game. The exercises in the app are also related to their learning experience and daily activities. Additionally, Duolingo's learning reminder system and features that provide feedback to help correct English errors are aspects that make them appreciate the app. Furthermore, they liked Duolingo for its flexibility, allowing them to use it at any time and in any location, and is free to access, requiring only data. This is supported by Hairunnisa (2023), who found that students' perceptions of Duolingo in terms of utility, content, context, control, connectivity, and mobility were positive.

For the second research question, the questionnaire results show that most students responded positively, indicating that Duolingo improved their English skills in various aspects. Nearly all students believed that Duolingo



assisted them in learning the correct and accurate pronunciation of English words. This is due to Duolingo's feature that provides feedback when there are errors. The exercises available on Duolingo also helped nearly all students improve their writing, listening, and speaking skills. Lastly, many students felt that using Duolingo to learn English helped them improve their vocabulary effectively. They found it easier to learn and memorize vocabulary. This is because almost all activities in Duolingo focus on vocabulary, such as translation exercises, listening practices where students speak and type what they hear, and filling in blanks by choosing the correct word in multiple-choice options. As a result, these activities helped students become more familiar with a wide range of vocabulary and made it easier for them to memorize words. This aligns with Utami (2020), who stated that Duolingo is a language learning app designed to assist students in enhancing their English skills while also encouraging them throughout the learning process.

## CONCLUSION

The conclusion of this study indicates that the majority of students have a positive perception of using the Duolingo app for learning English. Students highlighted Duolingo's features, utility, content, context, control, connectivity, and mobility as factors that make it enjoyable for them to use. Students appreciate the app because it is easy to use, intuitive, and offers engaging features such as colorful cartoon images and amusing sounds. In addition, Duolingo provides great flexibility, allowing students to use it anytime and anywhere, and the app is free, only requiring data usage. The learning reminder feature in Duolingo helps students stay consistent in their learning. Aside from their positive perception of the app, students also reported significant improvements in various aspects of their English language skills. Aspects such as pronunciation, writing, listening, and speaking showed improvement after using Duolingo. The feedback feature in the app helps students correct their mistakes, making the learning process more effective. Students also feel that Duolingo is highly effective in enhancing their vocabulary. Activities focused on word practice, listening, and multiple-choice exercises make it easier for them to remember and memorize vocabulary in English. Therefore,

Duolingo is not only effective in improving English skills but also motivates students in a fun language learning process. This study was only limited to students enrolled in the English Education program at the University of Mataram who are currently or have previously used the Duolingo application. In order to expand this research, the other researchers are suggested to conduct further research with larger and more diverse samples to obtain more representative data and strengthen these findings. Future research could involve students from different universities or even different countries to gain a broader understanding of the effectiveness of this application in English learning. Furthermore, to obtain more in-depth research results, future researchers are advised to use a mixed-method approach by combining quantitative and qualitative approaches. In addition to questionnaires, which can capture perception data in numerical form, interviews can be used to explore further students' experiences, challenges, and views on using Duolingo. This qualitative method can help understand emotional and motivational aspects that may not be revealed through quantitative data. Thus, this mixed-method approach will provide a richer and more comprehensive picture of Duolingo's role in English language learning, as well as the factors influencing its effectiveness for students.

## ACKNOWLEDGMENT

I would like to express my deepest gratitude to my thesis supervisors for their invaluable guidance, support, and encouragement throughout the process of completing this thesis. I am also sincerely grateful to my examiner, Mr. Agus Saputra, for his insightful feedback and constructive suggestions, which greatly contributed to the improvement of my research. Thank you for your dedication and commitment to helping me succeed. Additionally, I would like to express my deepest gratitude to my beloved parents., my sister, and my dear friends, whose support, encouragement, and kindness have been a constant source of strength throughout my studies. Your support means a lot to me, and I will always appreciate it.

## REFERENES

Ahmed, H. B. (2016). Duolingo as a Bilingual Learning App: a Case Study. *Arab World*

- English Journal* (AWEJ).  
<https://dx.doi.org/10.24093/awej/vol7no2.17>
- Aliaga, M., & Gunderson, B. (2002). *Interactive Statistics*. Thousand Oak, CA: Sage Publication.
- Arikunto, S. (2010). *Prosedur penelitian : suatu pendekatan praktik*. Jakarta: Rineka Cipta.
- Cehi, L. (2023). *Most popular language learning apps worldwide 2023, by downloads*. Statista.
- Fu, J. S. (2013). ICT in Education: A Critical Literature Review and Its Implications. *International Journal of Education and Development using Information and Communication Technology (IJEDICT)* , 112-115.  
<https://eric.ed.gov/?id=EJ1182651>
- Hairunnisa. (2023). *Students' Perception on Using Duolingo Application in Increasing English Learning Motivation*. Jakarta: SYARIF HIDAYATULLAH STATE ISLAMIC UNIVERSITY.
- Halverson, R., & Smith, A. (2009). How New Technologies Have (and Have Not) Changed Teaching and Learning in Schools. *Journal of Computing in Teacher Education* , 49-54.  
<https://doi.org/10.1080/10402454.2009.10784632>
- Joshi, A., Kale, S., Chandel, S., & Pal, D. K. (2015). Likert Scale: Explored and Explained. *Current Journal of Applied Science and Technology* , 396-403.  
<https://doi.org/10.9734/BJAST/2015/14975>
- Munday, P. (2016). The case for using DUOLINGO as part of the language classroom experience (Duolingo como parte del curriculum de las clases de lengua extranjera).  
<https://doi.org/10.5944/ried.19.1.14581>
- Sadiku, L. M. (2015). The Importance of Four Skills Reading, Speaking, Writing, Listening in a Lesson Hour.  
<https://doi.org/10.26417/ejls.v1i1.p29-31>
- Sharifian, F. (2009). *English as an International Language: Perspectives and Pedagogical Issues*. Bristol: Multilingual Matters.
- Sugiyono (2019). *Metodologi Penelitian Kuantitatif dan Kualitatif Dan R&D*. Bandung: ALFABETA.
- Utami, D. Y. (2020). *Students' Perception on the Use of Duolingo as a Language Learning*
- Application for Learning English*, Aceh: UNIVERSITAS ISLAM NEGERI AR-RANIRY BANDA ACEH