

Review of Duolingo Application in Learning English

Lisa Irwit Santi^{1*}, Achmad Hilal², and Rismiyanto³

¹SMA 1 Bae Kudus

^{2,3} Muria Kudus University

* E-mail: lisairwit@gmail.com

Abstract

This study aims to review the extent of the studies that have been carried out related to the Duolingo application in learning English. This study uses a descriptive quantitative research method with a content analysis approach. The data was obtained from the Google Scholar database in the form of journal articles about the Duolingo application in learning English which were published during the 2018-2022 period. The analysis was carried out by mapping the articles into three groups; the year of publication, type of research, and theme of study. The results of the study show that of 40 articles analyzed, the majority examine the use of the Duolingo application to facilitate learning vocabulary. Meanwhile, there are very few articles that examine the use of the Duolingo application to improve language skills. Therefore, in the future, researchers should conduct research on the Duolingo application which is applied to improve English language skills.

Keywords: *English Learning, Duolingo Apps, Language Skill*

INTRODUCTION

Education is a process of learning knowledge and skills. Learning English is a skill-based learning that requires a variety of approaches and techniques. Education today is heavily influenced by technological advances. The use of technology is the latest solution to answer the challenges of learning English.

The world is changing at high speed. People are moving from an industrial economy to one that is media-driven and based on information. It means there are different ways to do a thing in the past and right now. Two decades ago, people did everything manually, but now media has changed it in easier ways. People nowadays do a thing automatically with media which allows people to do everything in one touch by their computer, laptop, or phone. This also happens in education. Mobile device technology can be a great ally if it is used not only to promote a more meaningful language learning experience for students but also to increase methodological efficiency by allowing access to education anywhere and at any time.

Technological developments with the adoption of mobile multimedia devices and applications have given opportunities for learning English as a foreign language. There are many practical and theoretical dialogues concerning mobile devices that help us to better conceptualize the opportunities and overcome the challenges they present. Mobile devices can enable mobile learning, but if they are used with an unwise strategy, they are no more revolutionary to our students than any other technology.

Over one decade and a half when technology still became a new thing, teachers usually asked students to do assignments provided in a textbook or teachers made some questions on the blackboard and then students would do it at home. However, since technology emerged and was initially used in education, the situation has changed. Teachers have used media such as mobile phones or laptops to give assignments to students from home or somewhere else. It indicates that since then, technology has been synchronized with learning. In this case, students can utilize a mobile phone application to finish their assignments.

This situation demands students to be familiar with this application, teachers can use it as an assignment for students at home. Students can be more familiar with English and also spend their leisure time not only playing games on their smartphones but also maximizing utilizing their Android phone to do some tasks with this application.

Technology can serve as an alternative to help and support students in learning English. Learning English includes reading, listening, speaking, and writing skills which all require basic knowledge such as vocabulary and grammar. However, in reality, there are still many teachers who cannot master technology to support the teaching and learning process. One of the technologies in learning English that has recently been used frequently is the Duolingo application (Tiara et al., 2021).

Duolingo is a fully free gamified e-learning application or web that allows learning how to speak any of the languages such as English, Italian, French, Spanish, German, and Portuguese. This e-learning tool can also be accessed by online computer using the Duolingo website; www.duolingo.com, or by using a smartphone such as iPhone, iPad, or any Android device. Duolingo has made its course to let users learn and have fun at the same time, by making this course through a gamified learning experience.

During each lesson, you are given four hearts, if you lose all of your hearts while doing a lesson you have failed that specific lesson and must complete the lesson from the beginning. The term heart in this lesson is like a soul or chance to play in a game. Thus, if students do not want to complete the lesson from the first, they have to keep the heart complete. It has allowed users to embrace the exercises by applying their knowledge and learning verbally how to speak in their chosen language. Each course is presented through diverse lessons. In those lessons, there are different games allowing users to apply their knowledge using words, voice, pictures, matching, repetition, writing, filling in the blank, and much more. As students continue to improve their language skills, they move up to the next levels to increase their learning skills.

Duolingo is one of the modern applications that facilitate mastery of foreign languages. Duolingo is an app where any beginner can start learning a foreign language because it motivates them to keep making progress. Duolingo is included in the category of educational applications, but how to use it is like playing a game so that students can use it casually without pressure, and in use, it is very easy to accept and absorb because of its flexibility (Habibie, 2020).

Learning with the game model is very suitable for the present century because the current learning process is closely related to the use of gamification. Many English teaching staff use gamification as a medium to assist them in teaching. For teachers, the use of gamification in the teaching and learning process can make students have fun and make learning interesting. For some students, gamification may benefit them in learning English.

The Duolingo application deliberately carries the concept of "playing while learning" to make it more fun, and easy to use by all ages. This application can be made by yourself to support learning activities according to daily topics and can make it easier for us, especially education practitioners, to practice English skills in various ways (Widyastuti & Kusumadewi, 2018).

Until now, the Duolingo application has been implemented by teachers at all levels of students. From elementary school, junior high school, and high school to college. There have been many studies examining the Duolingo application in learning English. This article aims to review the extent of the research that has been done on the Duolingo application in learning English.

METHODOLOGY

This study uses a descriptive quantitative research method with a content analysis approach. This study uses analytical data from the Google Scholar database to obtain the designed results. The data from this research comes from journal articles that examine the Duolingo application in learning English which has been published in several journals in the 2018-2022 period. There are 40 journal articles related to the Duolingo application and learning English collected.

The analysis process starts by mapping the articles into three groups. First, the articles are grouped by year of publication, the second are grouped by the type of research used, and the third are grouped by the theme of the study. After the third grouping, the researcher verifies the content of the articles for conclusions.

RESULT AND DISCUSSION

Based on the data collected, it was found that the 40 articles that were the object of study could be classified based on the year of publication, the type of research, and the theme of the study. This is as contained in the following table;

Table 1. The type of research and the theme of the study

| Period | Total | % | Type of Research | Total | % |
|--------|-------|------|------------------|-------|-----|
| 2022 | 9 | 22,5 | Kualitatif | 28 | 70 |
| 2021 | 6 | 15 | Kuantitatif | 12 | 30 |
| 2020 | 16 | 40 | Total | 40 | 100 |
| 2019 | 6 | 15 | | | |

| | | |
|-------|----|-----|
| 2018 | 3 | 7,5 |
| Total | 40 | 100 |

Table 1 above shows that the majority of research on the Duolingo application in learning English over the past five years (2018-2022) took place in 2020, and consisted of 16 articles (40%), in 2022 there were 9 articles (22.5%), in 2019 and 2021 there were 6 articles (15%), and in 2018 there were 3 articles (7.5%). Meanwhile, in terms of the type of research, the majority is in the form of qualitative research, consisting of 28 articles (70%), while the remaining 12 articles are in the form of quantitative studies (30%).

Table 2. The majority of the study themes from articles about the Duolingo application in learning English vocabulary

| Study Theme | Total | % |
|-------------|-----------|-----|
| Vocab | 18 | 45 |
| Grammar | 1 | 2,5 |
| Writing | 2 | 5 |
| Reading | 1 | 2,5 |
| Speaking | 3 | 7,5 |
| Listening | 2 | 5 |
| Translation | 1 | 2,5 |
| Perception | 8 | 20 |
| Lainnya | 3 | 7,5 |
| Total | 40 | |

Table 2 above shows that the majority of the study themes from articles about the Duolingo application in learning English vocabulary consisted of 18 articles (45%), then studies on student perceptions in using the Duolingo application as many as 8 articles (20%), then studies on speaking 3 articles (7.5%), then studies on writing and listening which are 2 articles each (5%), and about grammar, reading and translation which are 1 article each (2.5%), and there are 3 articles (7.5) that examine things other than learning English.

Based on the findings in Table 2 it can be explained that the content analysis of each study theme is;

First; Vocabulary learning is essential for acquiring a new language and therefore inadequate vocabulary knowledge can be considered as a significant barrier to language learning. The availability of tools to enhance or simplify the learning process is an added advantage for encouraging students to learn a language. The Duolingo application has a positive influence compared to conventional student approaches to mastering vocabulary (Kusumadewi & Widyastuti, 2018).

The same thing was also expressed in other articles. This is because the Duolingo application is made with the concept of "playing while learning" so that it feels more fun and easier to use by all ages (Widyastuti & Kusumadewi, 2018).

The Duolingo application is believed to be an effective tool in learning vocabulary. This was felt by twenty English teachers who participated in the learning trial (M & Deris, 2019). Students who practice vocabulary for 30 days using the Duolingo application experience an increase in scores in student vocabulary mastery (Ajisoko, 2020). Another article explains that the vocabulary mastery ability of the group of students who use the Duolingo application in learning vocabulary has a significant difference compared to the group of students who do not use it (Aulia et al., 2020).

Another study conducted on elementary school students showed that the Duolingo application scored quite well (73.8%) so learning media with this application can be applied especially for students to understand English, especially vocabulary (Irawan et al., 2020). Meanwhile, 30 second-grade junior

high school students gave positive perceptions about the Duolingo application. The majority of students prefer to learn English vocabulary using the Duolingo application as a medium (Jaelani & Sutari, 2020).

Other research shows that students' scores after being taught using the Duolingo application show significant results. There is a significant effect between the pre-test and post-test scores (Matra, 2020). The use of the Duolingo application as a medium for vocabulary mastery can also have a positive effect in the form of increasing motivation and vocabulary mastery (Yusda et al., 2020). Students' positive attitude towards the Duolingo application is due to its advanced features. Students are more challenged to play the application and less worried because Duolingo provides many solutions, and structured materials, and motivates and convinces students to achieve their learning goals. (Wiyati & Amelia, 2022). This is also experienced by semester 3 students who are trained to always remember the meaning of the word mentioned through the questions given at each level in the Duolingo application. They can remember the meaning of vocabulary properly and correctly (Hidayati et al., 2021).

The Duolingo app is perceived positively by high school students in learning vocabulary. This can be seen from their perception of its effectiveness. Middle school students are motivated to continue learning vocabulary by using the application. (Miftakh & Yulianti, 2021). The Duolingo application is one of the applications that supports students in mastering English vocabulary. (Tiara et al., 2021). This is supported by research conducted on class VII high school students whose average post-test score (68.18) is greater than the average pre-test score (28.78) (Hardiyanti et al., 2021).

Research on class X high school students also resulted in students' vocabulary mastery in the experimental class being included in the very good category and the control class being included in the good category. There was a significant difference in students' vocabulary mastery between students who were taught using Duolingo and those who were not using Duolingo. (Erfiani & Miski, 2022) This was also corroborated by another study which stated that grade 7 junior high school students who used the Duolingo application obtained a better understanding of vocabulary than those who did not use it. (Kurniawati et al., 2022). The same thing was expressed by other researchers who stated that the use of Duolingo affected students' vocabulary mastery. (Permatasari et al., 2022)

Second; Grammar (grammar), mastery of grammar is one of the important skills in learning languages, including English. A study states that the use of the Duolingo application is sufficient to reduce students' grammatical errors in writing report texts. Therefore, this application is highly recommended for use in improving the quality of students' writing skills (Syahputra, 2019).

Third; Speaking is one of the language skills. The use of the Duolingo application in grade 8 of junior high schools to test speaking and listening skills shows that the use of the Duolingo application to improve students' speaking and listening skills has proven effective (Niah & Pahmi, 2019). Other research also states that the use of the Duolingo application has a positive influence on the process of learning English speaking (Mahbub et al., 2020). Similar findings were also conveyed by other research, namely the Duolingo application had a positive impact on improving students' English speaking (Syafrietal et al., 2022). The use of the Duolingo application can also improve students' learning outcomes and English speaking skills (Purba & Saragih, 2020).

Fourth; Writing is also one of the language skills. The Duolingo app also provides facilities to hone these skills. Research in this regard shows that the use of the Duolingo Gamification application is sufficient to reduce students' grammatical errors in writing texts. Therefore, this application is highly recommended for use in improving the quality of students' writing skills (Syahputra, 2019).

Fifth; Reading (reading ability) is the most difficult learning that plays an important role in mastering English. Learning to read is quite challenging so it needs various techniques and applications. The results of the pre-test and post-test scores in one study showed a large increase in the scores of students who used the Duolingo application in reading. Students also feel that the Duolingo application is a useful application for everyday use in learning English because the application can help improve reading comprehension (Ajisoko, 2022).

Sixth; Listening (ability to hear), based on the results of a study concluded that the use of the

Duolingo application to improve students' speaking and listening skills has proven effective (Niah & Pahmi, 2019). Other research states that the Duolingo application contributes to improving students' listening skills, both for high-achieving and low-achieving students (Purwanto et al., 2022).

Seventh; Translation (translation skills), integrates technology into learning English because it can change traditional learning into digital learning. The Duolingo application is an application that can be used to learn English including translation. The application of translation exercises is appropriate in learning English. There are two kinds of translation exercises, choosing words and free typing. Providing translation exercises is useful in actual translation work. And the Duolingo app is a great way to learn to translate into English. And the Duolingo application can help users improve their English, including translation skills (Milyarni et al., 2021).

Eighth; Perceptions of users of the Duolingo application, several articles examine user perceptions of the Duolingo application, including the results of Yana's research which shows that students feel positive about the application of the Duolingo application as a tool to facilitate English learning. This is because the application is interesting, motivating, helpful, and encourages students' self-confidence (Yana, 2021). The results of other studies reveal that the Duolingo application is easy-to-use, interesting, and fun software for learning English. In addition, Duolingo brings a new concept (gamification) to learning English. Thus, it makes them very enthusiastic about learning English. (Dewangga, 2020) Another study found that students view the Duolingo application as a useful application and a motivational tool for learning English. Students' motivation to learn English outside the classroom can be increased through the use of the Duolingo application on cell phones. (Inayah et al., 2020)

In the 21st century, the process of teaching and learning is closely related to the use of gamification. Many English teachers use gamification as a medium to assist them in teaching. For teachers, the use of gamification in the teaching and learning process can make students have fun and make learning interesting. For some students, gamification may be beneficial for them in learning English. Therefore, researchers want to know students' perceptions of using the Duolingo application as vocabulary learning media. In this study, researchers used questionnaires and interviews to determine student perceptions. This research was conducted in one junior high school in Bogor. Participants of 30 students from second grade gave positive perceptions about the Duolingo application. The results of this study indicate that most students prefer learning English vocabulary using the Duolingo application as a medium. There are several advantages that can be taken from using the Duolingo application as a medium for learning English vocabulary, of understanding the easy to understand the material, they are more enthto learn motivated in learning English vocabulary, Duolingo can eliminate boredom in learning and also encourage them from new ideas in learning. (Jaelani & Sutari, 2020)

Ninth; The Duolingo application, in this section, the article does not specifically explain learning English, but describes the Duolingo application. Among them is an article written by Irham, this article mentions the effectiveness of using the Duolingo application in learning Dutch. This is compared to using other applications such as the CALL system on a computer. The Duolingo application is considered to be understood more quickly by its users (Irham, 2018). Another article reveals that students are quite active in using language learning applications including Duolingo. They can enjoy the practicality and flexibility of learning English through the app even if there is little involvement. Student's positive response to the use of the application is an indication of the potential to encourage independent English learning outside the classroom (Hidayati & Diana, 2019).

Ananda's research shows that using the Duolingo app can significantly improve skills learning write French to students (Ananda et al., 2019). The Duolingo application is also considered as an English learning application for mobile devices which is preferred as a medium for learning foreign languages. This is based on the findings and classification comparisons in sentiment analysis from Duolingo application user reviews obtained from Google Playstore which has an accuracy rate of 91.95% and an AUC of 0.740. (Chohan et al., 2020)

The results showed that teachers and students considered the use of Duolingo media to be effective in learning English because its increased students' willingness to do homework through Duolingo media and language skills in learning English. Students are excited and interested in doing homework by the Duolingo app. (Fauzan & Kasim, 2020). The same thing was revealed that the use of the Duolingo application was quite effective in increasing students' motivation in learning English. This study shows that Duolingo is an application where every beginner can start learning a language because it motivates them to continue making progress (Habibie, 2020). Budiharto and Syahroni's research shows that the Duolingo application is an educational application that is very useful when used in English teaching and learning activities in the classroom (Budiharto & Syahroni, 2020).

CONCLUSION

Based on the findings from the 40 articles about the Duolingo application in learning English that have been presented, it can be concluded that the majority of studies that have been carried out are the use of the Duolingo application to facilitate learning vocabulary. In addition, studies on the use of the Duolingo application to improve language skills which include writing, reading listening and speaking are still minimal. Therefore, in the future, researchers should conduct research on the Duolingo application which is applied to improve English language skills so that it can be more beneficial for the community and Duolingo application developers.

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