

# EVALUATING THE PERCEPTIONS OF NATIONAL DEFENCE UNIVERSITY MALAYSIA STUDENTS MINORING IN FRENCH REGARDING DUOLINGO FOR LANGUAGE ACQUISITION

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## Abstract

Duolingo is a widely used mobile application designed to facilitate language learning through interactive exercises and gamified lessons. The key question is whether applications like Duolingo can replace traditional language learning methods or if they are only viable as complementary tools. This study aims to evaluate the perceptions of National Defence University Malaysia (NDUM) Students Minor in French Regarding Duolingo for Language Acquisition. Utilizing a quantitative research methodology, and online questionnaires were distributed to a sample of students from National Defence University Malaysia (NDUM) who are enrolled in French minor programs. The questionnaire assessed various aspects of Duolingo's effectiveness, including its usability, engagement, and impact on language learning outcomes. The findings reveal that students generally perceive Duolingo as a very helpful tool for learning French language. Key benefits highlighted include interactive exercises, immediate feedback, and flexibility in accommodating to individual learning paces. The majority of respondents reported improvements in vocabulary, grammar, and overall language proficiency, crediting these improvements to the consistent use of Duolingo. This study contributes to the growing body of research on mobile-assisted language learning (MALL), suggesting that Duolingo is a valuable supplementary resource for university-level French language education in Malaysia. Future research should explore long-term impacts and compare the effectiveness of using Duolingo for learning new languages with traditional language learning methods.

Keywords : Duolingo, French learning, Application, eLearning, Language Acquisition

## 1. Introduction

In today's modern and technology advanced age, society are more incline towards leveraging existing technology and application to acquire new skills and knowledge. This is especially prominent with Generation Z, comprising individuals born between the mid-1990s and early 2010s. With smartphones and digital devices serving as common tools in aiding their daily lives, this generation demonstrates a pronounced reliance on technology-enabled solutions for learning and self-improvement. Advanced technology has offered learners numerous innovative and genuine materials that can aid in the acquisition of a new language (Walker & White, 2013). The usage of mobile devices to aid the learning process in foreign language learning is not a new concept. (Saran, Seferoglu & Cagiltay, 2009) This method is also known as Mobile-Assisted Language Learning (MALL). (Kukulcsa & Shield, 2008). Ramirez Montoya (2009) defined mobile language learning as a direct evolution of E-learning. E-learning is a learning method that is supported by electronic tools and resources and M-learning is involving using online resources that easily can be access through mobile devices. Crompton (2013) describes M-learning as learning across multiple contexts through social and content interactions, using personal electronic devices. As such, platforms like Duolingo, with their accessible mobile interface and gamified learning experience, resonate particularly well with the preferences and habits of Generation Z learners. Duolingo was developed in 2011 by Luis Von Ahn and Severin Hacker. (Munday, 2016) It is available for free download on smartphones through Google Play store for Android users and the App Store for IOS users. (Nushi & Egbali, 2017) Its primary teaching method is Direct Translation, which employs the learners first or choice of language to teach the target language. (Nushi & Egbali, 2017). The gamification elements implement by Duolingo able to foster a competitive atmosphere that encourage users to continue learning by earning points. (Finardi, Leao & Amorim, 2016) This feature of the app makes it attractive and enjoyable for the learners as it offers a gaming like experience within the learning process (Munday, 2016)

Duolingo has demonstrated its effectiveness as a helpful tool for language learning. (Ahmed,2016) Some researchers have shown that Duolingo can be effective in facilitating language acquisition. For example, a study by Vesselinov and Grego (2012) compared the effectiveness of Duolingo with traditional language instruction methods and found that participants using Duolingo made significant gains in language proficiency over a relatively short period. Additionally, a study by Graham, Moulton, and Bray (2017) examined the impact of Duolingo on language learning outcomes among university students and reported positive results, particularly in terms of vocabulary acquisition and listening comprehension skills. Having knowledge on rich vocabulary, foreign language learner is able to better understanding the language they learn. (Ghalebi et al 2020). Understanding the impact of applications like Duolingo as a language learning method is important, in order to improve traditional classroom language learning method. A lot of studies have been carried out with the similar theme for this research, some studies is a quantitative and qualitative approach. Previous researcher has focused mainly on narrative inquires and case studies to explore over perceptions, leaving gaps in the understanding of this topic. This study aims to collect more data to address the gaps by investigating how NDUM students perceive the usage of Duolingo app for French language learning through their own experiences.

## **2. Research Objective**

The main objective for this research is to determine the perceived effectiveness of Duolingo in improving language skills such as vocabulary, grammar, listening comprehension and speaking among NDUM students minoring in French Language. It is also to identify the specific benefits and advantages that the students experience while using Duolingo as a supplementary language learning tool and to analyze the usage patterns of Duolingo among NDUM Students, including frequency and duration of use, and how these patterns correlate with perceived language learning success.

## **3. Methodology**

This study adopts a quantitative research design to evaluate the perceptions of National Defence University Malaysia (NDUM) students minoring in French regarding Duolingo for language acquisition. The primary data collection method involves an online questionnaire made distributed to the target student population.

### **3.1 Participants**

The participants of this study are students from NDUM who are minoring in French. Due to the limited number of students pursuing a minor in French in the current semester, the sample size is small, consisting of only 10 participants. This purposive sampling method ensures that only those with experience using Duolingo are included.

### **3.2 Date collection instrument**

An online questionnaire was designed and created using Microsoft Forms as the primary data collection instrument. The questionnaire included:

- a. Multiple Choice Questions: To gather demographic information, frequency, and duration of Duolingo use.
- b. Likert Scale Questions: To assess perceptions on various aspects of Duolingo's effectiveness, benefits and challenges. These questions used a scale ranging from "Strongly Agree" to Strongly Disagree"

c. Open-Ended Questions: To collect detailed opinions and experiences regarding the use of Duolingo. The three open-ended questions will allow students to provide more nuanced and personal feedback about their language learning journey with Duolingo.

### 3.3 Procedure

An online questionnaire was developed by gathering details from existed research and comparing existing research with similar topics. The link to the finalized questionnaire then distributed to the selected students.

### 3.4 Data collection

Students then completed the online questionnaire and submitted their responses electronically. The data collection period was open for 1 week to allow ample time for participation.

### 3.5 Data Analysis

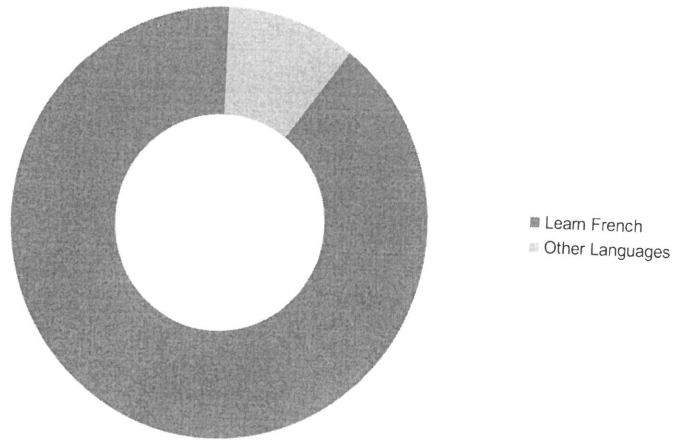
The collected data then organized and segregated into statistical analysis. Charts and tables are used to visually represent the summarize results from the questionnaire.

## 4. Results



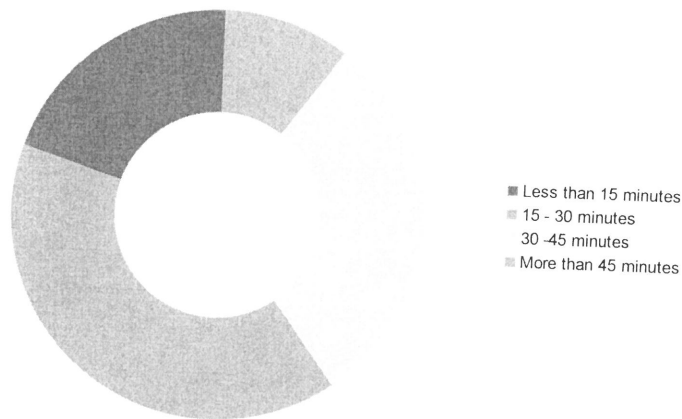
*Chart 1.1 When did you first begin using the Duolingo application*

The survey asked UPNM students when they first began using the Duolingo app. The data reveals that the majority of the students (50%) started using Duolingo six months ago. This is followed by 30% of students who began using the app three months ago, and 20% who started twelve months ago. None of the participants reported using Duolingo since 2019. This shows that the students' engagement with Duolingo is relatively recent, with a significant number beginning their usage within the past half-year.



*Chart 1.2 Do you use the Duolingo application to learn French or other languages*

The survey also inquired whether students used the Duolingo application to learn French or other languages. The data show that majority of the participants (90%) use Duolingo specifically to learn French. Only one student (10%) reported using the app for learning other languages. This result underscores the focus of NDUM students minoring in French on utilizing Duolingo primarily for their French language studies.



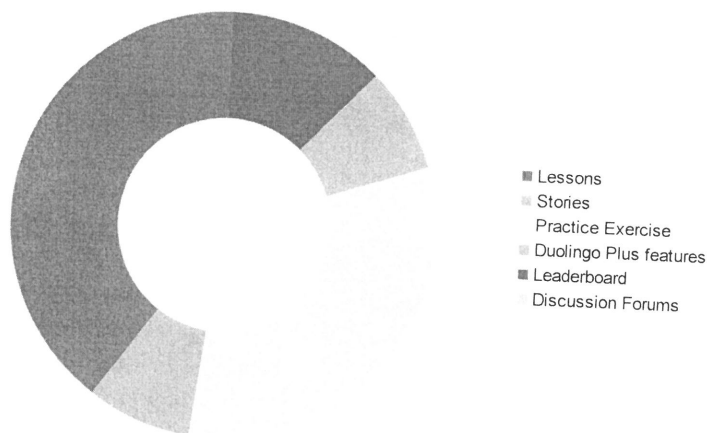
*Chart 1.3 How much time do you spend on Duolingo per session, on average*

The survey also has a question about the average amount of time they spend on Duolingo per session. The data indicates that the most common duration for a Duolingo session among UPNM students is between 15 and 30 minutes, with 40% of the respondents spending this amount of time on the app. Additionally, 30% of the students spend 30 to 45 minutes per session, while 20% spend less than 15 minutes, and 10% spend more than 45 minutes. This distribution suggests a balanced engagement with the app, with most students dedicating a moderate amount of time to their language learning sessions.



*Chart 1.4 How often do you use the Duolingo app in a week*

The survey also asked the frequency of the user using the Duolingo app in a week. The data indicates that the most common duration for a Duolingo session among NDUM students is once a week with 40% of the respondents spending this amount of time on the app. Additionally, 30% of the students spend 5 to 7 times a week, while 20% spend 2 to 3 times a week and 10% spend once a month. This distribution suggests a variety range of engagement levels among UPNM students, with a large portion using Duolingo regularly but not necessarily on a daily basis. This variety in usage patterns highlights the flexibility of the app in catering to different learning schedules.



*Chart 1.5 Which features of Duolingo do you use often? (check all the apply)*

The survey then proceeds with question on preferable features available on Duolingo. Respondents able to check all the apply. The data indicates that the most common feature usage was lessons with 40% of the respondents use it often. 32% of the respondents use practice exercise, 12% of the respondents use leaderboard and the relatively lower usage of stories (8%) and Duolingo plus features (8%) suggested that these tools are appreciated by a smaller subset of students, they are not the primary drivers of engagement for most users. Overall, the data indicates that students primarily value the foundational educational component of Duolingo (lessons and practice exercises), while additional features like leaderboard, stories and Duolingo plus serve to enhance the learning experience for a more targeted audience. This distribution of feature preference underscores the importance of providing a robust core curriculum, supplemented by optional enhancements that cater to diverse learning preferences and motivations.

**Table 1:** Students' perceptions of using the Duolingo application

No.	Questions	Strongly Agree	Agree	Neither agree Nor Disagree	Disagree	Strongly Disagree	Total
1.	The Duolingo App is very innovative for learning French	40%	30%	20%	10%	0%	100%
2.	Duolingo App is very effective for learning French	30%	40%	20%	10%	0%	100%
3.	When I use the Duolingo application, I am motivated and excited to learn French	40%	30%	20%	10%	0%	100%
4.	When used in the classroom, the Duolingo application is useless	0%	10%	30%	30%	30%	100%
5.	More practical to use everywhere and at anytime	50%	30%	20%	0%	0%	100%
6.	It can be used by anyone from children to the elderly	40%	50%	10%	0%	0%	100%
7.	I enjoyed learning French with Duolingo	50%	30%	10%	10%	0%	100%
8.	Duolingo was helpful in studying French	40%	30%	20%	10%	0%	100%

The data indicates overwhelmingly positive perceptions of Duolingo among NDUM students minoring in French. The majority of respondents agreed or strongly agreed with positive statements about Duolingo innovation, effectiveness and motivational impact. Specific insights include 70% of respondents find Duolingo innovative, and 70% also find it effective for learning French. 70% of students reportedly feeling motivated and excited to learn French using Duolingo.

The highest agreement was seen in the practicality of Duolingo, with 80% of respondents find it practical for use everywhere and at anytime. 90% of respondents believe that Duolingo can be use by people of all ages, therefore indicating it is broad appeal and user-friendly design. 80% of respondents enjoyed learning French with Duolingo and 70% found it helpful in their studies. Conversely, the statement about Duolingo being useless in the classroom has a high level of disagreement at 60%. This suggesting that most students see value in using Duolingo alongside traditional classroom methods.

Overall, the result from this question suggests that NDUM students have a very positive view of Duolingo as a tool for learning French, appreciating its innovation, effectiveness, and motivational qualities. These findings reinforce the potential benefits of integrating Duolingo into language learning curriculum.

**Table 2:** Effectiveness of Duolingo in improving language skills

No.	Questions	Very Effective	Somewhat Effective	Neither Effective Nor Ineffective	Somewhat Ineffective	Very Ineffective	Total
1.	Vocabulary	40%	30%	20%	10%	0%	100%
2.	Grammar	30%	40%	10%	20%	0%	100%
3.	Pronunciation	30%	20%	30%	20%	0%	100%
4.	Listening Comprehension	20%	40%	20%	20%	0%	100%
5.	Reading Comprehension	40%	30%	20%	10%	0%	100%
6.	Writing Skill	20%	30%	30%	20%	0%	100%
7.	Speaking Skill	30%	30%	20%	20%	0%	100%

The data from this question indicate varied perceptions of Duolingo effectiveness in improving different language skills. The result showed that Duolingo is perceived as very effective for vocabulary and reading comprehension with 70% and 70% of respondents rating it as either “Very Effective” or “Somewhat Effective” respectively. It is the same as grammar and speaking skills, whereby Duolingo is also seen as effective with 70% of respondents rating it positively for both skills.

However, the results for effectiveness of Duolingo in improving pronunciation, listening comprehension and writing skills is more mixed. In terms of pronunciation, it has a significant portion of neutral responses (30%) and 20% finding it somewhat ineffective. Listening comprehension also has a substantial number of neutral and somewhat ineffective ratings. Writing skill however has a balanced distribution between 20% to 40% but includes some neutral and somewhat ineffective perception.

The overall results suggests that NDUM Students find Duolingo particularly effective in enhancing their vocabulary and reading comprehension skills. However, its effectiveness in other areas like pronunciation, listening comprehension and writing skills is more varied. This feedback highlights areas where Duolingo is excelling and areas that may benefit from further development or complementary learning methods.

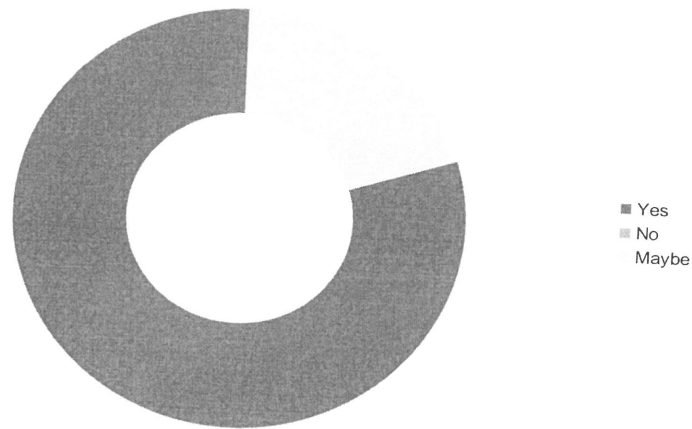


Chart 1.6 Will you continue using Duolingo

The data from the question if student will continue using Duolingo, indicates a strong willingness among NDUM students to continue using Duolingo. 80% of respondents indicated that they would continue using Duolingo, demonstrating a high level of satisfaction and perceived utility. 20% of respondents indicated “Maybe”, this result suggesting that while they find the app useful, there might be conditions or improvements needed for them to fully commit to continue using the app. No respondents chose “No, this resulting in a lack of strong negative experiences or dissatisfaction with Duolingo. Overall results support the conclusion that Duolingo is well-received by students that find it beneficial enough to continue using the app for their language learning needs.

#### Open-ended result

Table 3: "Why do you want to use the Duolingo app to learn French? Explain"

Participants	Description
P. 1	Improve vocabulary and getting know new words
P. 2	Because it was proven to work and help those new beginners who are about to learn French
P. 3	Because it is fun to learn by using this apps rather than in classes
P. 4	To improve my knowledge
P. 5	To improve my French Language
P. 6	It will make my language more strong
P. 7	Because it is considered more interesting than just doing paperwork
P. 8	To improve my French
P. 9	Easier to access
P. 10	Because it is a good application to test my French level

The result for the first open-ended result. “Why do you want to use the Duolingo App to learn French”, highlighting several similar key themes. 50% of respondent using Duolingo app to improve their vocabulary. 20% of respondent indicate that there are proven effectiveness in using Duolingo app to learn a new language. Another 20% preferred Duolingo for its engaging and interactive learning format and 10% due to its convenience and accessibility.

**Table 4:** “In your opinion, what are the advantages and disadvantages of the Duolingo application? Explain.”

Participants	Description
P. 1	Advantages to use Duolingo is the students can improve their vocabulary or grammar at the other language. while the disadvantages is the students cannot play for a long period such as, when the lives at the game finish, they have to wait for a long period until their lives in the Duolingo full.
P. 2	The app's gamification, accessibility, bite-sized lessons, variety of languages, and adaptive learning are all its significant advantages. However, its limited speaking and listening practice, limited grammar explanation, overemphasis on vocabulary, lack of immersion, and limited feedback are potential drawbacks.
P. 3	The advantages are students can learn in their own time. However, they need observation from the lecturer too.
P. 4	The advantages is so good for polish my language and knowledge. For disadvantages I think no need push with time.
P. 5	The advantages are easily to understand because it keeps repeating the exercises, the disadvantages are students easily distract when using Duolingo because it is an application in the gadget.
P. 6	For my opinion, the advantage is that I can refresh the French every day, and I consider using Duolingo actually doesn't have any disadvantage.
P. 7	Advantages of the Duolingo it can help me to get more vocabulary in French and also how to speak the word and the disadvantage i think there is no bad side for the Duolingo because it give us something that we can use and it help us to learn new language.
P. 8	Duolingo is very simple to use.
P. 9	Disadvantages: Need to spend some money for few features
P. 10	None

For the second open-ended question “In your opinion, what are the advantages and disadvantages of the Duolingo application? Explain.” The percentage for advantages is higher in comparison with disadvantages. 50% of the respondents find Duolingo help in improving vocabulary and grammar improvement. 40% of the respondents prefer Duolingo due to its accessibility and convenience and 30% prefer Duolingo app due to its engaging learning experience. 20% of respondents like the repetitive learning to help them retain memories and another 20% prefer how it is easy to use. Meanwhile 10% prefer the daily practice available from the app. The respondents also note the limitation in practice and feedback (30%). 30% have negative feedback on in-app restriction due to need to pay features. 10% of respondents suggested the need for additional observation or support from a lecturer. Meanwhile 20% of respondents did not find any significant disadvantages.

## 5. Discussion

The result from the survey conducted, provided insightful perspectives on the perceptions and experiences of the students in using Duolingo for language acquisition. The result from the usage frequency suggests that while Duolingo is a relatively recent addition to their language learning tools, which is correlated with the start of semester for French Language class. This suggests that students begin using it to enhance their French language learning as a supplement to their traditional classroom education. The majority of students use Duolingo specifically to learn French with only small percentage using it for other languages. This indicates a strong alignment with their academic goals and support the relevance of Duolingo in their French language learning methods. The distribution regarding duration of each Duolingo sessions suggested that while most students prefer short learning session, a significant number of students are willing to use the app for longer period. This show that the app has the ability to maintain user interest and engagement over varying lengths of time.

The students' perceptions of Duolingo were mostly positive. Most students strongly agreed or agreed that Duolingo is innovative, effective and motivating for learning French. They also found it practical and enjoyed using it for language learning. This is correlating with studies by Gafni, Achituv and Rahmani (2017) where it was mentioned that people prefer to use an app if it is easy to use and entertaining. However, there was some neutrality and slight disagreement regarding the utility of Duolingo in a classroom setting, suggesting that while Duolingo is effective as supplement tool, it may be challenging to integrate with traditional classroom environments. In regard to the effectiveness of Duolingo in improving various language skills, Duolingo is highly effective in certain areas such as vocabulary and grammar, there is a room for improvement in others, especially speaking and writing skills. Supporting this, Ahmed (2016) and Guaqueta & Castro-Garces (2018) have similar results where Duolingo app did infact help in improving language skills, including vocabulary, grammar and pronunciation. 80% students intent to continue using Duolingo while 20% still uncertain. However, none of the respondents indicated that they would stop using the app. This shows an overall high satisfaction with Duolingo.

The open-ended responses provide more insights. Most students agreed the advantages of Duolingo are the effectiveness in improving vocabulary and grammar, its engaging and fun learning experience and the students appreciated the app for being a practical and accessible tool for language learning. However, there are still some drawbacks such as the need for supplementary observation from lecturers, potential distractions due to the app nature as a gadget-based tool and the cost to access better features. The results overall are consistent with previous studies on student using mobile application in language learning. (Okumura & Bronson, 2016 ; Alkhezzi & Al-Dousari, 2016; Yudhiantara, 2017). A limitation of this study is the small sample size, as there are currently few students enrolled in French language courses. Future research could expand the sample size to further explore the topic.

## 6. Conclusion

The findings from this study indicate Duolingo is a well-regarded tool among NDUM students minoring in French. Duolingo offers a lot of advantages in terms of vocabulary and grammar acquisition, convenience and engagement. Even though there are some drawbacks, particularly related to in-app restrictions, and potential distractions, the positive perceptions and high intent to continue using the app underscore its value as an effective supplementary tool for language learning. Based on these findings, it is recommended that educators to consider incorporating Duolingo more formally into their language programs, leveraging its strengths to support and enhance student learning outcome.

## 7. References

- Ahmed, H. B. E. (2016). Duolingo as a Bilingual Learning App: A Case Study. *Arab World English Journal*, 7(2): 255-267.
- Alkhezzi, F., & Al-Dousari, W. (2016). The Impact of Mobile Learning on ESP Learners' Performance. *The Journal of Educators Online*, 13(2), 73–101.
- Crompton, H. (2013). A historical overview of mobile learning: Toward learner-centered education. In Z. L. Berge & L.Y. Muilenburg (Eds.), *Handbook of mobile learning*. (3-4). Florence, KY: Routledge
- Finardi, K. R., Leao, R. G., & Amorim, G. B. (2016). Mobile Assisted Language Learning: Affordances and Limitations of Duolingo. *Education and Linguistics Research*, 2(2):48-65
- Gafni, R., Achituv, D. B., & Rahmani, G. (2017). Learning Foreign Languages Using Mobile Applications. *Journal of Information Technology Education: Research*, 16: 301-317
- Ghalebi, Seyyedeh & Sadighi, Firooz & Bagheri, Mohammad. (2020). Vocabulary learning strategies: A comparative study of EFL learners. *Cogent Psychology*. 7. 10.1080/23311908.2020.1824306.
- Guaqueta, Cesar & Garcés, Angela. (2018). The Use of Language Learning Apps as a Didactic Tool for EFL Vocabulary Building. *English Language Teaching*. 11. 61. 10.5539/elt.v11n2p61.
- Kukulka-Hulme, A., & Shield, L. (2008). An overview of mobile assisted language learning: From content delivery to supported collaboration and interaction. *ReCALL*, 20(3): 271–289.
- Munday, P. (2016). The case for using DUOLINGO as part of the language classroom experience. *RIED. Revista iberoamericana de educación a distancia*, 19(1): 83-101.
- Nushi, Musa & Eqbali, Mohamad. (2017). Duolingo: A mobile application to assist second language learning. *Teaching English with Technology*. 17. 89-98.
- Okumura, S., & Bronson, M. (2016). The use of edmodo to enhance second language learning among Japanese and American College Students. *International Research Conference on Japanese Language Education*, pp. 1–4.
- Ramírez-Montoya, M. S. (2009). Mobile learning -mlearning-technology resources and their relationship with distance learning environments: applications and research studies. *RIED. Revista iberoamericana de educación a distancia*, 12.2, México. Mayo. ISSN:1138-2783
- Saran, Murat & Seferoğlu, Gölge & Cagiltay, Kursat. (2009). Mobile Assisted Language Learning: English Pronunciation at Learners' Fingertips. *Egitim Arastirmalari - Eurasian Journal of Educational Research*. 34. 97-114.

- Vesselinov, Roumen & Grego, John (2012). Duolingo effectiveness study. Final report. [http://static.duolingo.com/s3/DuolingoReport\\_Final.pdf](http://static.duolingo.com/s3/DuolingoReport_Final.pdf) (2016-01-03).
- Walker, A., & White, G. (2013). Technology enhanced language learning: Connecting theory and practice. Oxford, UK: Oxford University Press.
- Yudhiantara, R. A. (2017). Mobile-Assisted Language Learning (MALL) in Indonesian Islamic Higher Education. *IJELTAL (Indonesian Journal of English Language Teaching and Applied Linguistics)*, 2(1), 21–31. (2016). Duolingo: Guide For Leaders in Education. (2021).