

Research Article

Duolingo Application in English Teaching Practice: Teacher's Perception

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Abstract.

Unique learning media will produce good learning. Unique in this case means a teacher who creates a fun and innovative learning atmosphere. So that the process of learning English in class inspires them to keep going. Duolingo is a gamified software for language learning. The heavy-duty of this popular language learning software, incentive benefits, logical levels, and user ratings based on success are just a few examples of aspects that demonstrate the strong elements of gamification. As an outcome, a teacher must utilize creative and innovative learning media. Many English teachers struggle with designing and implementing English learning media that piques students' interest in learning English. As a result, the research focuses on introducing and developing the effectiveness of using duolingo application in English learning for students. This research utilizes a qualitative descriptive design to evaluate how English teachers perceive the Duolingo application in learning English in the classroom. The participants in this study were 15 English teachers from various schools in Medan City. The finding showed that the teacher's perception of the Duolingo application was very influential and effective while using in the classroom to learn English.

Keywords: duolingo, teacher's perception, English learning

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1. INTRODUCTION

Education has an important role in life, especially in learning foreign languages which are often considered boring. It is undeniable that education is influenced by technological advances, and many benefits from technology can be utilized. For example, with access to technology that teacher can implement in teaching English. One of them is Duolingo technology, which is the most downloaded language platform in the world. With more than 500 million users, the goal of this company is to provide free and fun education to everyone in the world. The use of Duolingo technology has been applied in many countries in the world, especially in teaching English. Because Duolingo is very effective for language tests that can be measured hourly so that it can be applied by teachers in the classroom, especially in Indonesia.

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Based on information obtained from the opinion of LaFlair and Settles (2019) about this software "Duolingo is a technical manual in the test". Not only that, the description of this software is listed on the website <https://s3.amazonaws.com/duolingo-papers/other/Duolingo%20English%20Test%20-%20Technical%20Manual%202019.pdf>. "This software is also a presented document". The additional DET information found in <https://englishtest.duolingo.com>. The Duolingo English Test is a computer adaptive test (CAT) of English proficiency that is fully handled and evaluated online. For the DET Score LaFlair and Settles (2019) argues, test takers' English proficiency is used for a variety of purposes, including "the decision to enter university"

Although the effectiveness of Duolingo has been widely applied in various countries in the world, however, there are still few teachers in Indonesia who apply it in teaching English in the classroom. Based on some of the research and theory mentioned above, researchers will focus on introducing and developing the ability of English teachers with the Duolingo application. Based on the background and research objectives, the research problem is formulated as follows:

1. What do the teachers think about Duolingo technology?
2. How would they apply Duolingo apps to their English instruction?

2. LITERATURE REVIEW

2.1. Mobile-assisted language learning with Duolingo and gamification (MALL)

The process of learning a language can cause stress, tension, and anxiety, this was stated by (Akbari, 2015; Iaremenco, 2017; Rafek, Ramli, Iksan, Harith, & Abas, 2014). Plus, learning a new language takes time and persistence to practice; students sometimes tend to give up when they are not motivated enough to learn it (Han, 2015; Turan & Akdag-Cimen, 2019). Not only that, the use of elements such as engaging games can create a motivating environment that can increase accuracy and confidence for language learners. This was stated by (Hanus & Fox, 2015; Kapp, 2012; Lui, 2014; Munday, 2016). Next the gamification elements in the MALL platform not only show how to actually increase student behavior, engagement, but also motivation (Huang & Soman, 2013), but also provide a visible trace of the language learning process itself. In a systematic review of the impact of digital gamification on students since 2015, Dehganzadeh and Dehganzadeh (2020) also describe that most research has

reported increased motivation and engagement among students in the area of using gamification.

Gamification is also a process of engaging people, motivating action, informing learning, and solving problems by utilizing game mechanics, aesthetics, and game thinking. This is described by (Kapp, 2012). The use of game elements and ideas outside the game to increase commitment and influence language learner behavior is known as gamification (Marczewski, 2013). Although there has been a significant increase in some gamification research and practical applications in recent years, scholars continue to discuss its definition, need, and value. In his article also mentioned by Werbach (2014) recommends that gamified be described as "the process of creating activities that are more like games" (p. 266). Also, five components of gamification were identified by Telaprolu, Rallapalli, and Venkata (2013). As for which includes goal orientation or goal setting; successful achievements or experiences; reinforce certain behaviors in response to outcomes; competition to drive performance desirability; and a fun orientation to relieve stress and increase engagement. Mobile software that follows these guidelines has a lot of potential.

Another developing area in MALL is gamification (Bunchball, 2010; Dehganzadeh & Dehganzadeh, 2020; Garland, 2015; Shadiev et al., 2020). However, there is growing concern about the uses and results of gamified language acquisition. Technology innovation makes it more difficult to conduct research and perform out simple tasks. As a result, it appears there is a gap in the pedagogy, design, and mobile learning platform utilized to research gamification in MALL. Dehganzadeh, Fardanesh, Hatami, Talaei, and Noroozi (2019) claim that although their research highlights significant effects on enjoyment, motivation, and engagement, it does not specifically point out variables that relate to these learning outcomes. Furthermore, some student qualities are excluded. The relation between gamification components and learning objectives at the micro level is thus still unknown. In their study, Dehganzadeh and Dehganzadeh (2020) discovered that Duolingo was the platform that researchers looked into the most, demonstrating a keen interest in this platform among both practitioners and researchers.

2.2. Duolingo Description

Approximately 95 languages could be learned on Duolingo at the time of this systematic study, and users could learn in languages other than English (Duolingo About us: Approach, 2021; Viberg & Grönlund, 2012). Users first choose their desired target

language, and if they currently know some of it, they can take a placement test to see where they are in terms of understanding. They decided to aim for a certain amount of experience points each day. To extend the streak by one day, you must complete one lesson (achievement) each day. After that, the streak is completely reset. To zero if no lessons are finished on any given day (reinforcement). The application may offer the user optional tasks, such as extending the streak for a few more days, attempting to compare experience points with users in other leagues, or providing a reward if a challenge is completed (fun orientation & competition) (Nah et al., 2013).

Lesson systems are organised around specific topics such as family, food, and travel; each topic briefly describes some grammatical and cultural concepts, but the lessons themselves are primarily concerned with introducing new vocabulary and exercises. Among the activities available are translation, multiple-choice word recognition, and spelling questions. Incorrect responses are addressed in two ways. Some users use a 'heart' system in which a certain number of errors results in the loss of one out of every five hearts. When all five hearts are lost, the user appears to be unable to train until at least a few hearts are regained. On some devices, picking common error results in more repetition and practise, but slightly less experience or achievement after completing a lesson. The 'heart' feature appears to be rendered for some accounts but not for others, and it is not usable in the app's web version. Mistakes are usually accompanied by a brief comment, and correct answers are usually rewarded with a bonus at the end of the lesson, as well as concise positive feedback. Users in both scenarios can interact with other children by opening forum strings dedicated to any given question.

While other gamified MALL apps such as Babbel and Busuu provide similar stories, Duolingo is far more popular due to its freemium business model and non-English learning options (Loewen et al., 2019). In their survey of gamification elements in MALL applications, Govender and Arnedo-Moreno (2020) identified 22 gamification elements in the design of Duolingo, such as (but not limited to) progress signifiers (daily goal and experience points, unlocking levels), responses (correct/incorrect answer), fixed reward schedule (expertise score), moment rewards (streaks), customizable (buying outfits for the owl mascot), challenges, knowledge sharing (forums (lingots and gems). They discovered that Duolingo was one of the most gamified applications among the 20 MALL applications they examined, reinforcing the idea that this platform can be used to implement gamification in this learning medium. Overall, the findings of the Duolingo

application studies can be used to introduce and develop gamification in order to improve the teaching skills of English Indonesian teachers.

3. METHOD

3.1. Setting and Participant

This research was sample was taken randomly from several junior high schools in the city of Medan. Meanwhile, the original research subjects were 15 English teachers, seven of whom were male and eight were female. Everyone in the class has an average of 5 years of teaching experience. All participants have previous teaching experience which generally ranges from beginner to advanced levels and courses (i.e. a wide range of skills, including oral communication classes).

3.2. Research Design

This research was conducted through several stages, including the following:

3.2.1. Observation and Interview

Observations were made to determine the teacher's experience while interacting with students in teaching English in class. Both obstacles during teaching and things that are done to improve students' English in class. Furthermore, interviews were conducted by recording voices via audio calls via cell phones. This activity is carried out to find out the conditions of teachers in detail and real what they experience when teaching at school.

3.2.2. Introduction to Duolingo App

The introduction and use of the Duolingo application was carried out through a virtual zoom meeting with all participants who were the object of research. The discussion presented in the zoom meeting is a tutorial on using the Duolingo application, which is as follows:

Download Duolingo App on Play store

Just like downloading applications in general on the play store, you can directly type "Duolingo" in the search field. Once open, you can click install on the side of the

application section. Wait for the application to finish installing. If it is already installed you can directly create an account or login if you already have an account.

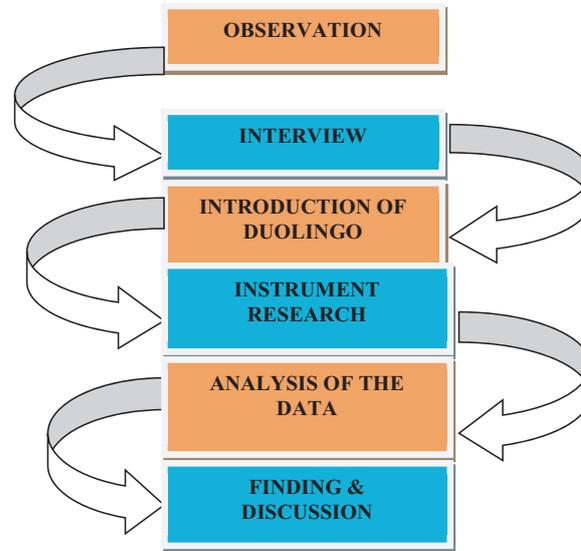


Figure 1: Duolingo setup page.

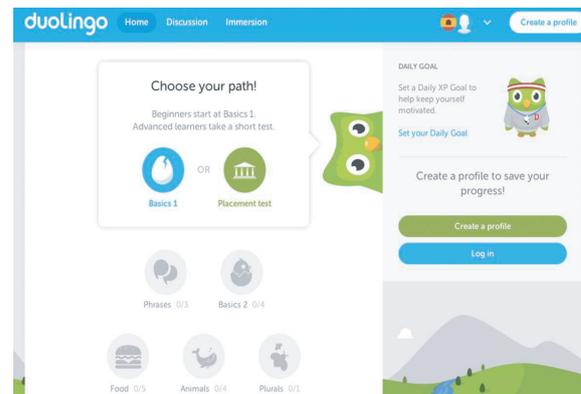


Figure 2: The description of lesson level of Duolingo Application.

3.3. Research Instrument

To determine the teacher’s perception of the Duolingo application in teaching English, the researcher used the Linkt scale. With the Linkert, scale, the variable to be measured becomes an indicator variable. Then the indicator is used as a starting point for compiling instrument items which can be in the form of statements or questions. Sugiyono (2006) says that the Likert scale is used to measure attitudes, opinions, and perceptions of individuals or groups related to social phenomena that are the object of research.

This study used Likert scale to measure the answer of questionnaire. ”A Likert scale is a psychometric scale that has multiple categories from which respondents choose to

indicate their opinions, attitudes, or feelings about a particular issue” (Nemoto & Beglar, 2014, p.2). In this study, Likert scale is used to measure opinions and perception students toward a given subject about language learning applications. There are two forms of statements in the Likert scale: positive statement functioning to measure positive perceptions; and, negative statement functioning to measure negative perception of the object of this study. Likert scale is typically five, seven, or nine point agreement scale used to measure respondent agreement with a variety of statements. In this study, the choice of the Likert scale that was offered to the participants applied a choice of four answers, which included: (1) a. strongly agree, b. agree, c. doubtful, d. don't agree, e. strongly disagree

3.4. Analysis of the data

Participants were expected to select one of the Likert scale answers in each based on the questionnaire. Following the collection of responses, the questionnaire was analyzed to determine the outcome. The percentage of teachers who chose each point agreement scale in each statement was calculated. According to Sudjono (2008), the percentages of each statement's frequency were calculated using the formula below:

$$\begin{aligned} \text{Known as: } x \text{ } 100\% \\ = \text{percentage} \\ = \text{frequency} \\ = \text{the number of sample} \\ 100\% = \text{constant value} \end{aligned}$$

3.5. Analysis Questionnaires

Questionnaires were used to obtain data about teachers' perceptions in learning English by using Duolingo as a language learning application. Then the number of questions in the questionnaire is fourteen. This study provides a closed questionnaire. The data can be seen in the following table and description.

Meaning of the numbers:

4 means strongly agree = very good

3 means agree = good enough

2 means disagree = not good

1 means strongly disagree = very not good

4. RESULTS AND DISCUSSION

TABLE 1: Questionnaires.

No	Questionnaires of teacher perception Duolingo application	Approval Level			
		4	3	2	1
1.	There is flexibility in the use of duolingo to achieve English learning curriculum goals?	4	3	2	1
2.	Is it the Duolingo application is a creative innovation in teaching English?	4	3	2	1
3.	Can the Duolingo application be a solution for learning English at school?	4	3	2	1
4.	Can Duolingo be a fun learning application for students in the classroom?	4	3	2	1
5.	Do you think the Duolingo application can improve students' English skills?	4	3	2	1
6.	Is the Duolingo application effective to be implemented in the classroom?	4	3	2	1
7.	Can the use of Duolingo application be a solution for students in working on English tests?	4	3	2	1
8.	Does the use of Duolingo have problems when applied in class?	4	3	2	1
9.	Does using Duolingo make students more motivated to learn English?	4	3	2	1
10.	Does using Duolingo make teachers more motivated to teach English in the classroom?	4	3	2	1
11.	Can the Duolingo application be applied optimally for the subject of learning speaking?	4	3	2	1
12.	Can the Duolingo application be applied optimally for the subject of learning vocabulary test?	4	3	2	1
13.	Can the Duolingo application be applied optimally for the subject of learning listening?	4	3	2	1
14.	Can the Duolingo application be applied optimally for the subject of learning grammar test?	4	3	2	1

In this questionnaire, 5 out of 15 teachers answered strongly agree. And 10 teachers who answered agreed with the teacher's perception of the use of the Duolingo application. Teachers feel more motivated to teach students using the Duolingo application because students get application feedback by being more active in learning the language, getting good influence, and student's better understanding the subject matter, also students are more interested in practicing and applying their English in their daily lives. day. The percentage of data analysis can be seen in the following table below:

From the table above, there are and 66.66% agree that teachers feel more motivated to teach English by using the Duolingo application. The rest chose strongly agree. This

TABLE 2: Teacher Perception on Duolingo Application.

No	Option	Frequency	Percentage
1.	Strongly agree	5	33.34 %
2.	Agree	10	66.66 %
3.	Disagree	0	0%
4.	Strongly disagree	0	0%
	Total	15	100%

calculation shows that the use of duolingo can motivate and increase the creativity of teachers in the practice of teaching English.

The purpose of the focused data analysis/questionnaire was to examine the perceived benefits of teachers in using the duolingo application and obtain recommendations for potential improvements and applications in ESL teaching. In the case of post-interview survey responses, we determine whether participants agree or disagree by determining the number of frequencies for each survey item. Focus groups are provided with an online google form. Following an analytical approach participants are expected to choose one of the Likert scale answers in each based on the questionnaire. After collecting responses, the questionnaires were analyzed to determine the results. The percentage of teachers who chose each scale of agreement points in each statement was calculated.

5. CONCLUSION

In the process of teaching English in the classroom, the effectiveness of teachers in designing and using interesting and fun learning media is very influential in attracting students' interest in participating in teaching and learning activities in the classroom so that teaching and learning activities can run effectively, efficiently and fun. Unique learning media will produce good learning. Unique in this case means a teacher who creates a fun and innovative learning atmosphere. So that students feel motivated in following the process of learning English in class. For this reason, a teacher must use creative and innovative learning media. Like using the Duolingo application as a learning medium for students. Therefore, the purpose of this research is to introduce and develop the effectiveness of the Duolingo application in learning English for students. This study uses a qualitative descriptive design, namely how the perception of English teachers in using the Duolingo application in learning English in the classroom. The object of this research is 15 English teachers from several schools in Medan. The results showed

that the teacher's perception of the Duolingo application was very influential and very effective in learning English in the classroom.

6. SUGGESTION

1. The selection of appropriate media and methods, especially in English, can trigger students' interest in the learning process. It is recommended to use various methods in learning so that students do not get bored in the learning process. Therefore, a teacher must choose the right media in teaching English.
2. A teacher is expected to provide motivation to learn in various ways according to the teacher's abilities and attractiveness to students. Then, it is hoped that collaboration between students and teachers is expected to find the best solution in the learning process to improve student learning achievement.
3. This language learning application, especially Duolingo, has been around since 2016. All of these support students to be able to study at home independently. However, this implementation can help learners in learning English.

References

- [1] Ahmed H. Duolingo as a bilingual learning app: A case study. *Arab World Engl J.* 2016;7(2):255–267. doi:10.24093/awej/vol7no2.17
- [2] Ajisoko P. The use of Duolingo apps to improve English vocabulary learning. *Int J Emerg Technol Learn.* 2020;15(07):149–155. doi:10.3991/ijet.v15i07.13229
- [3] Akbari Z. Current challenges in teaching/learning English for EFL learners: The case of junior high school and high school. *Procedia - Soc Behav Sci.* 2015;199:394–401. doi:10.1016/j.sbspro.2015.07.524
- [4] Bacca J, Baldiris S, Fabregat R, Graf S, Kinshuk. Augmented reality trends in education: A systematic review of research and applications. *J Educ Technol Soc.* 2014;17(4):133–149. <http://www.jstor.org/stable/jeductechsoci.17.4.133>
- [5] Castañeda DA, Cho MH. Use of a game-like application on a mobile device to improve accuracy in conjugating Spanish verbs. *Comput Assist Lang Learn.* 2016;29(7):1195–1204. doi:10.1080/09588221.2016.1197950
- [6] Dehganzadeh H, Dehganzadeh H. Investigating effects of digital gamification-based language learning: A systematic review. *J Eng Lang Teach Learn.* 12(25):53–93.
- [7] Duolingo. About us: Mission. 2021. Retrieved from <https://www.duolingo.com/info>

- [8] Duolingo. About us: Approach. 2021. Retrieved from <https://www.duolingo.com/ap-proac>
- [9] Duolingo Help Center. What is Duolingo? 2020. <https://support.duolingo.com/hc/en-us/articles/204829090-What-is-Duolingo->
- [10] Eisenlauer V. Multimodality in mobile-assisted language learning. *Commun Comput Inf Sci*. 2014;479:328–338. doi:10.1007/978-3-319-13416-1_32
- [11] Fadhli M, Sukirman S, Ulfa S, Susanto H, Syam AR. Gamifying children's linguistic intelligence with the Duolingo app: A case study from Indonesia. In Papadakis S, Kalogiannakis M, editors. *Mobile learning applications in early childhood education*. Hershey, PA: IGI Global; 2020. p. 122–135. doi:10.4018/978-1-7998-1486-3.ch007
- [12] Huang WHY, Soman D. Gamification of education. *Report Series: Behavioural Economics in Action*. 2013;1–29.
- [13] Hwang WY, Chen CY, Chen HS. Facilitating EFL writing of elementary school students in familiar situated contexts with mobile devices. In 10th 31 World Conference on Mobile and Contextual Learning, 18-21, October 2011, Beijing, China: MLearn2011 Conference Proceedings. 2011, October. 15–23.
- [14] Kondo M, Ishikawa Y, Smith C, Sakamoto K, Shimomura H, Wada N. Mobile assisted language learning in university EFL courses in Japan: Developing attitudes and skills for self-regulated learning. *ReCALL*. 2012;24(2):169–187. doi:10.1017/S0958344012000055
- [15] Lotze N. Duolingo: Motivating students via m homework. *TESOL J*. 2019;11(1):1–3. doi:10.1002/tesj.459
- [16] Luke JY, Wiharja CK, Sidupa C. The effectiveness level and positive values of practicing translation using mobile app DUOLINGO for Indonesian freshmen students. In *Proceedings of the 2nd International Conference on E-Society, E-Education and E-Technology*. 2018;26–29. doi:10.1145/3268808.3268834
- [17] Macalister J. Language learning principles and MALL: Reflections of an adult learner. *TESOLANZ J*. 2017;25:12–24. <https://doi.org/10.1177%2F0033688218771385>.
- [18] Marques-Schafer G, da Silva Orlando AA. Languages learning conceptions and Duolingo: A critical analysis on its proposals and learners experiences. *Texto Livre - Linguagem e Tecnologia*. 2018;11(3):228–251.
- [19] Munday P. The case for using DUOLINGO as part of the language classroom experience. *RIED. Revista Iberoamericana de Educación a Distancia*. 2016;19(1):83–101. doi:10.5944/ried.19.1.14581
- [20] Notaro GM, Diamond SG. Development and demonstration of an integrated EEG, eye-tracking, and behavioral data acquisition system to assess online learning. In

- Proceedings of the 10th International Conference on Education Technology and Computers. 2018. p. 105–111. doi:10.1145/3290511.3290526
- [21] Oktaviani A, Fauzan A. Teachers perceptions about the importance of english for young learners. *Linguist Eng Educ Art (LEEA) J*. 2017;1(1):1-15.
- [22] Pramesti AS. Students' perception of the use of mobile application Duolingo for learning English. *Int J Sci Technol Res*. 2020;9(1):1800–1804. Retrieved from <http://www.ijstr.org/final-print/jan2020/Students-Perceptio n-Of-The-Use-Of-Mobile-Application-Duolingo-For-Learning-English.pdf>
- [23] Rafek MB, Ramli NHLB, Iksan HB, Harith NM, Abas AIBC. Gender and language: Communication apprehension in second language learning. *Procedia - Social and Behavioral Sciences*. 2014;123:90–96. doi:10.1016/j.sbspro.2014.01.1
- [24] Research – Duolingo. (n.d). Research - Duolingo. Retrieved from <https://research.duolingo.com/>
- [25] Rolando APP, Gabriela REA, Carolina MSE, Antonio ARM. Incidencia de Duolingo en el desarrollo de las habilidades comunicacionales verbales del idioma ingles a nivel de educación superior. *Eur Sci J (ESJ)*. 2019;15(16):29–44. doi:10.19044/esj.2019.v15n16p29
- [26] Teske K. Duolingo. *CALICO J*. 34(3):393–401. doi:10.1558/cj.32509
- [27] Toland SH, Mills DJ, Kohyama M. Enhancing Japanese university students' English-language presentation skills with mobile-video recordings. *JALT CALL J* 2016;12(3):179–201. doi:10.29140/jaltcall.v12n3.207
- [28] Vehovar V, Toepoel V, Steinmetz S. Non-probability sampling. In: Wolf C, Joye D, Smith TW, Fu Y, editors. *The Sage handbook of survey methods*. Thousand Oaks, CA: Sage Publications; 2016. p. 329-345.
- [29] Vygotsky LS. Thinking and speech. In Rieber RW, Carton AS, editors. *The collected works of L. S. Vygotsky: Vol. 1. Problems of general psychology*. New York, NY: Plenum Press; 1997. p. 39-285. doi:10.1007/978-1-4613-1655-8