University Students' Perception towards the Use of Duolingo Application in Learning English

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Abstract. This study aimed to investigate students' perception towards the use of Duolingo Application in learning English. This was a descriptive study. There were 135 university students in Pekanbaru, Riau, Indonesia participated in this research. The data were attained through students' questionnaires and students' interview. The findings revealed that students had an overall positive perception towards the use of Duolingoapplication in learning English. The findings from questionnaires described that 82.3% of the participants found the features in Duolingowas easy to use and 83.7% of them also agreed that practice English through Duolingowas convenient because they could communicate and access it anytime and anywhere. Then, 85.2% of the participants thought that Duolingowas helpful, 90.4% of them stated it was useful for improving their English skills and 91.2% of them agreed that Duolingowas effective to improve their' English skills anytime and anywhere. However, it showed that 89.6% of them have positive attitude towards the use of Duolingo in learning English and over 60% of them also approved that Duolingocould develop their self-learning skill and encourage them to learn English. In addition, it also found that there were over 80% of the participants agreed thatDuolingo could increase their motivation to learn and to practice their English skills. Finally, the finding described that overall means scores of each items from questionnaires' were in high level (3.51-4.50). Furthermore, according to the result from students' interview, there were several benefits and drawbacks towards the use of Duolingo in learning English. There were several benefits towards the use of Duolingo for example, this application as an adequate way to a new context learning, it could help the students in improving their English skills, the features of Duolingo was interesting and addictive, it could stimulate and motivate the students to learn English, the students felt comfortable and enjoyed learning English through the use of Duolingo. In other hand, there were also several drawbacks towards the use of Duolingoapplication that noticed by students namely they could not play and learn trough the use of Duolingo in offline mode, they also found that there were unnatural sentences in the exercises in Duolingo, there were annoying advertisements in the middle of exercises, several repeated questions also found in the same level and there was no explanation related to the grammatical structures.These problems gave difficulties to the students in accomplising the exercises and learning process. In conclusion, eventhough there were several drawbacks found in Duolingo, but the positive aspects of it still gave contribution to the students' learning process.

1. Introduction

Due to globalization era, taken together with the advancement of technologies make us possible to communicate and interact with people all over the world. These advances bring out new possibilities on the job market and for the economy, including in Indonesia. Furthermore, English become a prominent factor for university students after Asean Economic Community applied in 2015. English is not just an additional qualification anymore, but rapidly has become a prerequisite for a successful career. Thus, as university students they should concern to improve their English skills for their future career. Unfortunately, most of university students in Pekanbaru, Riau still have difficulties in learning English even they have learned it since in elementary school. Most of them only learn English in the classroom once a week and they seldom practice their English outside the classroom. In addition, they

are lack of vocabulary in English. It triggers them reluctant to use English in their daily life. Whereas, vocabulary plays an important role in learning a foreign language. It is one element that links the four skills of speaking, listening, reading and writing all together. Due to the limitation of vocabulary they have, sometimes students want to share their ideas, but they do not know how to express them, finally they choose to keep silent. Consequently, it also tends to make them become passive students. These conditions influence the students speaking ability, because they do not have opportunity to speak and practice their English. In addition, these problems could influence the student's motivation in learning English. They do not have motivation to learn English. Finally, all lecturers have responsibility to develop teaching method and teaching media so that we can increase the quality of our teaching and students too. We need to find a way to overcome this problem and to motivate our students in learning English not only in the classroom but also outside the classroom. Based on the researcher observation and interview, majority of students using smartphone and laptop in their daily life. They usually use their smartphone for making a call, sending message, playing games and checking social media. Many of them spend their free time by using their smartphone or online about 3-12 hours in a day. Often the researcher saw by her bare eyes, many students play games in their break time whether in a classroom or out of classroom. The researcher asked them about the convenient of playing games and they said that playing games is fun and addicted. They also feel challenged to battle with their peer. It means that they feel comfortable and relaxed in playing games.

In recent years, web-based games or educational games have increasingly supported learning. Many researchers and practitioners point out that games have a great educational value by offering students a fun and non-stressful learning atmosphere. It minimizes the student's anxiety in learning process. According to Chen (2005) games promote communicative competence, encourage creative and spontaneous use of language [1]. They are effective to increase motivation and promote learner centered. Games can promote the development of students' attitude and give them more chances to speak. Furthermore, Ewa (2016) argues that games have advantage of bring variety, breaking monotony, proving a thrill when doing grammar exercises and motivating students to work. However, the term gamification has been rising and growing popularity since 2010 [2]. According to Darina & Christo (2015) who state that gamification is potential to foster motivation, behavioural changes, friendly competition, and collaboration in different contexts [3]. Further, Werbach (2013) believes that gamification is the use of game elements and game design techniques in non-game contexts [4]. In this study, gamification is defines as the application of game elements into education which makes learning more relaxed, fun and comfortable for the students. Pappas (2015) defines gamification as a methodology that involves the use of game design elements and mechanics in learning activities [5]. This is done to motivate and engage the learners become active participants in their own learning process.

Based on the explanation above and analyzed the pilot studies, the researcher have an idea to look for an appropriate educational game for her students. There are variety application of educational games can be applied to support teaching and learning activities. However, it is necessary for the lecturer to guide them in choosing appropriate application of educational games which meet the students' need, meets the objective of the topics, and integrates into the existing curriculum. So that it can help students in improving their English skills not only in classroom but also outside classroom. Throughout the researcher's overview of several educational games application, she considered to apply a gamification method to her students' teaching and learning activities through browser-based and mobile application called Duolingo. It is a games application that can be used for the students not only to play but also to learn language. The essential point is it can motivate them to spend their free time to improve their English outside classroom. Duolingo is a freemium language-learning platform for cell phones or computers created by Luis Von Ahn and Severin Hacker in 2012. It offers 68 different language courses across 28 languages. According to its website, it has over 300 million registered users across the world. It is one of the most and praised language teaching application on the market. It has also won several awards as best education start up and play and learning application. Duolingo presents four English skills namely reading, writing, listening, and speaking. The four skills are present during the learning activities in Duolingo through questions, small texts to heard and transcribed. The students also have to record their pronunciation to assess their speaking ability.

Many experts have given their positive feedback related to the use of Duolingo in teaching and learning English. Krashen (2014) states that Duolingo application is a web-based self-paced language teaching program that guides students step-by-step through a sequence tasks, largely based on translation [6]. It is aimed as conscious learning and subconscious of language as students hear and read samples of language. Then, Munday (2016) states that Duolingo is very modern-looking gaming application [7]. Most of activities in the application are based on translation, dictation, and pronounciation. It also incorporates some gamification elements to motivate and engage learners. Some examples of this are the lingots as awards given when you complete a skill; the inclusion of a weekly learderboard, where you can "compete" against friends to see who has the highest XP; a symbol of a flame next to your name with the numbers of days of your streak on the site; the aforementioned strength bar, which appears when a user is completing a lesson, to indicate how close they are to finishing it, etc. Furthermore, White (2017) points out that Duolingo is an online learning program allows people take free language courses because they translate [8]. Realizing this phenomenon above, the researcher was encouraged to apply Duolingo Application in learning English to her students. Finally, the objective of this research was to investigate her students' perception towards the use of Duolingo Application in learning English.

2. Method

2.1. Method design

This is a descriptive study, which aims to investigate students' perception towards the use of Duolingo Application in learning English. The study uses a mixed-method design in terms of data collection. The major data sources consist of quantitative questionnaire and a qualitative semi-structured interview. It is line with Dornyei (2007:169) who state that a study that is characterized by a dominant quantitative style the supported by a follow-up interview can be categorized as a 'QUANTITATIVE → Qualitative" research [9].

2.2. Participants

The study was conducted at several universities in Pekanbaru, Riau during the second teaching semester of the 2018 academic year. A total of 135 undergraduate students taking English Level II subject were purposively selected to participate in this study. They were consisted of 66 females and 69 male students. Their ages range were 19-21. According to CEFR it was B1 level.

2.3. Procedure

This research was conducted for one semester or 14 meetings. Duolingo was used outside classroom to support face-to-face meetings in the classroom. At the beginning of the semester, the researcher introduced Duolingo to the participants. She asked all students to download Duolingo application into their smartphone and/or laptop. Then, the researcher guide the students how to play and learn English through Duolingo. At the next meeting the researcher arranged a website for Duolingo Classroom where all of the participants were registered to the link by entering the classroom code. After following Duolingo Classroom, the students' acitivities and progress automatically recorded in Duolingo where this link only could be accessed and seen by the lecturer. Thus, the researcher could monitor all students' activities because the researcher also received notification from Duolingo via email about the students' progress in detail. Besides, it showed the information about the students' assignment submission time. The researcher could know who submitted the assignment on time, late, or even did not submit her/his assignment in Duolingo. The researcher gave assignment every week on Duolingo and they would receive notification via email that they have assignment on Duolingo and which topic that they were going to accomplish based on the schedule given by the lecturer. Furthermore, the lecturer asked them to do another exercises on Duolingo. The lecturer kept monitoring the daily use of Duolingo by the students and encouraged them to use it at least 15 minutes in a day. She also suggested them to make class group on Duolingo, so that they could compete and communicate with another users easily. They could also see who got the highest score and become the leaderboard everyday. In addition, the students might open Duolingo on their laptop as long as they remember their username, password and synchronize to their device. At the end of the semester, the researcher gave questionnaire and interviews to the participants related to the use of Duolingo in learning English.

2.4. Data collection and analysis

The instruments used in this study were questionnaire and interview. The questionnaire was examined and validated by three experts. They checked the suitability of content and clarity instructions. They suggested to improve several items and also to delete unnecessary items. The questionnaire used five point Likert-scale. Each statement was answered from strongly disagree (1), disagree (2), neutral (3), agree (4), and strongly agree (5). The questionnaire consisted of 24 items regarding students' perception towards the use of Duolingo application in learning English namely; easiness of using and learning English through the use of Duolingo, usefulness of learning English through the use of Duolingo, effectiveness and language improvement through the use of Duolingo, attitudes towards learning English through the use of Duolingo, and enhancing students' learning motivation through Duolingo. The students also filled survey about their learning duration through Duolingo. Furthermore, these data were analyzed quantitatively for means and percentages. The ranges were used for this data as follows: 1.00-1.50 = very low/very negative, 1.51-2.50 = low/negative, 2.51-3,50 = moderate, 3.51-4.50 = high/positive, 4.51-5.00 = very high/very positive. In addition, for investigating the students' perception towards the use of Duolingo Application in learning English more closely, students also interviewed in depth. The researcher interviewed 30 students, 10 students who were active, 10 students who were in moderate, and 10 other students who were passive in classroom. They were asked to tell about their thoughts on how Duolingo helps them in learning English, the benefits and the drawbacks of the use of Duolingo in learning English. The data from interview was analyzed qualitatively.

3. Finding and discussion

This study aimed to investigate the students' perception towards the use of Duolingo Application in learning English. Based on the survey, it reported that all of the participants have smartphone or android and 90% of them have laptop. They had been using them for 2-3 years. All of them also have Duolingo account on their mobile phone or laptop. In the beginning of the semester, the researcher or the lecturer suggested the participants to play and to learn in Duolingo minimum 15 minutes in a day. In fact, there were several participants (7.4%) did not open Duolingo as suggested by the lecturer. Fortunately, there were many students played and learned through the Duolingo more than 15 minutes in a day or >2 hours in a week (60.7%). The other details can be seen in Figure 1.

Figure 1. Percentage of learning duration of using Duolingo in a week
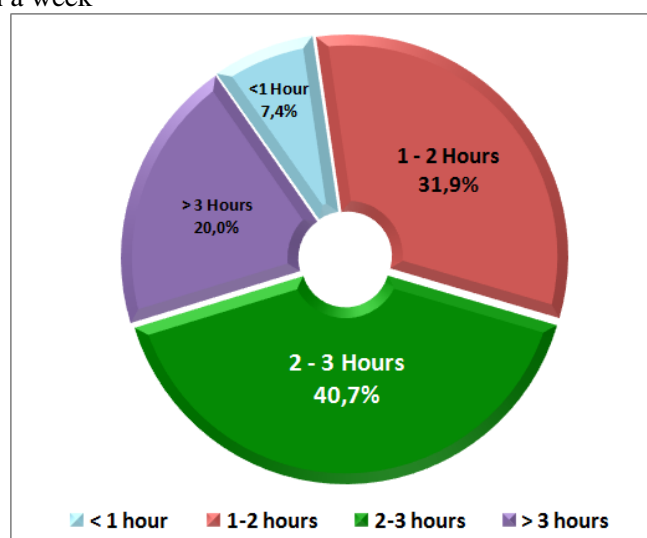
According to the questionnaire, the findings showed that the students were positive towards the use of Duolingo application in learning English. All of the mean in each items were in high level (3.51 – 4.50). The detailed results could be shown from the following tables.

Table 1. Easiness of using and learning through the use of Duolingo

No	Questions	Strongly Disagree (1) %	Disagree (2) %	Neutral (3) %	Agree (4) %	Strongly Agree (5) %	Mean -
1	I think Duolingo is easy to access whether from my mobile phone or laptop.	0,0	1,5	6,7	53,3	38,5	**4,3**
2	I feel Duolingo features is easy to use and to interact with other users.	0,0	1,5	16,3	55,6	26,7	**4,1**
3	I think it is covenient to practice English trough Duolingo since I can access it anytime and anywhere.	0,0	0,7	15,6	44,4	39,3	**4,2**

From the table 1 we can see the combination of the strongly agree and agree results we acquired from questionnaire, we find that 91.8% of the participants think Duolingo is easy to access whether from mobile phone or laptop, 82.3% find the features in Duolingo is easy to use and to interact with other users, and 83.7% agree that practice English through Duolingo is convenient because they can communicate and access it anytime and anywhere. In other words, the participants do not have any problems related to the features and the access of Duolingo in learning English.

Table 2. Usefulness of learning English through Duolingo

No	Questions	Strongly Disagree (1) %	Disagree (2) %	Neutral (3) %	Agree (4) %	Strongly Agree (5) %	Mean -
1	I think Duolinguo features are variative, interesting and useful.	0,0	2,2	15,6	54,8	27,4	**4,1**
2	I feel Duolingo gives me opportunities to enhance my English outside the classroom.	0,0	0,7	6,7	42,2	50,4	**4,4**
3	I think Duolingo is helpful to improve my English skill.	0,0	0,7	14,1	58,5	26,7	**4,1**
4	I feel Duolingo is useful to practice my English skill.	0,0	1,5	8,1	57,8	32,6	**4,2**

Table 2 demonstrates that Duolingo application is useful in learning English at several aspects. Almost half of the participants agree that Duolingo features are useful, convenient and fun. Then, more than 50% strongly agree that Duolingo gives them opportunities to enhance their English outside classroom. Besides, 85.2% of them also agree that Duolingo is helpful and 90.4% of them state it is useful for improving their English skills (combination results from agree and strongly agree). It means that most of the students feel that Duolingo can be used to enhance their English ouside classroom at anytime and anywhere.

Table 3. Effectiveness and language improvement through the use of Duolingo

No	Questions	Strongly Disagree (1) %	Disagree (2) %	Neutral (3) %	Agree (4) %	Strongly Agree (5) %	Mean -
1	I think Duolingo is an effective way to improve my English anytime and anywhere.	0,0	1,5	7,4	55,6	35,6	**4,3**
2	I practice reading and writing through Duolingo.	0,0	0,7	18,5	63,7	17,0	**4,0**
3	I practice listening and speaking through Duolingo.	0,0	2,2	18,5	61,5	17,8	**3,9**
4	I learn grammar or structure through Duolingo.	0,0	3,7	25,9	57,8	12,6	**3,8**
5	I practice translating words and sentences through Duolingo.	0,0	3,0	20,0	49,6	27,4	**4,0**
6	I think Duolingo enrich my vocabulary.	0,0	0,7	15,6	42,2	41,5	**4,2**
7	I believe that my achievement is possible to increase after the use of Duolingo.	0,0	4,4	28,1	57,8	9,6	**3,7**

Thus, Table 3 reveals that more than half of the participants agree that Duolingo is effective to improve students' English skills anytime and anywhere. They also state that it can be used as a media for practicing their reading, writing, listening and speaking skills. Besides, they can also learn grammar and translating through Duolingo. Another point is 83.7% agree that it can enrich their vocabulary. Finally, only 67.4% of the participants believe that it could possible to increase their English ability after the use of Duolingo. There are more than 30% of the participants who do not believe it could increase their achievement. Moreover, majority of them still expect that it is effective to improve their achivment in learning English.

Table 4. Attitudes towards learning English through the use of Duolingo

No	Questions	Strongly Disagree (1) %	Disagree (2) %	Neutral (3) %	Agree (4) %	Strongly Agree (5) %	Mean -
1	I think doing assignment through Duolingo is more fun than conventional way.	0,0	0,7	23,0	60,7	15,6	3,9
2	I think using Duolingo develop self-learning skills among students because we can measure our progresses on Duolingo.	0,0	3,0	36,3	49,6	11,1	3,7
3	I feel learning English through Duolingo makes is more interesting.	0,0	0,0	15,6	45,9	38,5	4,2
4	I have positive attitudes towards learning English through Duolingo.	0,0	0,7	9,6	52,6	37,0	4,3
5	I think using Duolingo makes learning English is easier.	0,0	1,5	11,1	67,4	20,0	4,1
6	I feel Duolingo encourages me to spend more time in learning English.	0,0	2,2	19,3	53,3	25,2	4,0
7	I enjoy when I am learning English through Duolingo.	0,0	1,5	5,9	48,9	43,7	4,3

Table 4 describes that more than 60% of the participants think that doing assignment through Duolingo is more fun than doing assignment on paper, 60.7% of the them approved that Duolingo develop their self-learning skills because they can measure their progresses day by day, 84.4% also feel that Duolingo makes learning English is more interesting. Then, 89.6% of the participants have positive attitude towards the use of Duolingo in learning English. However, more than half of the participants also think that using this application make learning English more easily. Finally, majority of the participants state that they enjoy when they are learning English through the use of Duolingo.

Table 5. Enhancing Students' learning motivation through the use of Duolingo

No	Questions	Strongly Disagree (1) %	Disagree (2) %	Neutral (3) %	Agree (4) %	Strongly Agree (5) %	Mean -
1	I feel motivated to play Duolingo when I find my friends get higher score than me.	0,0	3,7	28,1	58,5	9,6	3,7
2	I feel Duolingo can increase my motivation in learning English.	0,0	1,5	6,7	60,7	31,1	4,2
3	I feel motivated to practice my English skills through Duolingo outside classroom.	0,0	3,0	9,6	65,9	21,5	4,1

Table 5 shows that half of the participants feel motivated to play Duolingo when they know their friend or the other users get higher score. Furthermore, there were 91.8% of the participants feel that Duolingo can increase their motivation in learning English and 87.4% of them feel motivated to practice their English skills outside the classroom through the use of Duolingo.

Furthermore, after collecting and analyzing data from interview, the researcher found various responses from the students about their thoughts towards the use of Duolingo for learning English. Several students describe about the positive aspects and the benefit of using Duolingo in learning English as following:

1. "I think Duolingo is great educational games application because it is free software in learning English. Then, this application is flexible because can be played and learned anywhere and anytime. Besides, it is user friendly and compatible for many devices. Everybody can play and learn through the use of this application easily".

2. "I think the use of Duolingo in learning English is an adequate way to today's context. It could stimulate and motivate me in learning English. Through the use of Duolingo I could practice listening, speaking, writing, and reading in practical and fun way. I can also learn grammar through Duolingo, there are many examples of part of speech and language structure on the questions given. I can understand how to arrange statement in English, how to pronounce words or sentences correctly, translate phrase, and so on. I think Duolingo makes me more adept than before, it really helps me in learning English".

3. "I think duolingo help me a lot in learning English because it can enrich my vocabulary. I know many new vocabularies after finishing the lessons on Duolingo because there are many kinds of topics in duolingo, namely; part of speech, adverb of time, education, technology, economics, politics, etc".

4. "I think this game is pretty complete. I can set the daily goal setting. The level is from basic or casual, regular into serious or difficult. The higher the level, the harder the games will be. Besides, this game also better to sharpen my brain than another kinds of games because I get many knowledge and information about English".

5. "I think Duolingo helps me in writing and pronouncing words or sentences in good and correct way. By using Duolingo my vocabulary is getting more and more. It makes me more interested to learn English independently because it gives me instant feedback by showing information about my progress and my level. I also can play and learn anywhere and anytime".

6. "I like the display of Duolingo. There are many kinds of features on Duolingo namely the points, badges, leaderboards, avatar, theme and so on. This application provides pictures and voice in learning which helps me in improving my pronounciation. It also has voice recognition software so that it can detect whether my pronounciation is already correct or not".

7. " The interesting point in Duolingo, I can make a group and have follower. I can compete with the groups' member or the other users to grab the highest points. I can also see my followers' level, points, and comments that appeared on a 'leaderboard' list. But, this is reset once a week (on Sunday)".

8. "I think Duolingo also teach me become discipline learner because it always reminds me to study every day. When I do not play it in a day, I will get reminder or notification via email from Duolingo and encourage me to play it and improve my English skills".

9. "I feel happy when I am playing Duolingo. Furthermore, I feel proud when I become the leaderboard on the group player. If I could answer the questions, I can collect point and get 'lingots', the currency that Duolingo uses to reward its users. With this lingots I can buy something like some outfits for the mascot etc. This is funny and playful way of learning English".

10. "I like Duolingo because I can learn English while I am playing the games. I feel relax so that I can learn English easily. There is no mental burden in learning or the fear of making mistakes in public eyes".

11. "This application is addictive. I can choose the topic that I want to play based on our ability so that it motivates me to increase my score. I am curious about the next levels' questions and what I have to accomplish to reach another level. Each level is always challenging for me. Thus, I want to play it more and more".

However, several findings above were in line with Anna et.al (2016) who state proved that Duolingo constributed to increase their student's vocabulary, pronounciation and grammatical structures [10]. Besides, they also found there was a significant increase in students' confident and effectiveness of themselves when trying to communicate in English. Next finding also congruent with Zita and Ruta (2017) who point out there three positive aspects of Duolingo [11]. First, it offers a goal-setting tool which can vary to use, depending on students' learning motivation and their goals to reach the best result. Second, it could encourage learner's motivation by earning 'lingots' (virtual currency of Duolingo) which can be used to reward the learner's achievement related to language learning. In addition, Duolingo another supportive tool is badges which display a student's completion or achivement of the level. It effectively stimulates the intrinsic motivation in relation to progress and mastery while learning a language. These statements were correct as the findings of the researcher in this study towards the use of Duolingo on her students' in learning English.

Furthermore, the students also give their comments about the drawbacks of the use of Duolingo in learning English, as follows:

1. "I cannot play Duolingo in offline mode, so I have to turn on the internet data if we want to open the application. So, I cannot open it when I do not have internet package. I think it would be better if this application can upgrade and add offline feature".

2. "I find there are several grammatical structures seemed unnatural and weird in conversation. For example, "My friend introduced me to my husband". This sentence sounded weird for me".

3. "Sometimes I find several questions are repeated in the same level. It makes me bored because I have known the answer from the previous number. I think it makes me easier to finish it. I expect this application can improve the questions and add more challenging topics".

4. "I find there are many advertisements appear on that application. After I finish one level, there will be an advertisement come out. Sometimes these can bother my concentration in playing and learning English".

5. "I find there is no explanation or reason why my answer is wrong especially on grammar or structure exercises. I think if there is a note about the best answer within the explanation, it will be better because it can give me more knowledge".

In conclusion, even though there were several drawbacks of the use Duolingo in learning English, the positive aspects of it still gave more benefits to the students' learning activities. Finally, the result from questionnaire and interview described that majority of the students have positive perception and attitude towards the use of Duolingo application in learning English. They agree that it is an effective way to improve their English skills and their motivation in learning English. This findings in line with Mulya and Refnaldi study (2016) who agree that Duolingo has interesting features that can increase students' interest and motivate them to learn English [12]. Another findings also proved that educational game applications have positive effects on students' ability. It is congruent with Hyungsung (2012) who states that the positive effect of educational games is it can promote students' academic achievement through special subject education which support by selected games [13]. Then, the students' general abilities namely self-efficacy, problem solving, decision making, logical thinking, creativity, communication and so on can be developed by playing games. In addition, Tory in Anna (2016) describes that the educators and the students themselves are discovering the virtual resources can be excellent support face-to-face activities. It means that this application could help the students' learning process which contribute to the students' achievement.

4. Conclusion

This study aimed to investigate students' perception towards the use of Duolingo application in learning English. The findings of this research was the students have positive perception towards the use of Duolingo in learning English because it has many benefits to support students' learning process. This application could increase students' English skills and motivate them in learning English. They also felt comfortable and enjoyed learning English through the use Duolingo. Furthermore, majority of the students agreed that using Duolingo in learning English was an effective and interesting way. The finding also described that overall means scores of each items from questionnaires' were in high level (3.51-4.50). However, there were several drawbacks of the use Duolingo in learning process, for example the unnatural sentences, annoying advertisements, repeated questions, and lack of grammar guide. We expect this problems could be overcomed in the near future. Finally, the researcher recommends and suggests to other researchers to use Duolingo in their students' teaching and learning activities due to its benefits. She also suggest to other researchers to continue this study based on the drawbacks of this application.

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