



# Gamification in EFL classroom to support teaching and learning in 21<sup>st</sup> century

Indah Sri Redjeki\*, R. Muhajir

Universitas Ibn Khaldun Bogor

In the 21st century, the use of games becomes a trend within adults and youngsters, and has recently obtained a massive notice of academics, educators, and practitioners. Gamification is a term used in learning with games that can be used to improve English since it reflects an innovative and captivating learning activity. Several studies on gamification show that it can make students feel more excited and motivated during their effort to elevate their English language skills. In this research, one medium of gamification called Duolingo was explored in grammar learning activities for the second-year students in the subject of “Grammar for Written Discourse”. They used Duolingo from their smartphones to support their grammar learning. This research employed an action research design in which observations, questionnaires, and documentation were used to collect the data. By the end of the result, it can be concluded that Duolingo is a medium that can be effectively used to implement gamification in language learning. It is also confirmed that students gave positive attitudes and results in the implementation of Duolingo in grammar lesson. The results of the research can be used as a reference in facilitating the students with innovative and captivating English learning to support teaching and learning in the 21st century.

**Keywords:** grammar, gamification, Duolingo.

## INTRODUCTION

Grammar is the English language essential that enables ESL/EFL learners to read, write, speak and understand English effectively. However, it is a complex language variable that makes it challenging to teach and learn (Hashim et al., 2019). This is in line with a study by Hossain (2018) who discovers that students are weak in English grammar, vocabulary and speaking skill although they believe that formal study of grammar is important to language learning. They also tend to believe that studying and practicing grammar in the classroom help to improve their communicative ability very quickly. Therefore, the teaching of grammar should be fun to assist learners with better achievement (Hashim et al., 2019).

Grammar teaching has advanced beyond the memorization of rules or dialogues, and is more strongly rooted in helping learners enhance their communicative skill, demanding tasks that require them to understand grammatical forms, their meaning and their usage. Teachers should direct students to assess grammar in the sense of wider discourse as well as to engage in substantive negotiation (Bikowski, 2018). This needs to be achieved by recognizing that today's learners are digital natives. They have grown up with technological advancement and have various methods for their learning process and higher expectations for teaching and learning (Kiryakova et al., 2014).

### OPEN ACCESS

ISSN 2503 3492 (online)

\*Correspondence:

Indah Sri Redjeki

Indahsri.redjeki@uika-bogor.ac.id

Received: 7th September 2020

Accepted: 2nd March 2021

Published: 8th April 2021

Citation:

Redjeki and Muhajir. (2021).

Gamification in EFL Classroom to Support Teaching and Learning in 21<sup>st</sup> Century.

J. Eng. Educ. Society. 6:1.

doi:10.21070/jees.v6i1.882

In today's society, teachers should value literacy and is willing to adjust to more efficient methods as the effort of producing the best results in grammar learning activities. Consequently, today's language classrooms are extremely different from that of the mid - to late- 20th century. The focus on language education in the 21st century is no longer on grammar, memorization, and learning from rote, but rather utilizing language and cultural understanding as a means to interact and connect to others around the world ([Parvin & Salam, 2018](#)). Traditional assumptions of education are delivering way to newer, more innovative ways of thinking about how we learn, teach, and obtain knowledge. The American Council on the Teaching of Foreign Language (ACTFL, 2013) in [Parvin & Salam \(2018\)](#) perceived that technology has been utilized to both assist and improve language learning. It is now rare to find a language class that does not employ some form of technology.

The most obvious reason for using technology in the language classes is to make students more excited and motivated as well. [Shyamlee & Phil \(2012\)](#) asserted that "The last two decades have deposed a revolution due to incipience of technology, and has shifted the dynamics of various industries, and has also affected the industries and the way people communicate and work in the society. This speedy rising and advancement of information technology has proposed a greater pattern to explore the new teaching model. As a result, technology plays a highly important role in English teaching." Similarly, with the English learning atmosphere in a university in Bogor, technology is used in English classrooms to make students more excited and motivated as well, and help them triumphantly master English as a foreign language. This is related to the vision of the university that technology aggregates the basis for all academic activities.

Besides, [Kiryakova et al., \(2014\)](#) reveal that teachers face new challenges and need to discuss critical matters related to settling the learning process to the needs, interests and passions of students. They need to practice various teaching strategies and techniques that embolden students to be active participants with a strong motivation and dedication to their learning. Current educational paradigms and phenomena in education present the framework for the application of innovative methods and strategies to incorporate an active learning process. Gamification in education is one of these phenomena.

By [Su & Cheng \(2015\)](#), gamification is "The use of game design elements and game mechanics in non-game contexts in order to engage people and solve problems". It can encourage and motivate students to accomplish the goals of their English learning since it exhibits an innovative and captivating learning activity. It also enables students to play an active role in the learning process, thereby fostering constructive learning, skill development and problem-based learning ([Martí-Parreño et al., 2016](#)). [Tan \(2018\)](#) asserts that gamification is an innovative pedagogical technique or strategy in which digital games are applied in an educational

environment and as a learning tool. Gamification is well-aligned with a globalized and multicultural English language class in higher education where student-centered approaches tend to a more culturally varied and technologically oriented learning environment. Specific game features may be utilized in gamification or non-game contexts to produce successful player communication as well as endurance and motivation to succeed or learn. The outcome of particular game elements on players explicates the motivational aspects of the participation of the game, and investigating the game elements may be responsible for increasing the passion to participate and involve in a grammar learning game ([Zarzycka-Piskorz, 2016](#)).

[Bicen & Kocakoyun \(2018\)](#) addressed in their research that a new learning experience that developed students' engagement and motivation could be formed in a learning environment that included a gamification approach to competency evaluation. In October 2010, the innovative new approach, called gamification, came up in the mobile application that intended at encouraging the participation of students in classroom activities and supporting particular behaviors. The result of their research revealed that gamification made the learning process more attractive, so students were more excited and motivated as well in achieving the learning goals. In other words, motivation is an important element that can make students successful in the most learning process. Thus, gamification that can improve students' motivation and ambitions for success in the learning process can produce a more effective learning process.

More specifically, [Munday \(2015\)](#) revealed that most of students nowadays have owned smartphones, and almost 66% of the population of the world had one of these phones by the end of 2015. These smartphones or mobile devices can be outfitted with a wide range of applications that can be used for specific purposes; one of these is gaming or gamification used to acquire foreign languages. One media of gamification, called Duolingo, will be the centre of this research.

It is explained by [Munday \(2015\)](#) that Duolingo is a free application designed by Luis Von Ahn and Severin Hacker in November 2011 with a slogan of "Free language education for the world." From its website, it is recognized that it has more than 30 million registered users. It extends several languages for English speakers as well as others for non-English speakers. ([Jašková, 2014](#)) adds to her clarification that Duolingo is a free language learning program designed for users to make progress through lessons in which they simultaneously help translate various websites and other documents. It has an excellent learning strategy because it has a very motivating learning method that uses a game mechanics approach to motivate students to learn primarily. Duolingo also has distinguished advantages to other software packages of language learning because its users have to enroll online and give a working email address. It concedes extracting the exact time of use or study by date Duolingo

users have to register online and present a working email address and time and by various activities: time applied for lessons, time applied for translation and time applied for other activities ([Vesselinov & Grego, 2012](#)).

The preliminary results recommend that Duolingo is an easy-to-use app that is beneficial and has potential even though its main lesson is not based on communicative competence. It is usually savored by students because of several elements, such as the accessibility on a mobile device, its gamification aspect, and the variety of tasks ([Vesselinov & Grego, 2012](#); [Jašková, 2014](#); & [Munday, 2015](#)).

In more detail, [Munday \(2015\)](#) stated in her research that her students seemed to find Duolingo an easy-to-use, helpful, and enjoyable app to practice Spanish. They seemed to like it more than regular, book-based homework because of the ease it was offering. They liked the fact that it could be accessed in a variety of formats, particularly via smartphones. Eventually, they also appreciated its gamification elements. [Munday \(2015\)](#) argued that this app was successful due to the way in which lessons were delivered with brief, varied prompts and interlinked skills. She also saw that the methods used in Duolingo were combined with spaced repetition, and this could make learning more efficient.

The previous research on grammar, which states that teaching grammar should be fun to assist learners with better achievement ([Hashim et al., 2019](#)), can be attributed to the nature of Duolingo in which it is an easy-to-use, helpful, and enjoyable app to practice Spanish or other languages since it is a free language learning program ([Munday, 2015](#) & [Jašková, 2014](#)). The other characteristic of Duolingo mentioning that Duolingo is fun because of its gamification aspect ([Vesselinov & Grego, 2012](#); [Jašková, 2014](#); & [Munday, 2015](#)), can also be connected to the previous research related to gamification used in the subject of grammar or a grammar learning game that may be responsible for increasing the passion to participate in the subject ([Zarzycka-Piskorz, 2016](#)). This is in line with the information on its site saying that Duolingo can make the players stay motivated with rewards by earning virtual coins, unlocking new levels, and watching their fluency scores rise as they master new words, phrases, and grammar.

Observing that the Duolingo's positive things can be implemented in the language learning, the current research was conducted to investigate Duolingo in the teaching of grammar in the researcher's classroom. This was done based on the situation in the classroom in which most of her students found grammar difficult, and it is the teacher's obligation to find ways to overcome student difficulties in learning, especially in learning grammar. [Hossain \(2018\)](#) supported this situation in his research discovering that students were weak in English grammar although they believed that the formal study of grammar was important to language learning. [Sawir \(2005\)](#) also explained in her study that the learning difficulties faced by students were grounded

in weaknesses in students' prior learning experiences - focused on grammar.

Acknowledging the importance of facilitating students with innovative and captivating grammar learning activities, the research on exploring gamification in the grammar lesson as part of EFL classroom is very important to be conducted to support teaching and learning in the 21st century. The objectives of this research were taken from the two research questions: 1) How is the implementation of Duolingo in EFL classroom? 2) What are the students' responses toward the use of Duolingo in EFL classroom? By the end of this research, the results of study would figure out the implementation of Duolingo in EFL classroom and the students' responses towards the use of Duolingo in EFL classroom.

## METHODS

An action research design ([Stringer, 2010](#)) was adopted to investigate how the gamification of Duolingo could help students achieve the goals of grammar learning process. The type of action research cycle applied in this educational research followed the theory of [Coghlan & Brannick \(2014\)](#) in which each cycle has four steps: diagnosing, planning, action, and evaluation. The action research design consisted of quantitative (survey) and qualitative research methods (observations, questionnaires and documentations) to collect and analyze data from 15 second semester students in EFL classroom, specifically in the subject of "Grammar for Written Discourse". They were all female students from a university in Bogor – West Java who have grammatical skills ranging from low, medium to high. This study was conducted in 2 cycles and each cycle consisted of 2 days, so that the length of time of data collection was 4 days. Every day from 8 to 11 July 2020 they worked on Duolingo's exercises at home using their own smartphones based on some criteria (reason, goal, and topic) that were determined by the researchers. During this activity, the researchers opened discussion or question-answer session with the students, and asked them to provide information about what they had discovered and experienced while using Duolingo. After both cycles ended, they were asked to respond to the implementation of duolingo in the grammar class as part of EFL classroom.

Because of the Covid-19, schools, universities and many other learning institutions have been temporarily closed, and it much influenced to the changes of the data collection method and the number of participants. At the beginning, this research was planned to involve 40 students from two grammar classrooms, and the researchers were going to collect the data directly to the students in class. Finally, instead of the direct (offline) data collection, this research applied the online data collection in two conditions.

First, the students must have smartphones in a good condition with a large capacity internal memory. Second, their smartphones must always be supported by an internet quota and a good internet connection. Without the two conditions, the online data collection will be difficult to do. Therefore, the number of students who could meet the conditions and participate in this research was reduced to 15 students. They were asked to join in a WhatsApp group created by the researchers. WhatsApp group is the most appropriate way to conduct the online data collection in which the researcher can communicate with the students more easily.

The instruments used in the online data collection were still the same as the offline one: observations, questionnaires and documentations, but of course they experienced changes or adjustments. Observation was conducted online through the Whatsapp group, and it was done during the online learning process to know the implementation of Duolingo. The researcher made notes of behavior of the participants of the research and situations happened during the learning process. Questionnaire was also conducted online using Google form, and it was administered to collect some information related to the responses of the respondents about Duolingo related to the English grammar learning process. The form of the questionnaires was open-ended questionnaires from which the respondents had some rooms to express their knowledge and understanding about Duolingo used in the classroom. Documentations through screenshots from students' smartphones were taken during the online learning process to support the observation. Afterwards, the data gathered from the questionnaire was summarized, computerized and analyzed to get information about the opinions of the respondents about the implementation of Duolingo in EFL classroom especially in grammar subject. Then, the results werematched with the data gathered during observation which was also supported by the documentation. By doing so, the questionnaire and observation data from which the gaps between responses and practices would be found out.



FIGURE 1 | The second feature of Duolingo (I want to learn...)

After installing the application, the students found Duolingo's symbol as the first feature, and the second feature to choose a language they wanted to learn (Figure 1). This application extends several languages for English speakers as well as others for non-English speakers (Jašková, 2014). In this research, the students automatically chose English as a language they wanted to learn.

## RESULTS AND DISCUSSION

### Duolingo Features for Language Learning

The researchers prepared 2 components in diagnosing step of the first cycle, i.e. an online grammar classroom using a Whatsapp group consisting of 15 students, and the preliminary procedure of using Duolingo to be followed by them as shown in some following features.

Why are you learning a language?

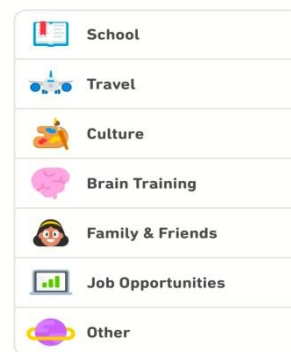
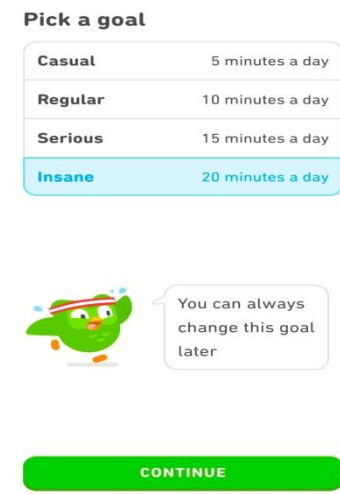


FIGURE 2 | The third feature of Duolingo (Reason)



In [Figure 2](#), the third feature asked the students the reason of why they were learning a language. There are 7 options on this feature: school, travel, culture, brain training, family and friends, job opportunities, and other, and they were asked to choose “school”.



**FIGURE 3** | The fourth feature of Duolingo (Pick a goal)

There are 4 options on the fourth feature ([Figure 3](#)): casual (5 minutes a day), regular (10 minutes a day), serious (15 minutes a day), and insane (20 minutes a day). The goal can be changed anytime. All the students were asked to choose “15 minutes a day”, but they can add the duration if they want to explore more about Duolingo relating to the development of their motivation and self-directed learning.

On the fifth feature of choosing a path, there are only 2 options to be chosen: learning English for the first time (start from beginning) or already know some English. The respondents were asked to choose the second option.

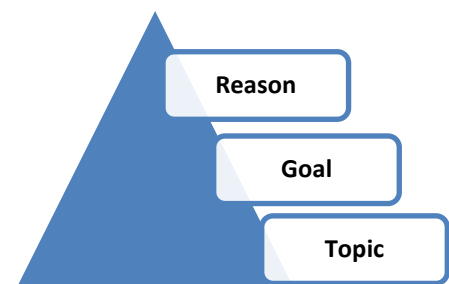
Soon after the fifth feature, the students had to take the preliminary test (the sixth feature) as a consideration on the topics that Duolingo will give to the students. In other words, the student’s preliminary test result determines the number and the kind of topics given by Duolingo. The test just needed 5 minutes and its questions would be easier or more difficult in accordance with the student’s proficiency level based on the student’s answers.

Having finished doing the test, each student got the result (the seventh feature). In fact, the 15 students’ preliminary test results were varied from 42% up to 72%. As a result, not all the students got the same topics. This would be a consideration for the researchers in giving the topics for the students which were same and relevant to the grammar materials they were learning. The list of the topics based on the maximum result of 72% were: Basic 1, Basic 2, Phrases, Food, Animals, Plurals, Clothes, Present Verbs 1, Colors, Questions, Conjunctions, Occupations, Adjectives 1, Present Verbs 2, Adverbs, Past Verbs 1, Infinitives, Past Verbs 2, Abstract Nouns 1, and Comparative Adjectives. The number of the given topics will increase if the students regularly add the exercises every day.

After the preliminary procedure carried out by all the students at home, each of them personally shared information to one of the researchers (via Whatsapp) about what they found and experienced during the preliminary test. The researcher then gave responses towards the students’ information and took notes the three important aspects to be taken as the diagnosis result of the first cycle: the reason of using Duolingo, the goal each day, and the topic given to the students.

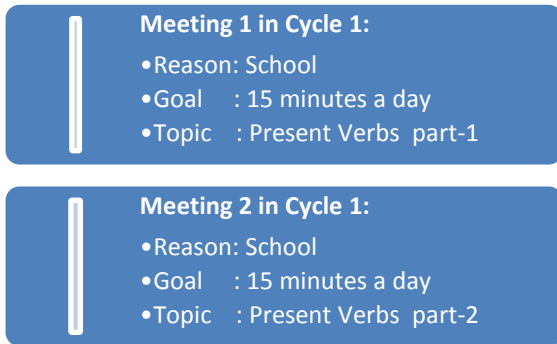
**Observation results of Cycle I and II**

The researchers applied two cycles in this study to gain further information about the situation and condition of the researchers’ classroom in order a successful learning can be accomplished. There were four steps completed in every cycle: diagnosing, planning, action, and evaluation ([Coghlan & Brannick, 2014](#)). The first step was diagnosis as resulted in figure 4 showing that the students have discovered three important aspects in the diagnosis cycle which are: reason, goal, and topic. These aspects helped them to familiarize themselves into the implementation of the application. Therefore, they knew what they had to do to implement the application appropriately and effectively in improving their grammar knowledge.

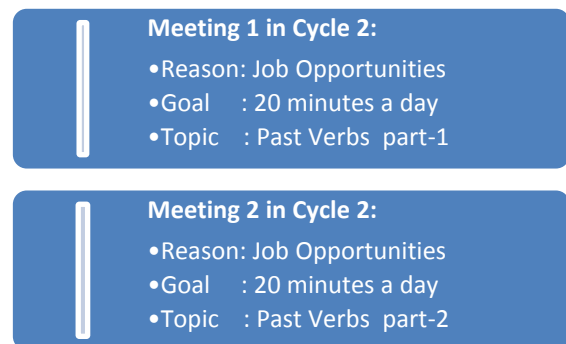


**FIGURE 4** | Diagnosis Result in Cycle 1

Following the diagnosis’s results earlier in [Figure 4](#), planning was carried out after the three important aspects in the application had been found. The reason of using Duolingo determines the difficulty level of Duolingo’s exercises. This could be a consideration to anticipate the emergence possibility of boredom or uncomfortable situation during the learning process with Duolingo. The optional goal a day provided by Duolingo (5, 10, 15 or 20 minutes) could be taken as a basis to evaluate whether or not the students are willing to elevate their daily exercise gradually as indication of self-directed learning improvement. The topic must be the same to all the students and relevant to the grammar materials they were learning so that the implementation of Duolingo was utilized as a support in grammar subject as part of EFL classroom. Therefore, the three important aspects were determined as the basis of planning actions in cycle 1 as follows:



**FIGURE 5** | Planning actions in Cycle 1



**FIGURE 6** | Planning actions in Cycle 2

In relation with planning actions as shown in [Figure 5](#), action stage was carried out accordingly. The first meeting of cycle 1 was done at the same day after the preliminary procedure. In the action stage, the researchers immediately took an action by informing the above planning to the students and asking them to continue playing Duolingo following the three aspects planned earlier by the researchers: 1) Choose “school” for the reason, 2) Choose “15 minutes a day” for the goal, and 3) Choose “present verbs part-1” for the topic. The students were also informed that the activity was not going to be graded from which they were asked to work on Duolingo individually from home using their own mobile phones. After finishing the activities in meeting 1, the students reported what they experienced with Duolingo application. The researchers then took notes and gave responses to the students’ reports. Later, a discussion about Duolingo usage took place either privately on the student’s Whatsapp number or simultaneously in the group. It allowed them to share information freely and widely regarding the things they found when playing Duolingo.

The last step was an evaluation in which the researchers analyzed the notes taken from the discussion via the Whatsapp group or private number. From the evaluation step, it can be concluded that the previous steps (diagnosing, planning and action) ran successfully. In the second meeting of cycle 1, the same steps were conducted with a different topic: present verbs part-2. After discussion and evaluation, the researchers got some information from the students. Most of them said that the exercises of present verbs part-2 were still quite easy. Moreover, Duolingo gives repetitions for the wrong answers, so this made them a little bored. Other than that, from the observation, the researchers found 5 students who did not seem to have good motivation and self-directed learning as well, since they did not add to the allotted time or the exercises given. Therefore, the researchers changed the reason, goal and topic in cycle 2 as seen in the following figure:

Planning action in cycle 2 ([Figure 6](#)) was made based on the evaluation result of cycle one in which the reason, goal, and topic needed to be adjusted. In the first meeting of cycle 2, before the students continued playing duolingo individually, they were asked to change the reason, goal, and topic as follows: “Job Opportunities” for the reason, “20 minutes per day” for the goal, and “Past verbs part-1” for the topic. The next activities until the end of cycle 2 were all the same as the previous cycle. The summary of the two cycles can be seen in the following [Table 1](#):

**The Implementation of Duolingo in EFL Classroom**

Duolingo was used in 2 cycles in which each cycle consisted of 2 meetings, so the total was 4 meetings. In each cycle, the students were asked to play or use Duolingo by working on the exercises given based on the reason, goal, and topic determined by the researchers. After finishing their activities in each cycle, they gave comments and reports to the researchers (via Whatsapp) about what they experienced with the application. A discussion automatically took place between them. Those activities were carried out until the two cycles finished. From the discussions with the students, the researchers found some implementation results of Duolingo in the grammar learning as part of the EFL classroom.

*First*, the student’s preliminary test result determines the number of topics given by Duolingo. Among the 15 students, 5 students got low results, that is, less than 50%. As a result, they did not get the complete topics of present verbs which are the first main topic of the research. They only got 2 parts of the topic, so they could not carry out the exercises for the last part (present verbs part-3). This situation may change if they do the exercises every day, especially if they increase their goals to do more Duolingo’s exercises. In other words, the topics given could increase depending on the progress of the student’s practice. This also could motivate them to improve their grammar knowledge.

**TABLE 1** | The Summary of the two cycles

CAR Cycles	Cycle 1		Cycle 2	
	Meeting 1	Meeting 2	Meeting 1	Meeting 2
Diagnosing	<ul style="list-style-type: none"> <li>All students did the preliminary procedure of using Duolingo individually using their own mobile-phones.</li> <li>Result: the students found three important aspects in Duolingo to be known before they implemented Duolingo for their grammar learning.</li> </ul>	It is a continuation of the first meeting of cycle 1.	The diagnosis had been done in the first meeting of cycle 1, but there were changes in the three aspects of using Duolingo based on the evaluation from the second meeting of cycle 1.	It is a continuation of the first meeting of cycle 2.
Planning action	Create an individual task relating to the three important aspects in Duolingo: <ul style="list-style-type: none"> <li>Reason: School</li> <li>Goal : 15 minutes a day</li> <li>Topic: Present verbs part-1</li> </ul>	Create an individual task relating to the three important aspects in Duolingo: <ul style="list-style-type: none"> <li>Reason: School</li> <li>Goal: 15 minutes a day</li> <li>Topic: Present verbs part-2</li> </ul>	Create an individual task relating to the three important aspects in Duolingo: <ul style="list-style-type: none"> <li>Reason: Job Opportunities</li> <li>Goal: 20 minutes a day</li> <li>Topic: Past verbs part-1</li> </ul>	Create an individual task relating to the three important aspects in Duolingo: <ul style="list-style-type: none"> <li>Reason: Job Opportunities</li> <li>Goal: 20 minutes a day</li> <li>Topic: Past verbs part-2</li> </ul>
Taking action	<ul style="list-style-type: none"> <li>Students worked on Duolingo’s exercises from home.</li> <li>Students reported what they experienced with Duolingo.</li> <li>Discuss the students’ findings in Whatsapp group.</li> </ul>	<ul style="list-style-type: none"> <li>Students worked on Duolingo’s exercises from home.</li> <li>Students reported what they experienced with Duolingo.</li> <li>Discuss the students’ findings in Whatsapp group.</li> </ul>	<ul style="list-style-type: none"> <li>Students worked on Duolingo’s exercises from home.</li> <li>Students reported what they experienced with Duolingo.</li> <li>Discuss the students’ findings in Whatsapp group.</li> </ul>	<ul style="list-style-type: none"> <li>Students worked on Duolingo’s exercises from home.</li> <li>Students reported what they experienced with Duolingo.</li> <li>Discuss the students’ findings in Whatsapp group.</li> </ul>
Evaluating action	Read notes taken from the observation in the action step.	Read notes taken from the observation in the action step.	Read notes taken from the observation in the action step.	Read notes taken from the observation in the action step.

Second, there are some language skills in Duolingo that the students can improve: grammar, writing, translating, listening, and pronunciation, but all of the 15 students assumed that the application could be more suitable to improve grammar since the exercises given were a lot about grammar. Among the skills in Duolingo, 12 out of 15 students found grammar as the easiest one and listening as the most difficult one. Luckily, the application gave repetitions for the wrong answers, so they could get good progress and understanding on the materials given. On the contrary, the repetition made 5 of 15 students bored, especially because the topic of present verbs was easy for them.

Third, the daily goal provided by Duolingo (5, 10, 15, or 20 minutes) can be taken as a basis to evaluate how the students think about the application and whether the students have good motivation or not to add Duolingo’s exercises every day. In fact, 10 out of 15 students added 5 up to 20

minutes a day as they thought that learning grammar with Duolingo was like playing a game, so it was fun for them. Therefore, they took the initiative to add Duolingo’s exercises in improving their grammar knowledge. Among the 10 students who added the goal: 8 students added Duolingo’s exercises with the topic given (present verbs and past verbs), while 2 students tried the exercises from different topics. Their opinion that Duolingo was a fun online application was in line with a study by [Munday \(2015\)](#) who investigated user’s satisfaction towards the use of Duolingo whether or not it was an enjoyable app to practice Spanish. After she combined the strongly agree with the agree results, she observed that 80,4% enjoyed using it, and 78% were satisfied with the app.

Fourth, there were some other characteristics of Duolingo found by 8 out of 15 students: 1) There was no advertisement in Duolingo as in other applications, so this made them more comfortable when playing the application;

2) Duolingo understood Indonesian words and would automatically correct the wrong words. One of the students translated the sentence “I write books” into the Indonesian language “Saya menulia buku”. It was an incorrect translation because of the typo he made, but Duolingo understood what he meant and could make a correction for the sentence became: “Saya menulis buku.” 3) Duolingo gave the right answers when students could not answer the questions correctly. This made students can learn the materials by themselves to understand them better especially about grammar.

Fifth or the last about the problems that the students faced were all the same: 1) 15 out of 15 students mentioned that the main problem when using Duolingo was the poor internet connection. This is not a new thing, because we know that the most common problem relating to the use of internet is the internet connection which is not always good. 2) 5 out of 15 students found that the other problem was distraction from a family member. They explained that learning with Duolingo needed good concentration and quite environment to get maximum results.

From the implementation results, it can be concluded that most of the students feel the benefits they have gained from learning English with Duolingo. The implementation of Duolingo has supported the students to understand the English materials better, especially grammar.

### The Students' Responses towards the use of Duolingo in EFL Classroom

Upon completion of the two cycles, all students obtained a questionnaire via the Google App. Their responses were then used to assess the students' responses towards the use of Duolingo in the grammar lesson as part of the EFL classroom. The questionnaire consisted of 9 open-ended questions adopted from [Munday \(2015\)](#). The list of questions can be seen on the appendix below. The questionnaire was divided into three themes: Duolingo in the EFL Classroom, the use of Duolingo to enhance students' interest in learning English, and the use of Duolingo to promote self-directed learning.

#### Duolingo in EFL Classroom

Due to [Jašková \(2014\)](#), “The languages available in Duolingo are English, Spanish, Portuguese, Italian, French, German, Russian, Hungarian, Dutch, and Turkish, but Duolingo started with English, Spanish and German. The Duolingo system is more effective because the learners (mainly those whose mother language is different from English) can try to think in English, discuss and deal with things in a foreign language.” With all the language skills existed in Duolingo, people who use English as a foreign language could improve their English by using the application.

In this current study, 15 out of 15 students as the respondents stated that Duolingo could improve their English in general because it provided varied exercises related to the general topics around their life such as food, animals, clothes, job, colors, and so forth. Of course, they

had to focus and concentrate when using the application. Not only answered the questions for the exercises but also understood the materials more deeply. By doing so, they could get new vocabulary, phrases, and sentences as a basis for improving their English. They could also get some experiences of practicing English skills such as writing, reading, listening, translating, and speaking skills through pronunciation practices.

*“All language skills in Duolingo are honed, especially reading, writing, listening and speaking.” (Student 1)*

Besides the language skills, all the students said that Duolingo could improve their grammar knowledge since the questions in the given exercises were a lot about grammar. When the students made the wrong answer, Duolingo gave them the correct one and repeated the question until they could answer it correctly. This repetition helped them understand the material better and improve their English grammar. One of the students said that after learning with Duolingo, he/she realized that grammar was especially very important for writing skills. This is supported by [Syahputra \(2019\)](#) in his research that examined the effectiveness of Duolingo in reducing student grammatical errors in writing text in English, and the results suggested that the use of the Duolingo was adequate to minimize the grammatical errors in the text.

*“Learning with Duolingo helps me understand English grammar properly and clearly. Even if I cannot respond correctly to the question, the correct answer will be given. By knowing the mistakes I have made, I will learn more about the grammar materials.” (Student 2)*

In addition, the application also has supporting characteristics for EFL classroom that is easy to use. All the students agreed that Duolingo was easy to use as long as they had an internet quota and a good internet connection. They only needed to have an email or Facebook account to install the application. The preliminary procedure of using Duolingo and instructions for carrying out the given exercises were simple to understand. The exercises only asked the students to choose an appropriate answer, pronounce, write, and translate a short phrase or sentence. Therefore, the application was user friendly and suitable to all levels, so everyone can learn English from basic. This is in line with a study by [Munday \(2015\)](#) who investigated user's satisfaction towards the use of Duolingo. She observed that 82% found Duolingo helpful, and 91% found it easy to use.

*“Duolingo application is very easy to use because it only uses an email / g-mail / facebook account. Well, there are some instructions that make it easier for us to use Duolingo.” (Student 3)*

From the students' responses mentioned above, it can be concluded that Duolingo could support the English learning process in EFL classroom since the application is easy to use and suitable to all levels. It also provides a lot of English topics in general and the language skills needed by the students who learn English as a foreign language. As part of



the EFL classroom, grammar knowledge could also be improved by the application because it gives more exercises about grammar materials.

### The use of Duolingo to enhance the students' interest in learning English

15 out of 15 students stated that they enjoyed learning English with Duolingo because it was fun, quite interesting, simple, modern, and easy to use. More specifically, 3 out of 15 students really liked the application since learning with Duolingo was like playing a game on a smartphone, so it was so fun and did not make them bored easily. Moreover, the learning process became easier and more practical since the application could be used anywhere and anytime. They could manage their time to study English with Duolingo wherever they were. They also found that the online application run fast or it was not slow when loading and processing. In other words, all the students were satisfied with the application, especially there were 2 students found it very satisfied. From Duolingo, they could learn all language skills they needed to improve their English skills including their grammar knowledge. A study by [Munday \(2015\)](#) found out that 80,4% enjoyed using Duolingo and 78,3% were satisfied with the application. In this current study, 15 out of 15 students (100%) were satisfied with Duolingo, and 2 out of 15 students were very satisfied.

*"Duolingo is a fun English learning application for me because learning with Duolingo is like playing a game but I still get knowledge at the same time." (Student 4)*

When the students enjoyed leaning English with Duolingo and were satisfied with the application, it could be concluded that their interest in learning English could be increased by the application. 13 out of 15 students agreed with this statement because the application was a very interesting game and easy to understand, so it made them happier to learn English. The exercises given were also interesting, especially when they were asked to pronounce words, phrases or sentences. From Duolingo, they could also learn the language skills needed to improve their English. The application was also suitable to all people in different levels, so they dared to learn English even though their levels are still low. It is mentioned in [Duolingo \(n.d.\)](#) that the application keeps in mind that everyone is different and motivation is an essential factor to learning. Therefore, the application provides some motivational features that the students might encounter, such as points, gold, lingots, trophy, fluency score, etc. Apart from this, 2 out of 15 students thought that the application was not really able to increase their interest in learning English. The first one said that it was only supplementary and he preferred to study directly in class. The second one added that sometimes he was bored playing the application, so he needed a good mood and a strong desire to play it.

*"Every time I succeed in leveling up this game, I feel my abilities have increased and I want to continue improving my English. It really increases my interest in learning English." (Student 5)*

From the discussion above, it can be concluded that Duolingo is a fun online learning application that can be used to increase the students' interest in learning both of English grammar and of in general as part of the EFL classrooms.

### The use of Duolingo to promote Self-directed Learning

15 out of 15 students stated that they could learn English independently by using Duolingo because it could be installed on every smartphone that almost all students had and brought anywhere. They could use it anytime and anywhere. One of the students said that he was a typical person who preferred to enjoy his time alone rather than with friends. It means that learning English independently by using Duolingo could be the right choice for him. This was supported by the other one saying that Duolingo was one of the online English learning applications that could be applied in the pandemic situation. Although there was a student who stated that the explanation for grammar exercises in Duolingo was not in detail, but all students agreed that the application was fun like a game, easy to use and very helpful for learning English independently. Of course, this depended on the motivation they had to improve their English as stated in [Duolingo \(n.d.\)](#) that "Motivation is essential to learning. Duolingo has a variety of features, designed to keep learners interested."

*"Duolingo can be used for independent activities because it can be downloaded into cell-phones that could be brought to anywhere and anytime." (Student 6)*

On occasion of the target provided by the application, 10 out of 15 students stated that they added to the allotted time from 5 up to 20 minutes every day to add more exercises since they were interested in the exercises given and they wanted to improve their English. The rest did not add their time regularly every meeting because the internet connection was not always good or there was other activity or task to be done at the same time. This is also in line with the study by [Munday \(2015\)](#) stating that 56,5% completed more lessons than those required for class and more than 50% of the class would continue using Duolingo after the course was completed. Another study by ([Vesselinov & Grego, 2012](#)) stated that "a quarter of the participants studied between 2 and 8 hours, and a quarter of them had 30 hours or more, including 7 persons with 50 hours or more.

*"I always use Duolingo starting from 15 or 20 minutes and add more time, because I always want to finish the next levels each time I've finished one level." (Student 7)*

More about self-directed learning, 10 out of 15 students stated that Duolingo is able to be used as a substitution of regular grammar homework because the exercises in the application gave a lot about grammar such as tenses, articles, etc. The application showed them a correct answer if they made a mistake, and repeated the same question until they could answer it correctly. They enjoyed playing Duolingo since it was like a game. They did not feel as they were really doing homework. Furthermore, 2 out of 15 students

stated something slightly different i.e. it would be much better if Duolingo was just used as additional homework, not a main homework, to support the exercises on the grammar book they used in the classroom. The opinion arose because of the characteristic of Duolingo that did not give a score at the end of an exercise. It only gave a reward when they completed a level. In other words, the use of Duolingo as a substitution of grammar homework could not be well controlled. Therefore, the combination of Duolingo and common homework could be a way of giving tasks to the students in relating to the improvement of their grammar. However, 3 out of 15 disagreed with having Duolingo as homework. It would not be effective because its use via a smartphone could make students less focused on doing their homework. In other words, they might be distracted by other applications on their smartphones when they were going to use the application. In her study, (Munday, 2015) found out 84% of the students in group A liked Duolingo better than other types of homework, 8,7% said "No", and 6,5% said "The same.". On the contrary, 43,8% of the students in group B agreed if Duolingo was used as homework, 43,8% said "No", and 12,5% said "The same." It can be concluded that the use of Duolingo as homework is not something that all students absolutely agree on.

*"Duolingo might be used as an additional homework, not a regular homework, because we still need to learn grammar from books. In other words, we still need regular homework."* (Student 8)

It is still related to the self-directed learning, 12 out of 15 students mentioned that they would continue using Duolingo even after the grammar class was over. This was because they wanted to fill their time to improve their vocabulary, grammar and English in general, especially in the pandemic situation in which they were only at home most of the time, so the application could be the right choice for learning English. A study by Munday (2015) investigated a question whether or not the students would continue using Duolingo, and she found out that 39,1% students said "Yes", 17,4% said "No", and 43,5% said "Maybe".

*"I will continue using Duolingo because I haven't mastered grammar, so hopefully using this application can improve my grammar knowledge in the future."* (Student 9)

From the discussion above, it can be concluded that Duolingo can promote self-directed learning in which all the students can learn English with Duolingo independently. In addition, most of them added their target every day to add more exercises, accepted Duolingo as a substitution of regular grammar homework, and would continue using Duolingo even after the grammar class was over.

## CONCLUSION

Several studies on gamification have shown that it can make students more excited and motivated during their effort to elevate their English language skills. In this current study, one medium of gamification called Duolingo was explored in grammar learning activities as part of EFL

classroom. They played Duolingo at home using their smartphones in order to implement it in the grammar lesson. The implementation of Duolingo has increased student's motivation and self-directed learning. The answers to the questionnaires given to the students inform us that the implementation of Duolingo is seen as a positive activity because of some following reasons. All the students enjoyed learning English with Duolingo as it was fun, quite interesting, simple, modern, and easy to use (user-friendly) as long as there are an internet quota and a good internet connection. They only need to have an email or Facebook account to install the application. It is also suitable to all levels, so everyone can learn English even from basic. Most of the students added to the allotted time per day to work on more exercises. This is because learning with Duolingo is like playing a game on a smartphone, so it is fun and does not make them bored easily. They admitted that they were satisfied with Duolingo because Duolingo can increase their interest in learning English. Therefore, they would continue using Duolingo even after the grammar classroom was over. As a result, the students confessed that Duolingo could improve students' English in general as it provides varied exercises related to the general topics around our life such as food, animals, clothes, job, colors, and so forth. They could get some experiences of practicing English skills such as writing, reading, listening, translating, and speaking skills through pronunciation practices. Duolingo could also improve their grammar knowledge since its exercises were a lot about grammar. When they made a mistake in answering a question given, the application gave them a correct answer and repeated the question until they could answer it correctly. This kind of repetition helps students understand the material given better and improve their English grammar. Nevertheless, not all students accepted the condition in which regular grammar homework was substituted by Duolingo. They accepted Duolingo as an additional homework only, not a regular homework, since there was a possibility that they would not focus or lack of focus while working on grammar homework via Duolingo.

In conclusion, this study has proven that Duolingo, one of gamification, can be implemented into the subject of grammar as part of EFL classroom. In this case, Duolingo provides some motivational interesting features to increase students' interest in working on Duolingo's exercises regularly in order to improve their English skills, especially grammar. This action will not only motivate the students but also promote self-directed learning for them. As a result, it is suggested that teachers or ELT (English Language Teaching) practitioners implement Duolingo to support teaching and learning EFL. Furthermore, to explore more about this type of gamification, it is recommended for the future research to investigate the implementation of Duolingo in some other language skills such as listening, pronunciation, and translating as part of EFL classroom.

## ACKNOWLEDGMENT

We are grateful for having our colleagues from UIKA Bogor who helped us in this research, Movi Riana Rahmawanti for supporting us with valuable advice, supports and guidance that are very beneficial to this study. We would also thank to the reviewers for their recommendations towards this paper.

## REFERENCES

- Bicen, H., & Kocakoyun, S. (2018). Perceptions of students for gamification approach: Kahoot as a case study. *International Journal of Emerging Technologies in Learning*. <https://doi.org/10.3991/ijet.v13i02.7467>
- Bikowski, D. (2018). Technology for Teaching Grammar. *The TESOL Encyclopedia of English Language Teaching*. 1–7. <https://doi.org/10.1002/9781118784235.eelt0441>
- Coghlan, D., & Brannick, T. (2014). Doing action research in your organisation. In London: Sage.
- Duolingo. (n.d.). Guide for leaders in education. Guide for leaders in education - preview & related info | Mendeley
- Duolingo. (n.d) The world's best way to learn a language <https://www.duolingo.com> (retrieved on December 28, 2020)
- Hashim, H., Rafiqah M. Rafiq, K., & Md. Yunus, M. (2019). Improving ESL Learners' Grammar with Gamified-Learning. *Arab World English Journal*. <https://doi.org/10.24093/awej/call5.4>
- Hossain, M. A. (2018). Difficulties of Learning English Language at the Secondary Level: A Case Study of Thakurgaon District. *Journal of Education and Training*. <https://doi.org/10.5296/jet.v5i2.13500>
- Jašková, V. (2014). Duolingo as a New Language-Learning Website and Its Contribution to e-Learning Education. *Duolingo as a New Language-Learning Website and Its Contribution to e-Learning Education.*, 3, 59–70. [https://is.muni.cz/th/342420/pedf\\_m/Duolingo.docx](https://is.muni.cz/th/342420/pedf_m/Duolingo.docx)
- Kiryakova, G., Angelova, N., & Yordanova, L. (2014). Gamification in Education. Proceedings of 9th International Balkan Education and Science Conference. <https://doi.org/10.4018/978-1-5225-5198-0>
- Martí-Parreño, J., Seguí-Mas, D., & Seguí-Mas, E. (2016). Teachers' Attitude towards and Actual Use of Gamification. *Procedia - Social and Behavioral Sciences*, 228, 682–688. <https://doi.org/10.1016/j.sbspro.2016.07.104>
- Munday, P. (2015). the Case for Using Duolingo As Part of the Language Classroom Experience. *RIED. Revista Iberoamericana de Educación a Distancia*, 19(1). <https://doi.org/10.5944/ried.19.1.14581>
- Parvin, R. H., & Salam, S. F. (2018). The Effectiveness of Using Technology in English Language Classrooms in Government Primary Schools in Bangladesh. *FIRE: Forum for International Research in Education*, 2(1). <https://doi.org/10.18275/fire201502011049>
- Sawir, E. (2005). Language difficulties of international students in Australia: The effects of prior learning experience. *International Education Journal*, 6(5), 567-580.
- Shyamlee, S., & Phil, M. (2012). Use of technology in English language teaching and learning: An analysis. A Paper Presented at the 2012 International Conference on Language, Medias and Culture IPEDR Vol.33 (2012) ©(2012) IACSIT Press, Singapore.
- Stringer, E. (2010). Action research in education. *In International Encyclopedia of Education*. <https://doi.org/10.1016/B978-0-08-044894-7.01531-1>
- Su, C. H., & Cheng, C. H. (2015). A mobile gamification learning system for improving the learning motivation and achievements. *Journal of Computer Assisted Learning*. <https://doi.org/10.1111/jcal.12088>
- Syahputra, M. (2019). Duolingo gamification: does it reduce students' grammatical errors in writing?. *Getsempepa English Education Journal*, 6(1), 1-12.
- Tan, L. (2018). Meaningful gamification and students' motivation: A strategy for scaffolding reading material. *Online Learning*, 22(2). <https://doi.org/10.24059/olj.v22i2.1167>
- Vesselinov, R., & Grego, J. (2012). Duolingo Effectiveness Study. City University of New York, USA, 28(1–25). [http://static.duolingo.com/s3/DuolingoReport\\_Final.pdf%5Cnpapers3://publication/uuid/66F5DF12-D322-4400-8488-A09AE8EF47F1](http://static.duolingo.com/s3/DuolingoReport_Final.pdf%5Cnpapers3://publication/uuid/66F5DF12-D322-4400-8488-A09AE8EF47F1)
- Zarzycka-Piskorz, E. (2016). Kahoot it or not?: Can games be motivating in learning grammar? *Teaching English with Technology*, 16(3), 17–36

**Conflict of Interest Statement:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2021 Redjeki and Muhajir. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.