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GAMIFICATION STRATEGY AND THE ENGLISH LEARNING VOCABULARY

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Innovative Pedagogies in English Language Teaching Methodological Strategies

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Each achievement is accomplished with effort and sacrifice, but to obtain it you need the support of your family and especially of our heavenly father.

Therefore, my deepest gratitude to God who has given me life, health, and knowledge to be able to learn every day. To my parents and siblings who have constantly motivated me to achieve this goal. To my son who is my source of inspiration, my engine, and my strength to keep going. Finally, I want to thank my tutor, Mg. Wilma Villacís, with patience and wisdom, knew how to guide me in this project.

DEDICATION

I dedicate my work to the most important person in my life, my son, who has been my constant strength and my motivation to keep going. To my family who has been with me in hard times, supporting me unconditionally.

To my tutor, Mg. Wilma Villacis, who has patiently guided me in the development of this work.

Cristina Jordán Buenaño

Resumen ejecutivo

Este trabajo investigativo fue realizado con el propósito de establecer la efectividad de la estrategia de la Gamificación, en la adquisición de vocabulario en el idioma inglés en los estudiantes del primer semestre de la Carrera de Pedagogía de los Idiomas Nacionales y Extranjeros de la Universidad Técnica de Ambato. Para el desarrollo del estudio se utilizó una metodología descriptiva, correlacional y como técnica de recolección de datos un pre-test y post test de conocimientos que fue aplicado a 73 estudiantes del primer semestre paralelos “A y “B” (36 estudiantes fueron el grupo de control y 37 el grupo experimental). Los resultados demostraron que la mayoría de los estudiantes tenían un vocabulario limitado en el idioma inglés. Por tal razón, se propuso el uso de la plataforma de aprendizaje Duolingo como estrategia de la gamificación para mejorar el nivel de vocabulario que los estudiantes requieren. Finalmente, se aplicó un post test de conocimientos que demostró que los estudiantes pasaron de un nivel básico a intermedio, estableciendo la efectividad de la estrategia de la gamificación propuesta (plataforma de aprendizaje Duolingo) en la adquisición de competencias lingüísticas específicamente en el aprendizaje de nuevo vocabulario.

Palabras claves: Estrategia de Gamificación, aprendizaje, idioma inglés, Plataforma Duolingo, vocabulario.

Abstract

This research project was carried out to establish the effectiveness of the Gamification strategy in the vocabulary acquisition in the English Language in the students of the first semester at Pedagogy of National and Foreign Languages Program at Universidad Técnica de Ambato. For the development of the study, a descriptive and correlational methodology was used, and as a data collection technique, a pretest and posttest of knowledge were applied. For this study, 73 students of first semester A and B participated (36 students were in the control group and 37 in the experimental group). The results showed that most of the students from both groups had a limited vocabulary in the English Language. For this reason, the use of the Duolingo learning platform was proposed as a gamification strategy to improve the level of vocabulary that students require. Finally, a posttest was applied, which showed that the students went from a basic to intermediate level, establishing the effectiveness of the proposed gamification strategy (Duolingo learning platform) in the acquisition of language skills, specifically when learning new vocabulary.

Key words: Gamification Strategy, English language, Duolingo Platform, vocabulary acquisition.

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INTRODUCTION

English is considered one of the most important languages in communicating worldwide. Fluent English is one of the major challenges that students face every day. Firstly, the lack of vocabulary makes it impossible for learners to communicate accurately. For instance, in a large class, not all students participate in a discussion as they feel unsure of what to say. Secondly, learners feel frustrated and discouraged from being able to express their thoughts in the target language. According to a study conducted by Hua (2020), “If a learner has not got sufficient vocabulary, no matter how well he grasps the grammar and how idiomatic his pronunciation and tone may sound, it is hard for him or her to communicate efficiently and freely with others” (p. 427). Therefore, applying a gamification strategy allows students to broaden their vocabulary for effective communication.

Ecuador is considered one of the Latin American countries with a very low level in the English language domain. According to English First (2019), Ecuador ranked 81st out of 100 countries worldwide in the English Proficiency index and it ranked 19th out of 19 countries in Latin America becoming one of the countries with more difficulties in learning a new language. Macias and Villafuerte (2020) state that at the end of higher studies, students have to get a B1 level according to the Common European Framework of Reference (CEFR). However, this provision is not met. With this background, the Minister of Education decided to reinforce the study of language in primary school, middle school, and university.

The limited knowledge of the English language that students from the first semester of the Pedagogy of National and Foreign Language Program at Universidad Técnica de Ambato have, is due to the little importance that has been given to acquiring more vocabulary. The lack of vocabulary does not permit students to communicate accurately. For example, when students want to communicate about any typical situation, they have no idea about what to say or they have the idea, but they do not know the words in the English Language making them feel frustrated and unmotivated. A study conducted by Alqahtani (2015) “Vocabulary learning is an essential part in foreign language learning as the meanings of new words are

very often emphasized, whether in books or in classrooms. It is also central to language teaching and is of paramount importance to a language learner” (p.21).

In a study conducted by Kayseroglu and Samur (2018), whose topic was *“Vocabulary Learning through a Gamified Question and Answer Application Mayram”* explained the application of "The quiz Game" as a gamification strategy to learn German as L2. 31 students participated in this investigation. The aim of this research was to investigate the effect of using a gamified application, on German vocabulary to Turkish students learning German as a second foreign language. The findings show that with the help of this gamified practice tool the 97% of the learners were more enthusiastic to learn the language, especially vocabulary. The researcher applied a mixed method. It was recommended to continue doing more research applying other gamification strategies.

Another important investigation was the one conducted by Linh Le Nhat Pham, Hoang Tan Nguyen and Van Thi Kieu Le (2021) *“Triggering Students’ Learning Autonomy Using the Combination of M-learning and Gamification: a case study at Nguyen tat Thanh University,”* whose main objective was to propose the idea of combining M-learning and gamification to reinforce students’ learner autonomy. The results revealed that this combination helped students develop their autonomy when learning a language efficiently.

Similarly, a study conducted by Tamtama, Suryanto, and Suyoto (2020) titled *“Design of English Vocabulary Mobile Apps Using Gamification: An Indonesian Case Study for Kindergarten”*, whose main objective was to design a mobile app using gamification as a strategy of learning. The researchers used three categories, namely numbers, pictures, and spelling. The result is a mobile-based application that can be used by children to play the introduction of English with the concept of gamification. The contribution of this study was to motivate children's willingness to learn English through other technological tools, namely gamification.

The Gamification Strategy is considered as one of the most effective strategies to improve the English learning vocabulary. Initially, many theorists agree that the application of this strategy seeks to span the vocabulary in order to reduce the difficulties that learners have when speaking a target language. Mchucha, Ismail, and Tibok (2017) state that students need

to learn through tools or strategies that help reduce stress. In fact, young people constantly use video games, which are programmed in English, to spend their free time without noticing that they are learning the language and reducing their stress at the same time. Secondly, it permits teachers to see gamification as a help in the teaching-learning process. In summary, teachers should take advantage of the technological strength learners have in order to teach vocabulary.

Research problem

What is the effectiveness of Gamification Strategy in the acquisition of the English learning vocabulary?

Hypothesis

Gamification strategy influences in the development of the English Language vocabulary in students of first semester from Pedagogy of National and Foreign Languages Major at Universidad Técnica de Ambato.

Research Justification

The current research work titled “Gamification Strategy and the English language Vocabulary” provides learners with the opportunity to increase their vocabulary knowledge and therefore the development of the English skills. In fact, vocabulary is considered as the basis when learning a language; consequently, if teachers want students to express themselves in any language, they need to use words; which means, they need to broaden their vocabulary.

The objective of this research problem is to implement the gamification strategy, specifically. Duolingo platform, in the English learning vocabulary in students of first semester from Pedagogy of National and Foreign Languages Major at Universidad Técnica de Ambato. It is noticeable that students enjoy learning when a game is involved; in other words, teachers should consider the importance to facilitate the acquisition of vocabulary through games,

which is why this strategy will provide them the tools to help students acquire the English language vocabulary interactively, letting students feel motivated in the teaching-learning process.

General Objective

To implement the gamification strategy in the English learning vocabulary in students of first semester from Pedagogy of National and Foreign Languages Major at Universidad Técnica de Ambato.

Specific Objectives:

1. To investigate the conceptual underpinnings of Gamification Strategy and the English language Vocabulary
2. To analyze the importance of gamification strategy when learning a language.
3. To apply strategies based on gamification to improve the English learning vocabulary.
4. To determine the effectiveness of gamification strategy in the English learning vocabulary

CHAPTER I. STATE OF ART AND PRACTICE

1.1. Definition of Gamification

Gamification is defined as game-based mechanics, aesthetics, and game thinking to make students feel motivated in the learning process and make them be able to solve learning problems (Kapp, 2012). Therefore, gamification is considered a technological tool that aims at helping students find such motivation when learning, especially a language.

Huotari and Hamari (2012) provide another relevant definition. They define gamification as a way to offer any service in the business to support users. This definition is related to the theory of service marketing that is why this definition is applied to other contexts but teaching. The definition proposed by Chou (2015) focuses on gamification as an umbrella term to apply game-like which means to integrate designed elements or activities into a technological educational context.

Among the less employed definitions, the one proposed by Werbach (2014) stands out gamification as “the process of making activities more game-like” (p.3). This definition focuses on the process, which means that gamification comes from a non-game context. Here it is important to emphasize the activities which can sometimes be game-like. The author’s definition also states that gamification looks for creating games to support students’ learning.

For this thesis, Werbach definition has been chosen as the most appropriate, as it is a generally accepted term used in most studies on the topic. This permits the researcher to keep going with the investigation to implement gamification strategy to learn English vocabulary through the Duolingo platform.

Gamification and Games

Considering the previous definitions, games have a crucial part when creating a gamification concept. Tekinbas and Zimmerman (2004) described the term *game* as an artificial conflict where players must follow rules and where there is a quantifiable result. Not only rules are

present, but game elements are also part of games. It means that there are reward structures, progress tracking, rapid feedback, trial, and failure (Buckley & Doyle, 2016). Failure, in games, has a different connotation than in real life. In real life, it is considered a negative aspect that makes learners feel demotivated. On the other hand, failure in games is considered necessary and of course a natural process to move forward.

The game design elements that were mentioned above, help the reader notice the influence of games on gamification and of course what they have in common. However, it is necessary to understand that they have a difference as well. According to Marczewski (2015), the main objective of games is to entertain students while learning. Chou (2015a), for instance, considers games as incredibly powerful tools that teachers have in their hands to make students engage and interact with technology learning at the same time. However, he also states that this powerful tool needs to be used with a teaching-learning purpose where students feel the need to learn while playing.

Game design elements

A single classification of game design elements has not been found. Under those circumstances, one of the classifications, proposed by Zichermann and Cunningham (2011), will be to make the readers understand the description of all game design elements. These elements were borrowed from the Mechanics-Dynamics-Aesthetics framework (MDA). It stands for three different game design elements - game mechanics, game dynamics, and game aesthetics. Together, these elements are part of the gamification experience. All these three components will be introduced here, starting with game mechanics.

Game Mechanics

According to Zichermann and Cunningham (2011), game mechanics are rules and procedures that guide the player through the game. In other words, game mechanics are the way that the player interacts in the game to achieve the goal. The advantage of game mechanics is that students feel comfortable interacting through the game following rules and processes. Therefore, the seven primary game mechanics are the following: points, levels, leader boards, badges, challenges/quests, onboarding, and customization. It is important to understand that

others can be applied within the gamified system. For instance, feedback, collecting, surprises, and others. All these game mechanics are part of Duolingo, a gamified application used in the experimental part of this thesis as a gamification strategy to learn vocabulary in the English language. Replay or do over are other significant examples of game mechanics, which are presented by Kapp (2012) and are also part of Duolingo.

Points are necessary for any gamified system. It means that five-points systems have different functions in a game. These points are part of the process in a game, and they cannot be taken away from the player because they track the overall progress that a player gets through the game (Zichermann & Cunningham, 2011). These redeemable points make the player feel encouraged because they give support to the player on the different levels of a performed task. The skill points: on the other hand, are bonus sets of points that help a player to gain experience while playing.

Another game mechanic is a leader board. It has a connection with points. It gives the player a ranking system where a player can see how well he/she is doing in the game, so that the player has the opportunity to see the results to compare with others, having the opportunity to try again. This is also a way that a gamified system helps students to be motivated and of course, creating a competitive environment where students try to demonstrate their skills, learning at the same time.

The level is another game mechanic. The main purpose of levels, according to Nah et al, (2014) is to show players their progress with the help of a progress bar. This game mechanic is very popular in the educational gamified tool because it permits teachers to interact with students while they are learning vocabulary. This is another way that a competitive environment is created in the classroom where students are the main agent of the game.

Moreover, there are badges, which are rewards, that symbolize the achievement of the player (Cunningham and Zichermann, 2011). This game mechanic element permits the learner to know that his/her success is noticed and appreciated. Badges can also be used as a traditional

point-based grading system. Obtaining badges is a way to make learners feel motivated to further their learning and span their vocabulary in the English Language accurately.

The fourth game mechanism is known as challenges or quests. In other words, it refers to a hunt for a specific outcome where players receive directions within the game. This element makes students more competitive while learning. It also makes students gain new skills and progress in different areas of learning.

The fifth game mechanism is customization. It refers to the direct impact the player gets in a game. In other words, it means how the player controls the gameplay. This element makes students become special snowflakes because it gives the player an additional flavour while playing a game. Customization permits players to create something unique in a gaming world.

The last core game mechanism presented in Zichermann and Cunningham (2011) is onboarding. Onboarding refers to the first experience a new player feels so that he/she can decide when coming back again and again or just decide to close the game immediately and just eliminate it. In the teaching-learning process, this is crucial because here the student decides if he/she wants to learn with the game you as a teacher chooses for them. So, the goal here is to accommodate your user and get them to use your product. It is necessary to apply games that make students feel interested.

Game Dynamics

Game Dynamics are not so important for gamification experience, but it is necessary to be mentioned since they are part of the MDA Frameworks. These components can be described as the outcome that the player has to achieve in a game. There are three elements within Game Dynamics being these constraints, emotions, and narrative. These elements create an aesthetic experience (emotional reaction) in students, making them experience new learning alternatives where the main learning tool is the game.

Game aesthetics

Game aesthetics are another element of MDA Frameworks. They focus on aesthetic qualities where emotions are implicated. These elements permit students to find the necessary motivation to interact with the game and with the content of learning at the same time. In other words, game aesthetics refer to how the game makes the player feel; it means the emotional responses toward the game.

Gamification in Education

Nowadays, Gamification is increasing in any context, specifically in education. A study conducted by Dicheva and Dichev (2015) states that gamification is the “introduction of game elements and gameful experiences in the design of learning processes” (p.1). When gamification is included in the educational context, many opportunities arrive in the teaching-learning process. One of these opportunities, as teachers, is to see how gamification strategies motivate students to learn a language while playing. Therefore, gamification has become an important tool in the educational field for language teachers.

To get a better idea of how gamification is applied in the educational context, two examples of successfully gamified programs are presented. Firstly, gamification strategies can be applied not only on whole courses but individual subjects, being English one of these, specifically vocabulary. *Class Dojo* is an interactive, online, classroom management platform, whose main purpose is to make students participate interactively through the game. The platform contains many game elements such as avatars, giving points to students for various kinds of positive and negative behavior, a progress bar, or lovely illustrations (Silver-Bonito, 2014). GoalBook, Coursera, or CourseHero are also similar gamified applications. They focus on general classrooms where gamification elements are present. These programs provide students with studying materials where students receive some rewards using badges for their progress (Chou, 2015b).

There is another group of gamified tools which are used for educational purposes. These tools are focused on individual subjects. One example of these tools is explained to give the reader

a clear idea of how these gamified tools work. KnowRe is an online adaptive Math learning program. This program uses a lot of game elements such as personalization, reward-system, rapid feedback, there are several game mechanics – points, progress bars – and highly-developed game aesthetics. This program is well-known for its influence on students' motivation (Dicheva, Dichev, Agre, & Angelova, 2017).

Gamification in education is considered a new and novel experience to be applied in the teaching-learning process; however, many studies have been published on this subject of gamification. These studies show a big picture of this interesting strategy. They focus on the importance of applying gamification in order to motivate and make students feel comfortable learning vocabulary in the English Language.

The study titled *Gamification in Education: A Systematic Mapping Study*, presents an empirical research on gamification. This study examines 34 papers, whose main purpose was to demonstrate the effectiveness of applying gamification strategy in the educational context, (Dicheva et al., 2015). Most of these studies focus on computer science and IT. Furthermore, the 34 studies were conducted only with higher education students. In addition, these studies mentioned that through the experiment that was applied they could obtain encouraging results from the participants, as well their motivation and interest in learning vocabulary in the English language increase. Finally, these studies strongly agree that gamification must be considered as a valuable strategy to improve vocabulary.

Another study titled *Gamifying education: what is known, what is believed and what remains uncertain: a critical review* (Dicheva & Dichev, 2017) analysed 51 research papers, these studies (44), different from the ones that were mentioned previously, were conducted on university courses. Only 7 papers were applied to primary and secondary education. The important point here is to notice that university teachers were provided with better technical support making the application of gamification much easier for them. The results from these studies also show the effectiveness of applying gamification strategy in university students when learning a target language.

The reviews of these studies conclude with important aspects that are considered for this investigation. In the first place, they mention that empirical research contributes to current studies for “building an empirical knowledge base of the subject, and instrumental in further advancement of experimental research” (Dicheva & Dichev, 2017, p. 21). In the second place, these studies analyze the impact of gamification and motivation when learning vocabulary in a target language. Finally, it was found that even though gamification strategy is beneficial in the teaching-learning process, there is not sufficient evidence to confirm this. Consequently, these studies suggest continuing collecting evidence to support the effectiveness of gamification strategy to improve the vocabulary in the English language.

To continue with this investigation, it is necessary to mention that these studies were analysed in-depth to permit the researcher to understand the impact that gamification strategy has had in the educational field, specifically to learn vocabulary in the English language. What is more, the experiment in this thesis also addresses the dearth of experimental studies on the “deeper game elements”, such as challenges, low risk of failure, or a narrative.

1.2.Gamification and vocabulary

Vocabulary knowledge is considered as the root when learning a language because it helps people to have a mental dictionary where words come out without too much effort when communicating any idea. It provides an in-depth understanding when reading and writing. However, being vocabulary a necessary tool to communicate, teachers do not give the importance it requires. Consequently, students have such a limitation to express their ideas because of the lack of vocabulary. Even though technology has permitted us to find new and novel ways to learn vocabulary through gamified strategies. These gamification strategies make the teaching and learning process more dynamic because digital games have become an important part of learners’ lives, (Krokkfors, Kangas, & Kopisto 2014, p.13).

Although gamification is not new in the educational field, the application of digital games in the teaching-learning process is new. Despite this, many researchers have seen the need to conduct many experiments to demonstrate if gamification has a positive or negative effect in learning a language, specifically vocabulary, in any target language. Vesterinen and Mylläri

(2014, 57) mention that digital games facilitate teachers to teach outside the classroom. It means that students could learn vocabulary without the need to be in a physical classroom. They could use this gamification strategy in any place they are. It becomes a formal and informal teaching learning process for both teachers and students (Krokfors et al. 2014, 67). Also, Kapp (2012) mentions that “it is not easy to create a game that is both fun to play and instructional” (p.14).

1.3.Duolingo

Duolingo is an e-learning platform whose main purpose is to help people to learn a language. This application has a desktop version that contains 22 languages. This platform is considered as one of the strategies within gamification. Duolingo’s platform allows educators to create groups for each class. Most important is that educators can monitor students’ progress to give feedback when they consider it necessary. (Munday 2015) states the following:

This generates a link, which can be sent to students so that they can join the group. In the dashboard, the teacher can monitor students’ progress in several ways. The dashboard shows the time the student logged in, the lesson or practice he/she completed and the XP he/she obtained. A weekly report is sent by email, which includes all the work students have done during that time. In addition, there is now a dedicated area in the Discussion Forums just for educators’ concerns and ideas (Munday, 2015, p.88).

Duolingo is considered one of the most popular gamification strategies. It has had a big impact in the educational field due to the positive results it has obtained, especially when it is used as a teaching strategy to teach a target language. The popularity of this platform has attracted governments’ attention in Latin America. A clear example of this is what Orellana (as cited in Garcia Botero, Garcia Botero, and Questier, 2017) mentioned that in 2014 Guatemalan Government reached an agreement with Duolingo to be included in the curriculum of 97 public schools. Another important piece of data is the one provided by the

Ministry of Labour (as cited in Garcia et al., 2017) “the Colombian government presents a project whose main purpose is to include Duolingo as a strategy to provide high-quality English education for free with the possibility to obtain a free language certificate” (p.43). As it can be seen, Duolingo is not only an app or a platform, but also a potential strategy to teach English. Thus, even teachers in other countries are being trained in the pedagogical use of Duolingo.

This platform mostly focuses on translations to help students improve grammar and vocabulary. That is why the researcher considered using this platform as a proposal to improve the vocabulary in the English language. In addition, Duolingo platform facilitates students to develop pronunciation while learning vocabulary in a target language. The important aspect to mention here is that this platform uses a wide range of games elements to simplify the learning. *Duolingo* has two types of points: XP and redeemable points (lingots). There are also the badges; these are given to students as a price for their constant effort in practicing the different activities. Also, they are given to learners for signing regularly. Another advantage that *Duolingo* provides students is that they have the opportunity to interact and practice the language with people around the world.

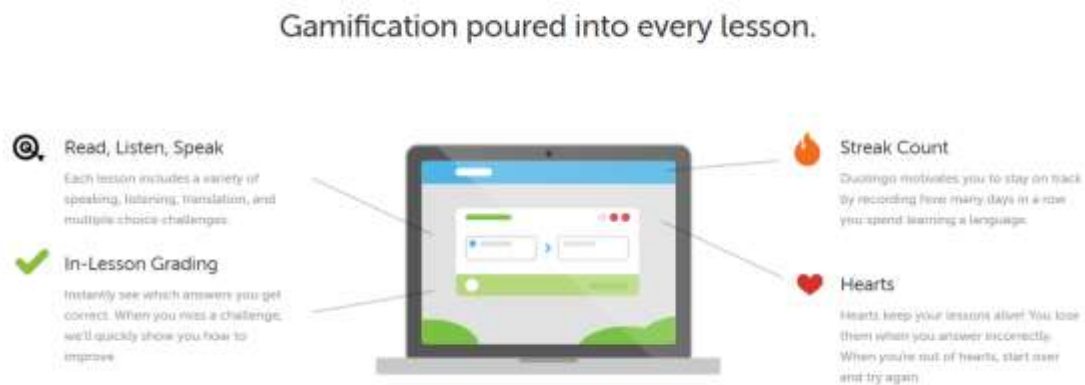


Figure 1. Duolingo Platform

Source: Duolingo platform: <https://www.duolingo.com/>

Duolingo is also considered an immersion learning application because it provides important repetition and of course, important reinforcement when learning any language. Bogdan (2016) states “the feedback Duolingo delivers is both timely and tailored to the learner, something difficult to provide in a traditional classroom setting” (p.210).

Duolingo Learning activities

According to Munday (as cited in Bodgan, 2016), Duolingo presents the following learning activities.

- Translate words and sentences in both languages.
- Repeat sentences of the audio tracks when speaking using the device microphone.
- Transcribe or translate the spoken language of the audio tracks.
- Multiple choice test questions with sentences, words, missing words in a sentence or word picture cards.
- Translation pairs of equal words.

The core of Duolingo's platform are the lessons. They are divided in different skills to give learners the opportunity to learn vocabulary because of the ten short lessons that each skill has; each lesson contains 20 different exercises to reinforce students' learning (Mehtala, 2015).

Duolingo Levels

Duolingo's platform has different thematic units. Each unit is divided into subunits. When learners start a unit, the subunits are uncovered until the unit is completed. The purpose of this is to permit students to see the translation of a word, if necessary, just by clicking on any word. In each unit students are going to find different types of exercises, for example, vocabulary, order words, choose the correct translation, join pairs, write what is heard, repeat what is heard. Those exercises depend on the students' level. So, they decide what to practice; basically, it depends on the students' needs (Vasselinov & Grego, 2012).

Duolingo's strengths

According to Vasselinov and Grego (2012) Duolingo has many strengths in the educational field.

- The vocabulary: with Duolingo students learn an extensive and very diverse vocabulary.
- Verbs and verb tenses: Duolingo allows you to know a quite broad spectrum of grammar, which allows it to unfold in many situations.
- The organization: as the units are divided, regardless of the bars, specific units can be reviewed.
- Speed: Duolingo allows students to learn at their own pace, consult translations as many times as necessary. While using audio, students can also choose a slower repetition and among other factors.

Duolingo Areas

Munday (2016) expresses that Duolingo's platform has the following areas:

The "tree": it contains skills that are represented by a changing color such as gray, when the activity has not been started; red when the lesson has begun; gold when all the lesson has been mastered.

Words: It contains a list of words students have learned. It also has a strength bar to indicate if the word was learnt and if the learner needs more time to practice.

Activity: Duolingo is like a social network because it permits students to interact with other people around the world. It also permits learners to comment and give feedback on the discussion board.

Discussion: In this section students have the opportunity to create posts about topics that they are interested in. Additionally, they may ask questions about the things they do not understand in order to receive feedback from the people who speak the language that is being learned.

Immersion: This section is for advanced students. Here students have the chance to write complete documents in any language and upload to Duolingo's platform. The purpose of doing this is to permit other students to translate that document, so that they can offer suggestions or make general comments on it.

Lingots: they are the currency that Duolingo uses. When a learner completes a skill or keeps using the platform at least 15 minutes a day, Duolingo rewards that effort by giving them lingots.

In the same way, Munday (2016) states that the mobile application does not have many activities as the platform. In Duolingo app the learner can find the following:

- Write a vocabulary word after seeing an image that represents it.
- Translate a sentence into a student's native language. When the words are presented for the first time, the user can hover over the word to see its meaning.
- Translate a sentence into the language being studied.
- Dictation: write a sentence heard at two speeds, normal and slow.
- Say a sentence through the voice recognition software, the application can detect if its pronunciation is correct.
- Match pairs of words.

Duolingo in educational field

Duolingo is a motivational learning platform, which means that students are exposed to entertainment while learning. All the skills have a systematic structure that facilitates students' learning. Each skill has a level of complexity that students must achieve while they practice (Duy, Long, & Hiroyuki, 2017).

Several studies have shown statistically that the application of this platform in the teaching-learning process has had satisfactory results. The motivation that students feel when learning a foreign language through this platform has allowed them to lose that fear. This platform seeks to facilitate the student's learning, making it more dynamic and interactive (Musa & Mohamad, 2017). The use of the Duolingo platform allows learning different topics according to the student's needs. As the student develops each of the activities, he/she learns new vocabulary. This great advantage that this platform offers makes the student feel the necessary confidence to be able to take the next step which is to communicate in the English language. It is necessary to mention that besides learning a lot of vocabulary, the pronunciation of each word is also learned. This facilitates correct pronunciation especially of unfamiliar words (Castro, Da Hora, & Pereira, 2016).

Limitations-disadvantages of Duolingo in educational field

Although there are several good features about Duolingo, there are some disadvantages to consider. The lack of naturalness of the sentences is sometimes far obvious in first sessions or are shown with little meaning. One more supernatural thing about the application is the computerized voice it uses because students are never presented with how a native speaker sounds, as long as they use this application as their only source of learning. Another important disadvantage of Duolingo is that the application uses one language to teach another, so this limits the number of application users. This happens because the students learn the target language through a second language, thus they always depend on the second language, and it is possible they can never express themselves completely in the language they learned (Musa & Mohamad, 2017)

Another aspect to consider is that occasionally, Duolingo presents to students a new word just by seeing it but not listening to it. In several languages (like English), words do not have the same letters and the same pronunciation, and it can cause several difficulties for students. This case does not happen in standard learning where teachers demonstrate the pronunciation of each word when introducing new vocabulary. Additionally, there is the lack of human interaction and a real conversation in the application. Duolingo gives students the illusion that they know the pronunciation of a word and its meaning, but because they have not used the phrases or sentences learned, their lexicon is going to be only passive and difficult to recover (Musa & Mohamad, 2017).

With the example of *Duolingo*, which was used here to demonstrate the contemporary trends in the gamified language learning applications, the theoretical part of this thesis concludes. The theoretical background of the gamification subject presented in this part serves as a foundation for the following practical part of the thesis.

1.4.Vocabulary

When learning a language, one of the biggest challenges is learning vocabulary. For many teachers, the search for new vocabulary teaching strategies has become the main objective since each strategy applied favors or not the student's learning. Technology has been advancing and this has allowed many teaching strategies to be found because students are more interested in learning through technological means. This is a great advantage for the teacher since he/she can combine teaching strategies with motivation making the student feel motivated to learn a foreign language which allows them to get out of traditional teaching. Baumann and Kameenui (as cited in Bryant, Goodwin, Bryant, & Higgins, 2003) state that when a person comprehends how to use the words when communicating, he can understand the different components that a word has.

For example, prefixes, root words, suffixes, and family words determine the meaning of a word. Furthermore, to learn vocabulary it is necessary to teach parts of speech, synonyms, and antonyms in contextual sentences. The importance of finding new strategies when

teaching vocabulary permits students to learn without the need of memorization due to the fact that students have different learning styles which represent that teachers should be up to date in the new teaching-learning strategies. As said by Mofareh (2015), vocabulary is not just a simple word. It is a set of words that permit people to have effective communication. To have a better understanding, the author mentions that expressive vocabulary and receptive vocabulary should be considered as skills that have to be developed effectively for good communication.

Receptive vocabulary: It represents words that appear in reading text and that students can recognize easily because they are used in context; however, those words are only recognized but not produced which means that students do not use them to speak and write.

Productive Vocabulary: Productive vocabulary, on the other hand, are the words that students can use when speaking and writing. They are the words that students understand, pronounce, and produce correctly. In other words, productive vocabulary permits students to express their thoughts to communicate in an active way.

Learning receptive vocabulary has impact only in the meaning of the words but learning productive vocabulary facilitates the comprehension of both, receptive and productive knowledge (Webb, as cited in Maskor, 2016, p. 264). Receptive and productive vocabulary has been a challenge for teachers since understanding both allows students to build a broader understanding of their thoughts when communicating. Consequently, learning new vocabulary makes students connect their ideas effectively.

Vocabulary knowledge is fundamental when learning a language because it permits learners to communicate in any situational context that they are (Tovar, 2017). Even though vocabulary is considered fundamental in a foreign language, the limited knowledge of it is a critical aspect because it impedes learners to get an in-depth communication in the target language (Susanto, 2017).

English Vocabulary Acquisition

English vocabulary acquisition is very important to develop oral and written communication. It is vital in listening, speaking, reading, and writing. The teachers' role to teach vocabulary is fundamental, that is why it is necessary to find strategies to teach vocabulary. A study conducted by Song and Chen (2017) "To master a language, a large amount of vocabulary accumulation is essential, and the lack of vocabulary will seriously restrict the language level of learners" (p.174). It is clear to see that the lack of vocabulary in students does not allow them to go further in learning the language. Most research emphasizes that much of the success of learning a foreign language is based on vocabulary; the more words in a learner's lexicon, the better the communication and interpretation (Susanto, 2017).

Vocabulary acquisition is not instantaneous learning. It requires the application of a good strategy in the teaching-learning process to allow learners to acquire many words in a foreign language (Karakoc & Durmusoglu, 2017). It is necessary to mention that learning vocabulary in the English language is fundamental for good communication. However, the commitment of the teacher as well as the students in the teaching-learning process will lead to more interactive learning in which the student feels that motivation to want to learn more with the help of the teacher. The teacher's satisfaction in achieving the desired objective in teaching vocabulary to students will depend on the strategy and its application. Therefore, the teacher, the student, and the learning strategy are fundamental agents in learning a language.

In the English language teaching-learning process, two ways of learning vocabulary are taken into account. The first is incidental vocabulary. This form of learning takes place when the teacher teaches a particular topic where the main objective was not to learn new words but was simply focused on other activities. The second form of vocabulary learning is intentional. This is done when the teacher applies various activities in which the main objective is to learn new vocabulary (Karakoc & Durmusoglu, 2017).

Spoken vocabulary.

Speaking is one of the most important skills in any language because through it people can express their thoughts. Both in the native language and a second language, speaking represents the quantity and quality of information that comes from the vocabulary learned throughout a human being's life. Additionally, this skill indirectly evaluates the vocabulary acquired in a second language. However, the lack of knowledge of new words leads the learner to feel fear and frustration when trying to communicate because he does not have the necessary fluency to express his ideas and thoughts (Leong & Masoumeh, 2017).

Written vocabulary

Vocabulary plays an important role in writing by enabling the learner to communicate in a written and appropriate manner. Knowledge of new vocabulary facilitates correct writing in a foreign language. It is important to mention that the activities applied in the teaching-learning process facilitate communication through writing. Therefore, this strategy goes hand in hand with the learning of new vocabulary, because if the student does not know how to express his ideas, he will find many limitations when writing (Karakoc & Durmusoglu, 2017).

CHAPTER II: METHODOLOGY

2.1. Research and Research Approach

This research has a mixed approach. The qualitative approach allows for the gathering of information of the study group, describing the phenomenon and helping its comprehension. On the other hand, the quantitative approach generates numerical data converted into statistics, describing the characteristics and information collected from the group of participants. Then, these approaches help the researcher determine the effectiveness of Duolingo as a gamification strategy on the English learning vocabulary.

Research Method

This study applied a pre-experimental research with a control and experimental group. Seventy-three students of first semester A and B of Pedagogy of National and Foreign Language Program in Universidad Técnica de Ambato participated. They were asked to practice Duolingo for thirty days. Learners' vocabulary mastery was measured by a pretest before they started using the app. Two instruments were used in this study. They are a test and a questionnaire to collect the data needed. The test, including the pre-test and post-test, was done to determine the effectiveness of the Duolingo platform and the English Vocabulary. It was done before and after the intervention. The questionnaire, which was previously validated by three experts, was used to describe students' perception toward the use of Duolingo when learning vocabulary in a foreign language. To apply the pre-test and post-test the Key English Test (KET) of the Cambridge exam was used to assess students.

Experimental design was used in this study. It was divided into two groups, the experimental class and control class. In the first group (experimental class) Duolingo application was used for thirty days. In the second group (control class) there were no changes in the teaching methodology. Pre-test and post-test were applied by the researcher to get the data needed and to find out the effectiveness of gamification strategy when learning vocabulary in the English language. Finally, a questionnaire was applied to analyze the students' perception towards the use of the Duolingo platform.

Research Instrument

The researcher used some instruments (test and questionnaire) in this research project. A test was used as the instrument of the study to know the students' achievement in vocabulary. This test was taken from Cambridge exams (KET). The pre-test was done to measure the students' achievement in English vocabulary while the post-test was done to measure the improvement in students' vocabulary after the intervention. The questionnaire, which contained five questions, was used by the researcher to identify, and knew the students' perception towards the use of Duolingo application in learning English vocabulary. The test contains 50 questions focused on vocabulary and language which was divided into three categories: nouns, adjectives, and verbs. This Cambridge test (KET) was applied to check students' vocabulary knowledge. The evaluation criteria that the researcher used in this study was focused on broad, accurate and effective use of nouns, adjectives, and verbs.

Research Techniques

The researcher gave the pre-test to both the experimental and control groups. Duolingo was used with the experimental group to teach vocabulary to students from first semester "A". On the other hand, the control group, first semester "B" was treated by conventional strategies. After the application of Duolingo Platform as a gamification strategy, a post-test was conducted to both groups, the experimental and control groups, to find out students' vocabulary understanding. In the end, a Likert scale survey questions were given to students to measure students' opinions and attitude towards the use of Duolingo.

Process of Data collection

- The pre-test is given to both groups (experimental and control groups).
- Application of Duolingo platform to the experimental group.
- The post-test is given to both groups (experimental and control groups).

- The questionnaire is given to the experimental group.
- Tabulation of the collected data from the control and the experimental groups.
- Analysis and interpretation of the results.

2.2. Process and Analysis of Information

To complete this research, it was essential to check the data in the pre-test and post-test to verify that all the information was accurate and contributed to this study. Tabulation was based on the research topic to get relevant information. It was relevant to see the frequency of the results to represent in tables. The tabulation was done manually, so that the information required to be checked carefully.

Students' Score of Pre-test from the control group

Table 1. Students' Scores

Students	Nouns	Adjectives	Verbs	Pre-test results
				Mean score
Student 1	19	20	17	56
Student 2	21	6	9	36
Student 3	11	13	28	52
Student 4	25	16	35	76
Student 5	11	8	13	32
Student 6	21	15	20	56
Student 7	12	13	11	36
Student 8	29	12	19	60
Student 9	18	8	22	48
Student 10	16	8	12	36
Student 11	10	6	8	24
Student 12	8	2	10	20
Student 13	15	2	7	24
Student 14	18	12	26	56
Student 15	25	15	24	64
Student 16	32	12	16	60
Student 17	15	10	15	40
Student 18	18	2	8	28

Student 19	16	10	26	52
Student 20	24	7	25	56
Student 21	41	15	20	76
Student 22	11	12	29	52
Student 23	18	10	4	32
Student 24	45	19	28	92
Student 25	47	15	26	88
Student 26	12	2	14	28
Student 27	14	10	24	48
Student 28	30	10	32	72
Student 29	14	18	20	52
Student 30	13	5	6	24
Student 31	37	5	18	60
Student 32	11	5	12	28
Student 33	41	18	21	80
Student 34	40	13	27	80
Student 35	16	4	20	40
Student 36	11	2	7	20
Total Score	765	360	659	1784
Mean Score	21,25	10	18,3	49,56

Elaborated by: Jordan, C. (2020)

According to the results obtained from the control group in the pre-test, the media score is 49.6.

Table 2. The score of Pre-Test and Post-Test in Control Class

Students	Pre-Test	Post-Test
Student 1	56	76
Student 2	36	64
Student 3	52	76
Student 4	76	88
Student 5	32	68
Student 6	56	76
Student 7	36	40
Student 8	60	72
Student 9	48	76
Student 10	36	60
Student 11	24	72
Student 12	20	52

Student 13	24	44
Student 14	56	76
Student 15	64	76
Student 16	60	80
Student 17	40	64
Student 18	28	48
Student 19	52	60
Student 20	56	76
Student 21	76	88
Student 22	52	80
Student 23	32	68
Student 24	92	100
Student 25	88	92
Student 26	28	52
Student 27	48	72
Student 28	72	88
Student 29	52	60
Student 30	24	60
Student 31	60	88
Student 32	28	44
Student 33	80	80
Student 34	80	80
Student 35	40	80
Student 36	20	52
Total Score	1784	2528
Mean Score	49.56	70.22

Elaborated by: Jordan, C. (2020)

The pre-test and post-test that were given to the 36 students from the control group measured the students' vocabulary knowledge without the application of Duolingo. The researcher did not apply any gamification strategy in this group. Based on the pre-test score, it can be said that the mean score of the control group was 49.56. The lowest score in the pre-test was 20 and the highest score was 92.

The Result of Pre-Test in Control Class

Table 3. Data Statistics of the Pre-Test Result in Control Class

N	Valid	36
	Missing	0
Mean		49.56
Median		52.00
Mode		52
Std. Deviation		20.154
Variance		406.197
Range		72
Minimum		20
Maximum		92
Sum		1784

Elaborated by: Jordan, C. (2020)

From the table above, it has been shown that the mean score of the pre-test was 49.56. The median of the post-test score was 52.00 and the mode was 52. The standard deviation was 20.154 and the variance was 406.197. The range of the score was 72. The minimum score of the post-test was 20, while the maximum score was 92.

Students' Score of Pre-test from the experimental group

Table 4. Pre-test results from the experimental group

Students	Nouns	Adjectives	Verbs	Pre-test results
				Mean score
Student 1	17	9	10	36
Student 2	33	6	21	60
Student 3	11	13	28	52
Student 4	18	15	35	68
Student 5	44	13	23	80
Student 6	15	17	20	52
Student 7	40	13	11	64
Student 8	35	11	12	58
Student 9	18	22	20	60
Student 10	18	15	23	56
Student 11	8	16	20	44
Student 12	18	12	18	48
Student 13	23	12	37	72

Student 14	10	12	26	48
Student 15	12	15	13	40
Student 16	6	12	10	28
Student 17	16	10	30	56
Student 18	11	8	17	36
Student 19	26	17	33	76
Student 20	20	11	21	52
Student 21	11	9	12	32
Student 22	11	14	31	56
Student 23	20	2	14	36
Student 24	28	14	18	60
Student 25	8	27	25	60
Student 26	12	4	36	52
Student 27	14	10	24	48
Student 28	28	15	25	68
Student 29	14	18	20	52
Student 30	12	23	17	52
Student 31	48	18	14	80
Student 32	13	5	26	44
Student 33	31	15	14	60
Student 34	44	26	30	100
Student 35	36	17	39	92
Student 36	50	23	19	92
Student 37	15	8	17	40
Total Score	794	507	809	2110
Mean Score	21,5	13,7	21,9	57,3

Elaborated by: Jordan, C. (2020)

According to the results obtained from the experimental group in the pre-test, the media score is 57,3.

Students' Score of Pre-Test and Post-Test in Experimental Class

Table 5. Pre-test and Post-Test results from the Experimental group

Students	Pre-Test	Post-Test
Student 1	36	80
Student 2	60	96
Student 3	52	68
Student 4	68	84
Student 5	80	88

Student 6	52	96
Student 7	64	100
Student 8	68	80
Student 9	60	76
Student 10	56	64
Student 11	44	88
Student 12	48	84
Student 13	72	76
Student 14	48	64
Student 15	40	64
Student 16	28	76
Student 17	56	76
Student 18	36	64
Student 19	76	84
Student 20	52	64
Student 21	32	92
Student 22	56	96
Student 23	36	88
Student 24	60	72
Student 25	60	100
Student 26	52	92
Student 27	48	68
Student 28	68	96
Student 29	52	72
Student 30	52	80
Student 31	80	100
Student 32	44	80
Student 33	60	72
Student 34	100	100
Student 35	92	96
Student 36	92	100
Student 37	40	76
Total Score	2120	3052
Mean Score	57,3	82,49

Elaborated by: Jordan, C. (2020)

37 students participated in the experimental group. They were from the first semester A. The pre-test was done to measure the students' vocabulary knowledge before the application of Duolingo as a gamification strategy. Based on the pre-test score, it can be said that the mean score of the experimental class was 57.30. The lowest score in the pre-test was 28 and the

highest score was 100. After the data was measured from the pre-test, Duolingo application was used by this group. After concluding the intervention, the post-test was applied to measure whether Duolingo influences students' achievement in vocabulary by distinguishing both pre-test and post-test score. From the post-test, the mean score of the students in the experimental group increased to be 82.49 and the range of the mean score from pre-test to post-test was 25.19.

General results from the pre-test and post-test from the control and experimental groups

Table 6. General results

GENERAL RESULTS FROM THE PRE-TEST AND POST-TEST APPLIED TO CONTROL AND EXPERIMENTAL GROUP	
Pre-test control group	49,56
Pre-test experimental group	57,3
Post-Test control group	70,22
Post-test experimental group	82,49

Source: Direct research

This table shows that the mean score of this experimental group in the pre-test was 57.30; meanwhile, on the control group the mean score was 49.56. The results obtained in the post-test confirmed that there is a significant difference (12,27) between the results gotten from the control group and the experimental group, which means that the application of Duolingo has a positive impact on students' learning, specifically when they learn vocabulary.

2.3. Characterization of the Institution

The following information introduces the main facts about Pedagogy of National and Foreign Languages Major at Universidad Técnica de Ambato, where this research project was conducted:

Table 8. Institution Background

Major's title	Bachelors' degree on Pedagogy of National and Foreign Languages - Majored in English
School's name	Facultad de Ciencias Humanas y de la Educación
City	Ambato
Province	Tungurahua
Period of study	8 academic periods
Approval date	14 de diciembre de 2015, según resolución Nro. 2461-CU-P-2015.
Approval entity	CONSEJO DE EDUCACIÓN SUPERIOR.
Degree awarded	Licenciado/a en Pedagogía del Idioma Inglés.
Type of Educational Institution	Public
Number of students	400
Number of teachers	14

Source: Major's project

Elaborated by: Jordan, C. (2020)

2.4. Research Proposal

Handbook for vocabulary learning through the use of Duolingo Platform.

Informative Data:

Institution: Universidad Técnica de Ambato

Province: Tungurahua

City: Ambato

Beneficiaries: Students from first semester of Pedagogy of National and Foreign Languages Major

Proposal Background

Nowadays, students are technological natives, so the use of a digital platform makes it easy for them to explore new ways of learning, without feeling frustration when learning vocabulary in a foreign language. It is necessary to understand that technology is part of

students' daily lives, and this is where teachers should take advantage of these technical skills to insert a new strategy in the teaching-learning process.

Moreover, the previous research has revealed the importance of applying a new and motivated technological teaching strategy where learners can develop the English vocabulary accurately, with just a click. Gamification is that technological strategy. It is considered the boom in the teaching-learning process. That is why the experiment, where Duolingo Platform as the Gamification strategy was applied, resulted in a significant improvement. This improvement was because students had the predisposition to participate in the experiment for four valuable weeks doing all the assignments that were established and where the researcher could obtain good results, demonstrating the effectiveness of this platform in learning English vocabulary.

Some studies showed that the use of technological strategies facilitates students' vocabulary learning in a target language. One of these studies was conducted by Guaqueta and Yicely (2018). This study is linked to this research project and its title is "The Use of Language Learning Apps as a Didactic Tool for EFL Vocabulary Building". The authors concluded that technology can foster vocabulary building effectively in classroom practices.

It is necessary to mention that this proposal is elaborated with the aim to provide teachers with a new teaching strategy focused on Duolingo Platform as a gamification strategy where the student, technology, dynamic activities, and motivation become the center of the class.

Justification

Learning a foreign language demands a lot of concentration and practice. However, the context in which students are exposed does not allow the language to be developed effectively. Unfortunately, it is something that is out of the teachers' hands. At the end of English classes, students return to their normal routine where the mother tongue is their source of communication. This great disadvantage implies looking for new teaching strategies where students can continue learning without caring about the place they are.

Therefore, the Duolingo platform is a novel proposal because it allows teachers to have a technological assistant in and out of the class making students feel comfortable, relaxed, motivated, and predisposed to learn. It is feasible to be implemented since this platform is free and easy to use and can be utilized in any device students have on their hands. This proposal is also original because nobody has implemented this platform in students from the first semester of the Pedagogy of National and Foreign Languages Major as a technological strategy in the teaching-learning process.

In addition, this proposal benefits two main agents in the teaching-learning process. In the first place, the students because technology makes them feel secure about what they are doing without caring about the time or place they are. Technology has become the main learning tool for them. In the second place, the teachers because through this platform they have the opportunity to approach students with a new strategy making their teaching more dynamic and interactive.

Finally, the implementation of this proposal to help students develop their vocabulary in the English Language demonstrates its effectiveness as a technological learning tool and as a new teaching strategy where students improve their communicative skill due to the increase in their vocabulary in this target language.

Objectives

General Objective

To improve the English learning vocabulary through the implementation of Duolingo platform in English classes.

Specific Objectives

- To identify topics in the Duolingo Platform to be implemented in the teaching-learning process.
- To design a guidebook for vocabulary learning by using the Duolingo platform.
- To evaluate the Duolingo platform to improve the students' learning vocabulary in the English language.

Proposal Feasibility

This proposal is considered as feasible because the coordinator and students agree on its implementation. They are conscious that the results obtained are beneficial for the institution and mainly for the students who will improve their English language vocabulary learning.

Theoretical Basis

The necessity of learning a language through new technological strategies makes students start to look for programs or platforms that help them learn while playing. This is what the Duolingo platform does. This platform gets students' attention and motivates them to learn. Duy (2018, as cited in Inayah, Yusuf, & Fibula, 2020) states "Duolingo aims to provide a free and enjoyable global language learning platform" (p. 77). This Application or learning platform can be used on any device that has access to the internet connection, allowing students to learn any language in a free and enjoyable environment. The success of this platform is recognized worldwide.

In 2011 Luis Von Ahn and Severin Hacker designed this platform to be implemented in classrooms as a teaching strategy that helps teachers obtain academic goals. A great advantage of using the Duolingo platform is that students do not have to pay for it; that is why English teachers are now including Duolingo within the curriculum as a helping tool in the teaching-learning process (Zueras, 2019).

Proposal Development

The Duolingo platform is one of the main gamified strategies used worldwide to help students improve their English language vocabulary learning while they are working on a task with or without the teacher. The aim of this proposal is to incorporate the use of the Duolingo platform in English classes to improve the vocabulary in students. Five topics were chosen from the Duolingo platform. Each topic has four lessons to be developed by the students. At the end of the assigned topic there is a quiz that the teacher will apply to check the students' progress.



Guidebook for vocabulary learning
through the use of Duolingo platform.

The background of the lower half of the page features a soft, light green illustration. On the left, a tree with sparse green leaves stands on a rounded green hill. In the distance, a range of misty, light green mountains is visible against a pale sky. The bottom of the page is decorated with wavy, layered green lines that create a sense of depth and movement.

*"Teachers open the door, but you must enter by
yourself."
Chinese Proverb*



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INTRODUCTION



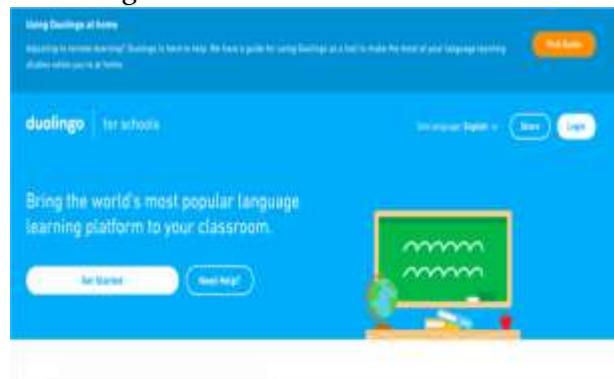
The success of learning a foreign language is based on the type of strategy that the teacher selects. To learn a language, it is necessary for the student to have a wide vocabulary; therefore, it has become necessary to take advantage of the technological means and look for new technological teaching-learning strategies that facilitate and motivate the student to learn.

The following proposal is a *Guidebook for Vocabulary Learning by Duolingo Platform*. This proposal will guide the teacher to create different learning classrooms that can be shared with different groups of students where they will have fun learning and at the same time interacting with other people. This guidebook contains a brief introduction of how to create a Duolingo classroom in an easy way. Additionally, five topics about family, routines, food, feelings, and shopping were created to facilitate teachers its use. Each topic includes four lessons that will help students to develop vocabulary according to the different contexts. At the end of each topic, the teacher will be able to evaluate students' process. I hope you like it. Enjoy this!

Mg. Cristina Jordán Buenaño

STEPS TO CREATE A DUOLINGO CLASSROOM

Step 1: Head to *schools.duolingo.com*



Step 2: Create a Duolingo account



Step 3: Log in using your new Duolingo account



STEPS TO CREATE A DUOLINGO CLASSROOM

Step 4: Once you are logged in, create a classroom.



Step 5: Invite your students to the Duolingo classroom.



- If you choose to share the classroom link you will get a link and a code to share with your students.



STEPS TO CREATE A DUOLINGO CLASSROOM

- If you choose to create the account option, then you will have to add each student manually.



Step 6: Download the PDF that contains instructions for the students (link to the classroom and steps to join the Duolingo classroom)



DUOLINGO GUIDE 1



Subject: English I

Duration per day/week: 20 minutes.

Duolingo topic: Family

Objective: To list vocabulary related to family by using Duolingo platform activities

Duolingo learning outcome: Students create a virtual family album describing their family accurately.

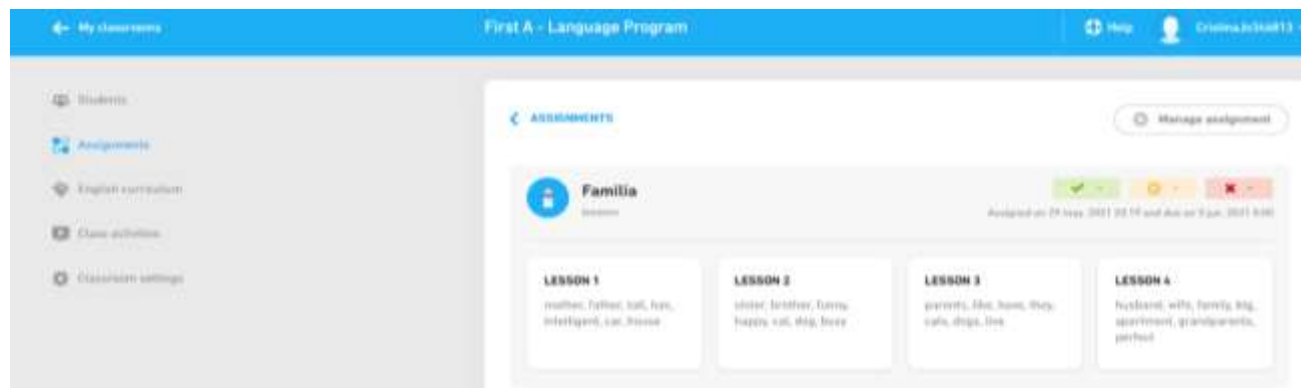
Duolingo vocabulary: mother, father, parents, daughter, son, brother, sister, brother-in-law, sister-in-law, aunt, uncle, mother-in-law, father-in-law, grandfather, grandmother, firstborn.

Devices: Flexible

TOPIC 1: FAMILY

Procedure:

- The teacher introduces the topic “Family” through a Word search. Students have to find at least 10 new words about the topic. Then, the teacher assigns four Duolingo lessons where students are going to practice the new vocabulary for 20 minutes (5 minutes per lesson).



Source: <https://schools.duolingo.com/>

Duolingo learning outcome: Students create a virtual family album describing their family, accurately.

After the four lessons have been completed, the student will create an online family album where they are going to introduce their family members. The link for this learning outcome has to be shared with the teacher. To do this activity, students are free to use any of the following links.

<https://myalbum.com/>

<https://www.canva.com/>

<https://www.genial.ly/es>

DUOLINGO GUIDE 2



Subject: English I

Duration per day/week: 20 minutes.

Duolingo topic: Routines

Objective: To support vocabulary related to routines by using Duolingo platform activities

Duolingo Learning Outcome: Students write about their daily routine using the Duolingo vocabulary learned, effectively.

Duolingo vocabulary: Wake up, get up, take a shower, brush teeth, brush hair, get dressed, make the bed, have breakfast, have lunch, play, watch tv, surf the net, get undressed, go to sleep.

Devices: Flexible

TOPIC 2: ROUTINES

Procedure:

- The teacher introduces the topic “Routines” with images. Students become familiar with the new vocabulary that will be used in the unit. Then, the teacher assigns four Duolingo lessons where students are going to practice the new vocabulary for 20 minutes (5 minutes per lesson).

The screenshot shows the Duolingo Schools interface for a 'First A - Language Program'. The main content area is titled 'ASSIGNMENTS' and features an assignment named 'Rutinas' (Routines) assigned on 7 Jan. 2021 12:45 and due on 8 Jan. 2021 3:00. Below the assignment title, there are four lesson cards:

LESSON 1	LESSON 2	LESSON 3	LESSON 4
lives, works, speaks, excuse me, here, please, language	play, plays, like, likes, music, to, soccer	goes, go, every, work, needs, class, day	has, dictionary, computer, use, uses, never, when

Source: <https://schools.duolingo.com/>

Duolingo Learning outcome: Students write about their daily routine using the Duolingo vocabulary learned, effectively.

After the four lessons have been completed, the student will present two paragraphs using the vocabulary learned. In the first paragraph, the student should write about his/her daily routine and in the second paragraph, the student should write about the daily routine of a classmate or family member.

My daily routine



Source: <https://thehungryjpeg.com/product/3612355-man-in-everyday-life-people-daily-routine-vector-cartoon-businessman>

Mydaily routine



Source: <https://www.pixtastock.com/illustration/40727653>

DUOLINGO GUIDE 3



Subject: English I

Duration per day/week: 20 minutes

Duolingo topic: Food

Objective: To learn vocabulary related to food by using Duolingo platform activities

Duolingo learning outcome: Students record a video preparing their favorite dish.

Duolingo Vocabulary: Fried chicken, noodles, sausage, pancakes, chips, bagel, toast, waffles

Devices: Flexible.

TOPIC 3: FOOD

Procedure:

- The teacher starts the lesson with the game “Who wants to be millionaire”. Students are going to be divided in groups. The teacher gives each group a picture of a dish and four recipes. Students have one minute to choose the recipe that contains the ingredients in the picture. If the chosen answer is correct, the winner group gets a lingot in the DUOLINGO activities.
- Then, the teacher assigns four Duolingo lessons where students are going to practice the new vocabulary for 20 minutes (5 minutes per lesson).

The screenshot shows the Duolingo Schools interface. At the top, there is a blue header with 'My classroom' on the left, 'First A - Language Program' in the center, and 'Help' and 'Dialina.69AAR13' on the right. A sidebar on the left contains navigation options: 'Students', 'Assignments', 'English curriculum', 'Class activities', and 'Classroom settings'. The main content area is titled 'ASSIGNMENTS' and features a 'Manage assignment' button. Below this, there is an assignment card for 'Comida' (Food) with a red circular icon and a 'Lessons' label. The assignment is scheduled from 1 Jan. 2021 11:15 to 8 Jan. 2021 0:00. It contains four lessons:

LESSON 1	LESSON 2	LESSON 3	LESSON 4
eat, eats, usually, meal, lunch, beans, rice	drink, drinks, coffee, tea, milk, with, does	breakfast, egg, fruit, for, want, wants, some	drink, at, apple, orange, color, make, makes

Source: <https://schools.duolingo.com/>

Duolingo learning outcome: *Students record a video preparing their favorite dish.*

Finally, to evaluate the students' progress, the teacher asks students to record a video where they are going to prepare their favorite dish. In this video, students are going to describe the steps to make that dish using the vocabulary learned. This video must be shared with the teacher. To record this video, students may use the following links.

<https://www.canva.com/>

<https://www.powtoon.com/>

DUOLINGO ACTIVITY 4



Subject: English I

Duration per day/week: 20 minutes.

Duolingo topic: Feelings and Emotions

Objective: To list vocabulary words related to feelings by using Duolingo platform

Duolingo Learning Outcome: Students complete a dialogue and role-play it accurately.

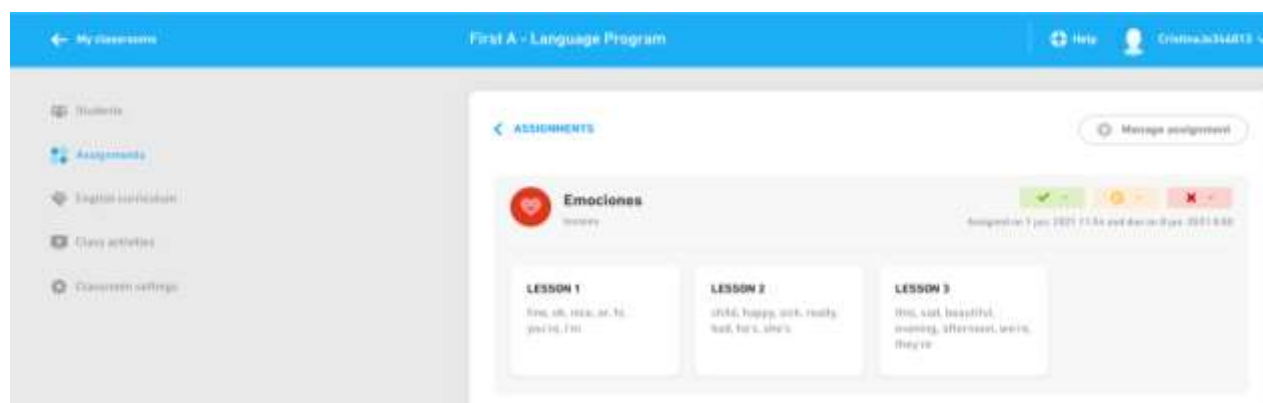
Duolingo Vocabulary: Afraid, annoyed, bored, disappointed, exhausted, shy, cheerful, angry, playful, relaxed.

Devices: Flexible

TOPIC 4: FEELINGS AND EMOTIONS

Procedure.

- The teacher starts the lesson with the game “In the mirror”. Students are going to work in pairs. The teacher asks students to stand up face to face. The teacher is going to show some pictures with different feelings. One student is going to perform that feeling, the other student is going to say the name of that feeling while imitating it.
- Then, the teacher assigns four Duolingo lessons where students are going to practice the new vocabulary for 20 minutes (5 minutes per lesson).



Source: <https://schools.duolingo.com/>

Duolingo Learning Outcome: *Students complete a dialogue and role-play it accurately.*

To check comprehension, the teacher is going to ask students to complete and role-play the following short dialogue with the vocabulary learned.

A: Hi, how do you feel today?

B: I feel

C: What makes you feel

B: My

D: Oh! I am sorry to hear that.

B: How do you feel, A?

A: I feel

B: What makes you feel

A: Ms. Smith just said I did a good job.

C: What did you do?

A: I

DUOLINGO ACTIVITY 5



Subject: English I

Duration per day/week: 20 minutes

Duolingo topic: Shopping

Objective: To develop vocabulary related to shopping by using Duolingo platform

Duolingo learning outcome: Students create an original comic strip to convey shopping vocabulary.

Duolingo vocabulary: Customer, cashier, shelf, basket, cash, credit card, debit card, discount, shopping bag

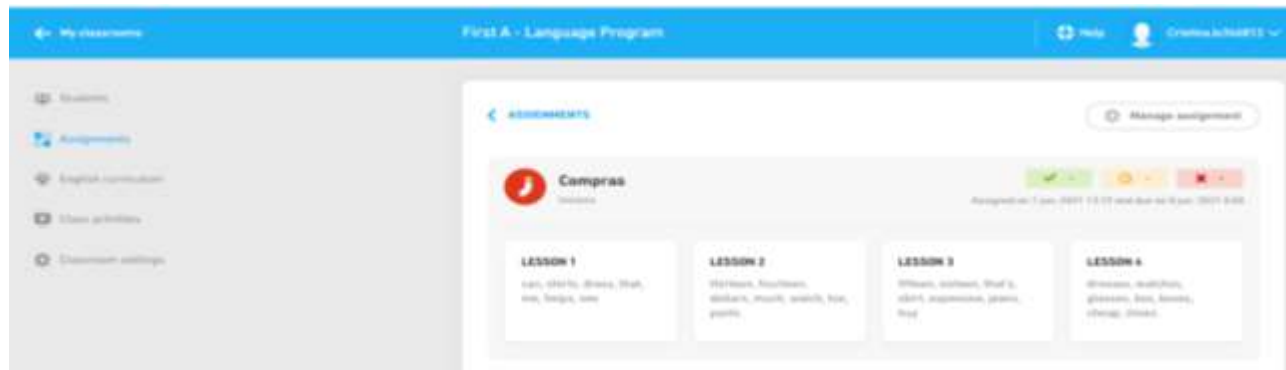
Devices: Flexible

This activity can be completed as part of the class activities, or it can be sent as homework.

TOPIC 5: SHOPPING

Procedure:

- The teacher starts the lesson with the game “find the pair”. For this game, the students are going to be divided in groups of 3. The teacher is going to choose one person per group. In this game, there will be a number of pictures and words on the teacher’s screen. Each picture represents a shopping word so students have to find out the two as quickly as possible. The group that finds out the pair in less than two minutes, wins.
- After this activity, the teacher assigns four Duolingo lessons where students are going to practice the new vocabulary for 20 minutes (5 minutes per lesson)



Source: <https://schools.duolingo.com/>

Duolingo learning outcome: *Students create an original comic strip to convey shopping vocabulary.*

To evaluate the students' comprehension, the teacher asks students to create an original comic strip to convey shopping vocabulary. For this activity, students may use the following websites:

<https://www.storyboardthat.com/storyboard-creator>

<https://www.makebeliefscomix.com/Comix/>

<https://www.pixton.com/>

Finally, students have to share the link with the teacher.

CHAPTER III. ANALYSIS OF THE RESULTS

In the theoretical part of this thesis, it was stated that there is still a dearth of empirical research on the gamification field and its applications in education. With this need in mind this experiment was designed to understand the importance of using other teaching strategies when teaching vocabulary in the English language; that is why the researcher decided to do her investigation on the gamification strategy where the main objective was to implement Gamification strategies, specifically Duolingo platform, in English language learning vocabulary. As it was already stated in the methodology chapter, the study was conducted with the mixed method where a pre-test, post-test and a questionnaire were used to obtain the data needed. All the data obtained from students and from *Duolingo* served as the source to evaluate the central hypothesis of this experiment.

3.1. Hypothesis Testing

Null Hypothesis H0: Gamification strategy does not influence in the development of the English Language vocabulary in students of first semester from Pedagogy of National and Foreign Languages Major at Universidad Técnica de Ambato.

Alternative Hypothesis H1: Gamification strategy influences in the development of the English Language vocabulary in students of first semester from Pedagogy of National and Foreign Languages Major at Universidad Técnica de Ambato.

Matematical Model

Statistical test observed:

H0: $1 = 2$

H1: $1 \neq 2$

Where:

1 = media experimental group in the pre-test.

2 = media experimental group in the post-test.

The calculation formula is the following:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{S_p^2 \left[\frac{1}{n_1} + \frac{1}{n_2} \right]}}$$

$$S_p = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}}$$

Where:

\bar{x}_1 = average in the first measurement (pre-test).

\bar{x}_2 = average in the first measurement (post-test).

S_p = combined variance of the samples.

n_1 = data number of the first measurement (37 data).

n_2 = data number of the first measurement (37 data).

Specification of the regions of acceptance and rejection

The distribution under the null hypothesis of the variable t is a Student t-test with $(n_1 + n_2 - 2)$ degrees of freedom.

Decision Making

If the 'p' value or level of bilateral significance is smaller than or equal to a (0,05), the null hypothesis (H0) will be rejected and the alternative hypothesis (H1) will be accepted. It is the same as if the Student t value is on the null hypothesis rejected area in the Student t-test distribution the alternative hypothesis (H1) will be accepted.

Selection of the level of significance

To verify the hypothesis, the following level of significance was used: $\alpha = 0.05$

Degrees of freedom

The formula to determine the degrees of freedom is the following:

$$v = n - 1$$

Where:

n = average of first and second measurement (37 data).

v = degrees of freedom

$$v = 37 - 1 = 36$$

Through the use of statistical software the following results were obtained:

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Score	Equal variances assumed	.814	.370	3.864	71	.000	12.264	3.174	5.936	18.593
	Equal variances not assumed			3.854	67.990	.000	12.264	3.182	5.915	18.614

Figure 4. Hypothesis testing
Elaborated by. Jordan, c. (2020)

This table showed the result obtained from the statistical hypothesis. The value of t_{count} was 3.864. While Df (Degree of Freedom) was 71 and sig. tailed (p) value was 0.000. Based on these results the researcher establishes that H_0 was rejected, and H_1 was accepted. Therefore, it can be concluded that Gamification strategy influences in the development of the English Language vocabulary in students of first semester from Pedagogy of National and Foreign Languages Major at Universidad Técnica de Ambato.

3.2. Results from the survey applied to the experimental group.

The following data was obtained from a questionnaire. This instrument is a Likert scale survey question that contains five statements to measure students' opinion and attitude towards the use of Duolingo. This questionnaire was validated by three experts from Pedagogy of National and Foreign Language Major.

Table 7. Survey Results

N.= 37	Strongly Disagree	Disagree	Neither disagree nor agree	Agree	Strongly Agree
1. Duolingo platform was very easy to use.	2,20%	0%	28%	4%	65%
2. You enjoyed learning English with Duolingo	0,00%	0%	7%	40%	53%
3. Duolingo helped you learn new English vocabulary	3,33%	2,50%	5%	58%	31%
4. You were motivated learning new vocabulary with Duolingo	0,00%	0%	1%	11%	88%
5. You liked Duolingo better than regular homework	5,20%	0%	8%	27%	60%

Source: Direct research

Elaborated by Jordán, C. (2020)

This table shows the results of the survey applied to the experimental group after the intervention. The researcher combined *the Strongly Agree* with the *Agree* results to have a better understanding of the data. In question one, 69% said that Duolingo was very easy to use. In question two, 93% found it enjoyable. Question three, 89% found it helpful. Question four, 99% were motivated and in question five, 87% liked Duolingo better than regular homework. In addition, not too many students seem to disagree with these statements. To sum up, the results obtained from the five questions that were conducted to 37 students from first semester “A” of Pedagogy of National and Foreign Languages Major at Universidad Técnica de Ambato, show that most students consider that Duolingo is an effective strategy to use when learning a language because it permits students to expand their vocabulary and at the same time motivates them to learn.

The results from the quantitative part were correlated with the data obtained from the questionnaire. This instrument was focused on Likert scale where the main objective was to analyze the students’ opinions and attitudes towards *Duolingo Platform*. The researcher applied this survey at the end of the intervention after the post-test. The results were very satisfactory because the researcher demonstrated that Duolingo Platform helps students learn vocabulary in the English language, as well as makes students feel motivated when using it. It is necessary to emphasize that this study was carried out with the participation of young adult students who just started the first semester of Pedagogy of National and Foreign

Languages Program. These students come to the program with gaps in the English Language. This problem made the researcher decide to experiment with gamification strategy, specifically Duolingo platform.

Conclusions

Based on the research, which had been conducted at Pedagogy of National and Foreign languages Program, in the first semester “A” as the experimental group and “B” as the control group, this research aimed to implement Gamification Strategy in the English language learning vocabulary. Duolingo platform was the gamify strategy that the researcher focused on obtaining the following conclusions:

- Most of the studies in Gamification strategy focused on the effectiveness of using the Duolingo platform or application as a gamify teaching strategy. The results of these studies showed that this platform facilitates the acquisition of new vocabulary in the English language. Additionally, most of the authors stated that motivation has been a huge factor within this platform because it has permitted students to explore new ways of learning through the games.
- This study showed that the Duolingo platform facilitates the learning of vocabulary in the English language due to its ease of use and the variety of activities it contains. It also attracted the attention of the students, to whom the experiment was applied, since its design resembles a game platform where students must complete all the lessons to level up by obtaining points and gaining positions.
- The results obtained in the pre-test and post-test confirm the hypothesis stated at the beginning of this research. The Duolingo platform is effective in the development of English vocabulary. This data could be corroborated with the application of the questionnaire where we sought to analyze the opinions of the students towards the use of this platform, who mentioned feeling motivated during the completion of the assigned lessons.

Recommendations

- Teachers should take full advantage of these new technological teaching strategies to motivate students when learning vocabulary. One of these is the Duolingo platform, as it facilitates student learning, since they, being technological natives, are constantly seeking to be immersed in this technological world. Therefore, learners must focus on using these technological strategies for educational purposes through the teacher's guidance.
- It is recommended to use the Duolingo online platform as part of the tools that students can use in the learning process, and to conduct a subsequent study to determine the effectiveness of the platform, not only in the English learning vocabulary but also in other English language skills.
- It is suggested to continue with a further and deeper investigation of the Duolingo platform, not only on vocabulary but also on the development of the other English language skills to determine its effectiveness in the teaching-learning process, especially in primary and secondary level students.

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APPENDIX

Appendix A: Instrument Validation

QUESTIONNAIRE VALIDATION CHART

TOPIC: GAMIFICATION STRATEGY AND THE ENGLISH LEARNING VOCABULARY

Objective: To collect information on students' perception towards the use of Duolingo platform when learning vocabulary in a Foreign language.

Instructions:

We request your collaboration in filling out the following survey by marking with an "√" the answer of your choice in the appropriate column.

Survey questions	Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
1. Duolingo platform was very easy to use.					
2. You enjoyed learning English with Duolingo					
3. Duolingo helped you learn new English vocabulary					
4. You were motivated learning new vocabulary with Duolingo					
5. You liked Duolingo better than regular homework					

Elaborated by: Jordan, C. (2020)

THANK YOU FOR YOUR VALUABLE COLLABORATION

Appendix B: Pre-test and Post-test - KET Test (Retrieved from:

https://www.examenglish.com/KET/KET_vocab.htm)

KET TEST

DATE: _____

STUDENT'S NAME: _____

GRADE: _____

Choose the correct answer:

1. Jack's not well. I think we should call an _____.

ambulance
 illness
 accident
 engine

2. My teacher is a very good _____.

cooking
 cook
 cooker
 cookery

3. Come to my desk and _____ me your book, please.

get
 bring
 take
 carry

4. Mark _____ a lot of great photos on his holiday.

took
 got
 had
 did

5. Can I have a _____ ticket to Oxford, please, coming back today?

return
 double
 long
 round

6. You need _____ to make an omelette.

fish
 eggs
 potatoes
 apples

7. We could outside today you should take a _____ with you.

sock
 scarf
 hat
 glove

8. Could you _____ in this form for me, please?

make
 write
 wear
 fill

9. They were all _____ so they went to a restaurant.

angry
 hungry
 sorry
 fat

10. This radio, portable is too _____ for me.

loud
 empty
 empty
 heavy

11. Almost everyone from Egypt so his first language is _____.

Arabian
 Arabic
 Arabic
 Arab

12. Could you tell me the _____ to Piccadilly Circus, please?

way
 road
 path
 street

13. Your bag is dirty. You must _____ it tonight.

clean
 tidy
 break
 wash

14. We're going back home the day after _____.

tomorrow
 yesterday
 today
 tonight

15. Can you help me _____ some ideas for the party?

try
 choose
 look
 decide

16. The shortest month of the year is _____.

February
 July
 December
 January

17. My sister came 200 _____ in work.

each
 dozen
 million
 money

18. I stopped parking when the car moved. I don't want to get _____.

dry
 warm
 windy
 wet

19. They live on the top floor of a big block of _____.

cinema
 houses
 hotels
 flats

20. I'm _____ I'm late my car broke down.

wrong
 sorry
 bad
 unhappy

21. Can you _____ Spanish?

talk
 tell
 say
 speak

22. I'm going to go to bed now. _____? See you in the morning.

Good evening
 Good morning
 Good night
 Good bye

23. Don't _____ to post my letters for me.

remember
 forget
 need
 make

24. Almost everyone from Egypt so his first language is _____.

Arabian
 Arabic
 Arabic
 Arab

25. You must be _____ in the library.

quiet
 quiet
 quickly
 questions

26. I'd like to make _____ with the doctor, please.

a meeting
 a conversation
 an appointment
 something

27. We had a very good football _____ last night.

game
 play
 look
 time

28. Could you _____ the schedule to me again?

tell
 explain
 talk
 answer

29. My father's brother is my _____.

uncle
 cousin
 nephew
 aunt

30. You must be _____ to the library.

quiet
 quiet
 quickly
 questions

31. I'd like to make _____ with the doctor, please.

a meeting
 a conversation
 an appointment
 something

32. Can I have a _____ ticket to Oxford, please, coming back today?

return
 double
 round
 long

33. There are 24 hours in a _____.

day
 week
 night
 year

34. When I went through customs, nobody _____ my passport.

controlled
 checked
 looked
 watched
















35. We had a very good football _____ last night.

game
 play
 look
 time

36. Did you enjoy the _____ from London to Tokyo?

fly
 flying
 flight
 flew

Appendix C: Students' Duolingo Assignments reports

 Alejandro Candanoza 990 XP - - 3	 Alvaro Sarmiento 3855 XP 3 - -
 Camila Cárdenas 840 XP 4 5 -	 david pabon 3855 XP 3 5 1
 Dylan Contreras 500 XP 2 3 1	 Dylanplay245 50 XP - - 6
 Esteban 334 XP 2 - 2	 Jesús David Nuñez Becerra 220 XP 3 3 -
 karlafigueroajaime 1036 XP 4 3 1	 Laura Gonzalez Soto 1660 XP 2 5 2
 navy 430 XP 3 4 -	 nicolasyesid.j12 1185 XP 5 4 -
 Santiago 2060 XP 4 5 -	 Santiago Guzman 668 XP 1 2 -
 valentina feria 5120 XP 3 6 -	