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Topic:

**USE OF DUOLINGO PLATFORM TO IMPROVE VOCABULARY ACQUISITION
FOR CHILDREN**

**Research project prior to obtaining the title of Magister on English Pedagogy
as a Foreign Language**

Line of research:

INNOVATIVE PEDAGOGIES, TEACHING METHODS

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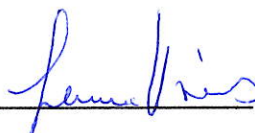
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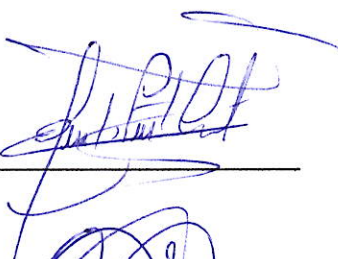
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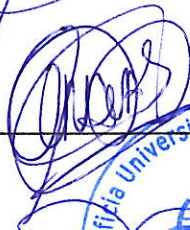

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DEDICATION

This research is mainly dedicated to God and the most significant people in my life, my parents Angel and Julia, my brother Edwin and my sister Wilma, my nephew Wellington. Thank you for your unconditional support.

ACKNOWLEDGEMENT

I am deeply grateful for the opportunity to express my deepest appreciation to all those who have contributed to the completion of this post-graduate project.

I would like to thank God for giving me the opportunity to live and grow and be the light that accompanies in the most difficult moments.

I am deeply grateful for the opportunity to express my honest appreciation to all people who have contributed to the completion of this project.

Thank you to my parents, my brother, my sister and my nephew for their valuable support and encouragement sustained me during moments of doubt and provided the motivation to persevere.

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I extend my sincere thanks to my thesis advisor, whose guidance, expertise, and unwavering support have been invaluable throughout this process.

To PUCESA that was my second home where I learned a lot as a person and as a professional.

SUMMARY

Esta investigación explora la eficacia del uso de la plataforma Duolingo para mejorar la adquisición de vocabulario en niños. La variable independiente relacionada al uso de Duolingo promueve variedad de actividades interactivas para adquirir nuevo vocabulario, y la variable dependiente se relaciona con la adquisición de vocabulario, factor esencial en el desempeño del lenguaje.

Este estudio surge de la idea integrar herramientas digitales en entornos educativos y la necesidad de medir los resultados del aprendizaje, en este caso la adquisición de vocabulario. Duolingo al ser una plataforma mundial de aprendizaje de idiomas reconocida por su enfoque interactivo, proporciona un entorno útil para que los niños interactúen y adquieran nuevo vocabulario.

Este estudio tiene como objetivo contribuir que la plataforma Duolingo es recomendada de manera efectiva apoyando el aprendizaje de idiomas. Además, busca brindar percepciones sobre los beneficios y limitaciones del uso de esta, para la adquisición de vocabulario.

Este estudio empleó un enfoque cuasiexperimental incorporando un pre-test, un post-test y una encuesta incluye datos tanto cuantitativos como cualitativos para ser recopilados y analizados. Se utilizan análisis estadísticos, incluidas pruebas T-test y pruebas de Wilcoxon, para evaluar el impacto de la plataforma, especialmente en el desarrollo del idioma en los niños.

Finalmente, esta investigación promueve informar a educadores, representantes de la educación en el país y padres de familia, sobre el papel de las plataformas digitales de aprendizaje de idiomas, particularmente en adquisición de vocabulario con propósitos educativos.

Palabras clave: plataforma duolingo, adquisición de vocabulario, niños, aprendizaje digital, tecnología.

ABSTRACT

This research explores the effectiveness of using the Duolingo platform to improve vocabulary acquisition in children. The independent variable related to using Duolingo promotes various interactive activities to acquire new vocabulary, and the dependent variable is related to vocabulary acquisition, an essential factor in language performance.

This study arises from integrating digital tools in educational environments and the need to measure learning outcomes, such as vocabulary acquisition. Duolingo, a worldwide language learning platform recognized for its interactive approach, provides a useful environment for children to interact and acquire new vocabulary. This study aims to contribute to the recommendation that the Duolingo platform effectively supports language learning. It also seeks to provide insights into its benefits and limitations for vocabulary acquisition.

This study employed a quasi-experimental approach incorporating a pre-test, a post-test, and a survey, including quantitative and qualitative data to be collected and analyzed. Statistical analyses, including T-tests and Wilcoxon tests, assess the platform's impact, especially on children's language development.

Finally, this research promotes informing educators, representatives of education in the country, and parents about the role of digital language learning platforms, particularly in vocabulary acquisition for educational purposes.

Keywords: *duolingo platform, vocabulary acquisition, children, digital learning, technology.*

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INTRODUCTION

Language acquisition follows a process that is achieved by each learner according to their needs, interests, abilities, beliefs, and other factors. So that, the interaction in another language contributes to personal and professional life. Acquiring a new language implies the domain of the two receptive skills: listening and reading, and the two productive skills of writing and speaking. Moreover, to have the language field, it is relevant to have a great deal of glossary.

Vocabulary must be taught to children with the purpose to help them to recognize the different parts of speech. It is a requirement in the language learning process to be able to pronounce the words correctly and identify the grammatical rules (Liando & Kumayas, 2022) For all languages, it is essential to have vocabulary knowledge; however, a high percentage of children around the world have an absence of it.

The lack of vocabulary is also a problem in our country, especially in public institutions where the Ministry of Education does not provide the appropriate materials and the institutions do not have the suitable technology for language acquisition. That is the reason why Ecuador has a low English level, according to English First (2019) being the last country ranked among the Latin American countries. On the other hand, English hours have been reduced according to the updated curriculum provided by the Ministry of Education. However, it needs to have given more periods, especially to students from bachillerato, to get the B2 level.

The minimum vocabulary knowledge of English that children from “Unidad Educativa Joaquin Lalama”, from sixth to seventh level of Basic Education, depends on some factors like the lack of interest to learn English due to fact that at the end of their Senior level most of the students do not continue studying at the university. They consider it is not useful to acquire a second language in the future, therefore they only use English to pass their school years. Another difficulty in learning and using the English language, is the socio-economic situation of the students. Nowadays the Ministry of Education does not provide free English textbooks and

their parents do not have the economic resources to buy one, thus they are not able to help their children at home in their learning acquisition process.

Furthermore, another factor is that the students do not value the importance of acquiring new vocabulary because they consider unnecessary to use the English language in their lives. Most of them have trouble with the writing and pronunciation skills. Considering these facts, there is some percentage of students who want to learn and apply the second language in their learning process and in their personal lives. A study conducted by (Schmitt et al., 2021) defines “the key type of knowledge necessary for any language use, because if words to express concepts are not known, all syntactic and discourse knowledge is of little use”

In this technological world, learners must use different online platforms in order to acquire language; they have a variety of interactive activities to learn and to practice a second language. The ability to learn by themselves and to have a teacher or tutor guide helps them to clarify doubts and solve some difficulties. Consequently, one of the most convenient platforms to acquire languages is the Duolingo platform, which provides a variety of interactive activities depending on the learner’s level.

A study performed by (Phan, 2023), with the use of Duolingo platform, students can develop the activities according to their prior knowledge. This platform has been designed with the objective to recognize words and translating sentences; as a consequence, it is a collaborative tool which helps children start and continue learning English at the basic level. Moreover, they can repeat the tasks to improve their learning being a meaningful tool that has spread for using English learning alternatives.

In the articles performed by (Lowen et al., 2019) and (Govender & Moreno, 2021), a survey is carried where they recognized 22 gamification elements in Duolingo’s design. It showed evolution in the students learning process and fulfilled short objectives to perform knowledge and criticism. Their knowledge indicated accuracy in the answers, promoting experience, which contributed to the English levels. In reference to these authors, the platform provides a variety of games that keeps

learners entertained. Moreover, they feel confident in themselves, have progress, and ability to interact with other speakers.

In a study managed by (Friska, 2022), the main objective was to explore Duolingo's effectiveness in vocabulary acquisition in seventh-grade children. The result revealed that they were able to master most of the vocabulary presented in the class. Besides, the learners reduced their learning anxiety to learn a new language. Taking into consideration, the platform provides improvement and meaningful significant learning, at the same time, they have more confidence to develop better communication using the language and have the opportunity to use it.

Another relevant study carried out by (Edwards, 2022) indicated that the practice of Duolingo for twenty-two days helped students become familiar with the platform and lost their fears of using the language by performing all the activities in an enjoyable way. It was found to have two cons; one of them was the speech recognition because they had some troubles with it, the second con was that they were not able to achieve a high level of proficiency in the language. It may occur with a high percentage of the learners, especially with children who are in their vocabulary acquisition learning process. At the beginning of its use, there were complications; nevertheless, after the familiarization with it, the learning showed the expected results, and the most important fact was their interaction with the language.

Research question

What is the impact of using the Duolingo Platform to make children acquire vocabulary?

Hypothesis

The use of the Duolingo platform has a great impact on the vocabulary acquisition of children from eight to ten years old at Unidad Educativa Joaquin Lalama.

Research Justification

The current research work titled “Use of the Duolingo Platform to Improve Vocabulary Acquisition for Children” gives the learners the opportunity to develop their vocabulary knowledge while improving their English skills. As vocabulary is an essential part of the language, it is recommended to have the appropriate lexis. On the other hand, teachers must provide the appropriate tools so that the learners can use the platform by themselves and communicate with other students. The main purpose of this research is to use the Duolingo Platform to make children who are 8-10 years old from Unidad Educativa Joaquin Lalama acquire vocabulary in the easiest way due to they do not have access to the internet in the institution and they do not use technical resources to learn English. Another point is that learners consider the English classes are not so interesting for them considering the teachers do not have effective strategies to teach the language vocabulary.

General Objective

To improve vocabulary acquisition in students aged eight to ten years through the use of the Duolingo platform.

Specific Objectives:

1. To analyze students' weaknesses regarding the development of vocabulary acquisition.
2. To identify the advantages of Duolingo platform to increase vocabulary acquisition in a theoretical way.
3. To apply Duolingo platform which challenges vocabulary acquisition in learners from eight to ten years old at Unidad Educativa Joaquin Lalama.
4. To enhance vocabulary learning by using Duolingo interactive activities promoting new language acquisition.

CHAPTER I. STATE OF ART AND PRACTICE

1.1. Duolingo platform

Duolingo is an interactive platform that is used by teachers and students in order to learn any language with variances in age and abilities. It was founded by professor Luis Von Ahn, who was born in Guatemala, where English is not the first language. On the other hand, his PhD student, Severin Hacker, decided to come from Switzerland to the United States to expand his teaching studies. Switzerland is a country which had four official languages in 2012. They realized the importance of learning languages, so they planned to create a platform that would be likely to be used by English language learners.

To have access to use Duolingo, the requirement is to have an internet connection on computers or cell phones. It offers different courses in different languages, providing free accounts for learners around the world. The platform has a translation option where the outcomes determine the right choice. In February 2022, Duolingo presented courses in forty languages to 41.7 million learners around the world. The main objective of the company was to increase the number of users and expand the platform use to more countries, providing language services. Besides, they wanted to become one of the most known companies use to learn languages and to get the highest levels to master a language.

Figure 1. Duolingo users



Source: Retrieved from: <https://codempire.io/blog/how-to-build-a-language-learning-app/>

At the beginning, Duolingo started using four languages: English, Spanish, German, and French, then it expanded to other languages. In the present, the platform usually contains around six levels, providing from four to six lessons to perform vocabulary activities including: grammar, listening, and quick story exercises. The platform provides two types of accounts: Duolingo Plus, which requires a payment; however, it does not have ads and it has more simultaneous activities and practices as well; and Duolingo for Schools, which was designed for educational purposes to follow students' language acquisition progress.

Duolingo has basic contents for beginners, allowing them to go back between their native language and the second language in the free version. Moreover, learners can practice their language skills, making it easier to learn and making their own progress. Students have the opportunity to set their own goals by selecting the time they decide to practice. Even if they are more advanced, they can pass the checkpoint to start more lessons.

Duolingo features

This platform has good characteristics which allow learners to identify the mistakes they make. So that they can learn from their errors. It has around 21 languages to use according to students' level if they have some previous language knowledge. Additionally, it allows them to use their native language and start to use the target language, applying most of their language skills. There is also the paid version, which allows you to use more characteristics to have positive learning. Nonetheless, most of the learners prefer to use the free version

Figure 2. Features of Duolingo



Source: Retrieved from: <https://www.visartech.com/blog/how-to-create-a-language-learning-app-like-duolingo/>

A study conducted by (Matra, 2020) demonstrated that Duolingo had a positive impact on learners. They were given a pre-test and a post-test. Moreover, it increased motivation to learn the target language; it proved that Duolingo provides effectiveness in young learners. Taking this into account, teachers have to provide enough information related to the platform with the purpose of using it accurately. At the end, there was a noticeable difference in the learning vocabulary acquisition. Duolingo platform as a vocabulary learning tool helps to manage time and students' encouragement to learn a language. Otherwise, it could have some difficulties and could not have good outcomes.

Another study performed by (Shortt et al., 2023) showed Duolingo's effectiveness with learners. They did a study related to mobile-assisted language learning (MALL), where different gamification styles were used. It used diverse approaches, backgrounds, locations, and samples to identify the best gamification tools for learning different languages. English was not the only language to be learned; otherwise, it has different languages such as Italian or Russian that need to be learned and mastered.

Among the applied tools, Duolingo had better success in language acquisition because learners were engaged in their learning process. Besides, there was encouragement to use this tool to demonstrate their learning improvement. The reviews applied a pre-test and a post-test to evaluate the learning process even in formal and informal education situations. It shows the importance of using gamification in classrooms and virtual settings. An important aspect is also the student's motivation, which contributes to success in language learning and has good consequences when applied in personal and professional roles.

Moreover, the use of the platform is to increase motivation to learn the target language. So, it is proved that Duolingo provides effectiveness for young learners. Taking this into consideration teachers are provided with enough information related to the platform with the purpose of using it correctly. The use of this platform, then, contributes to learn English with low pressure, repeating tasks, and having reflection on their learning process.

A study executed by (Al-Dosakee, 2021), demonstrated that the use of gamification is a valuable implement for language acquisition. At the same time, it is the best motivation for learners to develop activities and fulfill their objectives. Furthermore, technology is an important element used in education that allows an individual to learn a language in different ways. The study shows that different platforms and ways to gamify the language learning process are significant elements in acquiring languages, and they are not the traditional methods used to master a language.

Duolingo is one of the tools which contributes to the process of learning languages, focusing on vocabulary and grammar, as well. Another factor is to work collaboratively because learners are able to help each other by promoting competition among them. Event though, most of them have previous knowledge, there is a collaborative effort. On the other hand, gamification is a powerful tool to teach children; they get engaged, and the learning is productive allowing them to remember the new words and to use them in their language production.

In another study performed by (Sakalauski, 2022), the platform has had success in language learning acquisition. As a consequence, it revealed that it has a wide market segment and is the most recognized gamification product for learning languages. It has gone with the hand of the technological world and social media contributions. Learners have lost the concern of using the language; these studies showed good effectiveness in language acquisition; in other countries and cities, students have enjoyed using this platform.

Like all learning corporations, Duolingo has competition with other companies like Babbel, Rosetta Stone, among others. Nowadays, there are so many different establishments that offer to learn languages for free and with easier ways. On the other hand, it has some software errors and voice recognition, and one of its weaknesses is that it does not provide the practice of speaking skills, which is a key element to learning a language. The company also has the threat of market oversaturation due to other big companies like Google, Apple, and Amazon that offer a better way to acquire languages.

They are promoting artificial intelligence technologies to acquire language services that do not have enough advanced capabilities to compete with humans yet. Although, in the future, verbal abilities and human interpreters will become obsolete as technology advances, even though (SAKALOUSKĚ, 2022), article shows that Duolingo has a long-term strategy that consists of enhancing technology, increasing the users' number, looking for more investors, and providing an attractive company image to attract more language learners.

A study conducted by (Permatasari et al., 2022), showed the use of the Duolingo platform in students from eight years old. They had difficulties in acquiring new vocabulary, having pronunciation difficulties, and retaining newly learned words. The study was applied quantitatively by using a pretest and a post-test. The results revealed that after they used Duolingo, they had positive results. It increased their ability to master vocabulary, and they felt encouraged to learn English.

According to these studies, they have demonstrated that the use of the Duolingo platform improves language acquisition. It is an easy platform to learn vocabulary and to use some grammar structures and listening skills. Moreover, learners are encouraged and motivated to perform lexis. Even though it does not allow the practice of speaking skills, which is the ability to master a language, Furthermore, there is competence with other platforms, which give other features to get involved in the language acquisition process. Learning a language implies time, practice, and feeling motivated; otherwise, it does not produce success. It is recommendable to apply the newly learned vocabulary daily with the purpose of learning the language.

There is also a study performed by (Ajisoko, 2020), which was executed on 19 university students for 30 days. During this extensive period, the results were encouraging. Learners got engaged using the platform, which is very familiar and not difficult to use. It was directly used to learn vocabulary. At the same time, the outcomes are to provide information for teachers and learners about the extensive practice of using Duolingo. Moreover, it shows the students were interested in language acquisition; the activities were meaningful and easy to develop. Finally, Duolingo shows the students are not bored because they are engaging in performing the activities.

Duolingo's strengths

According to (Vasselinov, 2012) Duolingo provides a variety of strengths in education.

- **Vocabulary:** This platform provides a variety of vocabulary according to the unit.
- **Verb Conjugation:** It is possible to find different tenses depending on the situation, allowing learners to identify the use of the verbs.
- **Units' development:** Each unit has organized events to be performed by the learners, providing clear explanations.
- **Time:** learners do not have to be stressed out because they can execute the activities according to their speed. They have the opportunity to look for the meaning of new words with a translator. They might repeat the audio to complete the activities.
- **Feedback:** at the end of the unit activity students are able to verify their learning progress.

Advantages of Duolingo

One of Duolingo's major advantages is that it is a free platform created with the purpose of learning English and other languages. It contributes to vocabulary acquisition by using interesting topics and learning through games. Furthermore, it helps to create activities to be performed by the learners. To practice a language through the Duolingo platform, it is possible to get access anytime and anywhere being provided by an internet connection and having a digital device.

Disadvantages of Duolingo

Among the great features Duolingo pretends to help students learn vocabulary; however, there are also disadvantages. One of them is the requirement to use it online due to it being an online application. If the learners do not have the technology, there is no access to use it. Another one, is that the teachers also have the negative aspect of not being able to use a projector to perform the class. Finally,

there are no activities to practice speaking, a very useful skill to interact with other second language speakers.

Duolingo Areas.

(Munday, 2015), mentions that Duolingo's platform provides these areas:

- The "tree" shows some icons for the activities; it has a green color if the exercise has not yet begun. Instead, it turns red if the activity has already started, and it changes to gold if the lesson has ended.
- Words: It has a variety of words that learners have acquired. Moreover, it contains a bar showing whether the words were learned or if the student needs to practice more.
- Activity: Similar to social networks and other learning platforms, it allows for interaction with learners in other languages in different countries. Among them, they can share learning tips and share opinions on the discussion board.
- Discussion: This segment allows learners to write posts related to issues they want to learn about. Furthermore, they have the opportunity to ask for information, which is difficult for them. At the same time, learners can receive comments from students who master the language.
- Immersion: this area is for advanced levels where learners can write documents in any language, they upload the paper to Duolingo's platform. Once it is on the platform, other learners can provide translation, and can give some recommendations by writing a comment about them.
- Lingots: They are rewards given to learners who have completed a skill or who have been on the platform for more than 15 minutes. To get a lingot it is important to end a level where learners can get 10 lingots and other relevant aspect is to use the platform frequently otherwise, students lose the lingots.

A study performed by (Jiang et al., 2020), mentions that the Duolingo platform has some similar characteristics related to the Common European Framework of Reference (CEFR), demonstrating abilities in the language production in particular aspects such as: giving information, ordering some food, giving suggestions, asking

for help, among others. Moreover, this platform helps students to involve personal experiences in their learning process, it is not a requirement to have previous knowledge of the language because they might start from zero. Another feature is that they have the opportunity to receive some feedback if they have made mistakes.

One of the great characteristics is that learners have the opportunity to customize their learning by combining previous learning with new content. However, others prefer to get directly to the difficult levels. In addition, Duolingo has interesting stories for learners that may be listened to with the purpose to enhance pronunciation, allowing them to interact using the target language. Besides, to achieve language success, it is important to have clear goals for language learning. So, the previous authors mentioned above recommend using this platform for second language acquisition to learn the language according to their speed.

Another study executed by (Herminingsih, 2021), showed that he applied the Duolingo platform to freshmen students from the university regarding vocabulary acquisition, whose results revealed that they set their schedule for each lesson. They did not feel the stress from teachers performing the activities. On the other hand, the listening exercises are recorded by native speakers, which contributes to practicing pronunciation. Herminingsih argued that there are some difficulties in acquiring language.

For instance, learners do not apply the vocabulary they have acquired, there is a limit of words that they receive in each class. Taking into consideration that nowadays technology has revolutionized, there are a variety of tools that offer the chance to learn languages. In this case, Duolingo demonstrated its useful platform to learn languages through games, and it has reduced the nervousness in the learning language process.

Comparing these studies, this valuable platform provides meaningful learning in second language acquisition. It is very useful for beginners and for students who have some knowledge as well, because they get a placement test and start from the level they got. There is no pressure to develop the activities; the learners are the

ones who decide the time; they get to the advanced levels according to their language knowledge. Another positive aspect of this platform is that it is for young learners as well as for adults without worries.

A study performed by (Purwanto, 2023), on eighth-grade students explained that they have been using the Duolingo platform for a short time. The gamification of this app offers learners help to achieve their language performance when they practice the four skills. They started with basic vocabulary. The easiest way to learn English kept them encouraged to develop each lesson according to their time. Additionally, they felt motivated to use the platform anywhere and everywhere they have internet access.

However, there was a few percentages of students who felt upset due to the use of the platform required to have an internet connection. As in many other countries, not all students who want to learn another language have the privilege of using the latest technologies. This author recommends using this application at other students' levels, like junior and high schools, to make comparisons about whether this tool is recommended for learning English.

Similarly, there was another study performed by (Amin, 2021) on learners from second grade. Its purpose was to identify their motivation to learn a second language. So, observation and data interviews were the instruments used to compare language learning using traditional books and learning applications. Learning participants felt enthusiastic about using Duolingo because it was flexible and totally practical. Moreover, the study focused on the following three main aspects:

1. Duolingo promotes motivation in EFL learners.
2. Duolingo promotes effectiveness in EFL.
3. Establishing the differences between Duolingo and traditional learning.

Once the study was concluded, the researcher realized that learners had the interest and curiosity to acquire a second language, even though there were some other factors like the influence of other people who had had the experience of using the platform. The elements, pictures, listening activities, and different exercises the

platform offers make an enjoyable learning. Besides, gamification is a key factor in language learning through the use of technological devices, which avoid boredom in the learning process.

A comparison between Duolingo and conventional learning is not to carry out books that are not so comfortable. These materials do not provide the key answers to check the progress, and there are no restricted rules in the classroom; teachers change new books as well. It makes students feel unmotivated to learn a language. Nonetheless, the use of this app requires an electronic device, and it has most of the skills to practice. This is an interactive platform that encourages learners to use the language.

Likewise, (Anugerahwat, 2023), asked the question, "Can Duolingo help people master a foreign language?" The study showed mastering a second or third language is a requirement in this era. Most people do it for communication, research, education purposes, business, or their own interests. To perform the app, both young and adult students, get independent through internet to be bilingual speakers.

Regarding the factors that contribute to the acquisition of a second or third language, we can mention the interaction of people around the world, the cultural backgrounds of those who travel to other countries, and anything like direct communication to share ideas. For these reasons, most people use the Duolingo platform to fulfill their goals of learning a language. Learners have found out the effectiveness it provides in the target language. It is an amazing gamification way to learn, and the availability to use it at anytime and anywhere appeals to many learners who use this app. The variety of languages it has makes most people get involved in using it and being bilingual as well.

Finally, there is another study performed by (Aprilani, 2023) who wanted to identify the "secondary Students' Attitudes in Vocabulary Learning assisted by Duolingo". They found out that secondary learners have limited vocabulary knowledge, some of the reasons are the stress to learn new words and they feeling bored when they use new lexis. The objective was to recognize the learners' attitudes towards using

Duolingo in vocabulary acquisition. After applying qualitative research, they classified into three domains:

The Affective Domain

It refers to the reasons learners had to use or reject the Duolingo platform. The study was applied to three students and one of them expressed that he felt bored at the beginning due to learning a second language is complicated. The two other students said they felt enthusiastic about the use of the interactive platform while using gamification to learn.

The Behavioral Domain

It refers to wondering if the learning contributes to language acquisition. It means that Duolingo provides support in the future. The results revealed that at the starting point, they do not have enough motivation; they were scared to be active participants and they had doubts if Duolingo helps to master the language. After the use of it, they were interested, their participation was active by answering different questions.

The Cognitive Domain

It refers to the idea if the platform helps in their learning. It means their perspective on it. So, the results indicated the three students think Duolingo helps to understand vocabulary through a dynamic way to learn. They realized that the platform characteristics contribute to language comprehension and help to acquire new vocabulary. Finally, the study concluded students have positive attitudes to the platform, which is easy to use with its interesting features to learn a language and master it in their professional and personal life.

Duolingo levels

This platform contains different units about several topics, and each of them has different activities where learners have the option to skip any of them if they do not want to perform. Nonetheless, at the beginning, there is a requirement to complete all the activities; otherwise, it does not allow to continue to the next activities. So, in

each unit, there are translation activities, unscrambling sentences, completing sentences, listening to a track, and completing ideas, it all depends on the students' level if they have some language knowledge, they are able to keep on with the activities. (Vasselinov, 2012)

Duolingo activities

There are a variety of activities to do on the Duolingo Platform to follow the learning process:

1. The first exercise to start the platform is to choose some pictures related to vocabulary, where learners have to select the meaning according to the picture.
2. The next activity is to translate some sentences from their native language to the target language. There are extra words that are reasons to select the correct ones and finally write the correct word to complete the ideas.
3. The following exercise is based on listening; it consists of listening to the word and writing the right one.
4. The fourth activity consists of performing some sentence repetition according to what the learners listen to.
5. The last exercise implies completing the empty spaces and multiple-choice exercises.

Figure 3. Vocabulary Strategies



Source: Retrieved from: [inkedin.com/pulse/four-features-inclusive-design-using-duolingo-app-example-german/](https://www.linkedin.com/pulse/four-features-inclusive-design-using-duolingo-app-example-german/)

1.2. Vocabulary learning

Learning new vocabulary involves a long written and spoken process since childhood. A study performed by (Gulnigor, 2022) says that learning vocabulary is not as easy as it seems; it requires a long process where learners are exposed to the target language by using and applying different strategies. It is important to connect with objects that are around them as they get older. They have a vocabulary repertoire of words, and they are able to make connections and to maintain organization with the words. To get positive results in early learners, it is recommended to repeat words frequently. Furthermore, it is important to use the language in the classroom with their partners.

Vocabulary is the total number of words someone uses to communicate. (Ryani et al., 2022) define vocabulary as word compilation because it allows having enough information to produce interaction with others. The use of new vocabulary in any language process requires practice, motivation, and enthusiasm in learners. Moreover, learners require a tutor who can guide them and clarify their doubts before using vocabulary. Although it is recommendable to use it in the environment that surrounds learners through the use of technology implementation, that is a technique in language acquisition.

A study performed by (Kiliç, 2019) demonstrated that productive and receptive skills are related to the amount and excellence of words that learners know. However, he wanted to reveal that the receptive words to which learners are exposed can help them master the receptive vocabulary to reach B2 levels. On the other hand, it was exposed whether learners have a variety of lexis, they can produce the language. It concluded that vocabulary training improves the productive competences to keep a wide and deep range of vocabulary, allowing them to master the language skills.

Vocabulary importance

According to (Babajanova, 2022) the importance of teaching vocabulary implies its use in spoken and written ways. If learners have no vocabulary knowledge, there is no communication. For all the skills, it is necessary to have a great deal of it. Otherwise, it is difficult to understand the passages and dialogues and to be able to

transmit what they say. (Smith N. , 2022) mentions vocabulary as the basis for learning a new language; a variety of it allows a learner to express feelings and emotions so that there should be understanding in receiving and producing the language, which is necessary for effective communication.

Vocabulary strategies

Another study carried out by (Raungsawat, 2021) developed for undergraduate university students, applied Vocabulary Self-Collection Strategy (VSS). After the period of application, learners were able to provide meanings for words, they could retain more words, and they had the opportunity to select their own words and to share them with their classmates. Furthermore, they had the ability to work in pairs and communicate with each other. The successful result of using this strategy is a resource for freshmen students.

Similarly, (Syahrul, 2021) in his study, decided to apply a matching game by using Adobe Flash CS6. It was used for young learners in their fifth year because they had difficulties managing vocabulary in their classes. The activities they performed during the classes were not clearly understood by most of them. On the other hand, the classroom environment does not contribute to productive learning. They were bored easily, feeling unmotivated to learn the second language. After they have used this strategy, students show interest in the learning process. To conclude, it was a very useful tool to master vocabulary according to their age so that, they felt motivated in their language acquisition.

Likewise, the study performed by (Makhmudovna, 2022) mentions some useful strategies to be applied during classes for young learners. When they have some text to read, they have difficulties to understand the new words that come with it. Vocabulary needs to be practiced in their lives; it is not just looking at the dictionary otherwise, it is not helpful at all. It is recommended that students create their glossary with a list of words, synonyms, antonyms, and other mechanisms. The suggestion is to use the same words in their lives.

Another strategy that is mentioned is to give the word a definition and to create sentences. If children know a word, they can use it to write or to speak a sentence.

An important point is to use graphic organizers to identify the words better. It contributes to have more repertory words. Students need to practice their new vocabulary by using some of these strategies. Additionally, it is important to focus on the student's needs, desires, and perspectives to acquire a language.

1.3. Key Strategies in teaching vocabulary

According to (Mehta, 2020) there are some strategies to get the words meaning and to be successful to master vocabulary in Second Language Acquisition:

Figure 4. Vocabulary Strategies



Source: Retrieved from: <https://www.teacherspayteachers.com/Product/Vocabulary-Strategies-Anchor-Chart-4975040>

Definitions

Definitions in the second language might have some difficulties, especially for young learners, due to the fact that they do not have enough vocabulary information. For learners from the advanced levels, this strategy is more commonly used; at these levels, learners are able to define the target language. So, the teacher should recommend using trustworthy and well-known online dictionaries that provide good definitions according to the spoken words. Moreover, we, as teachers, have to

encourage students to develop reading habits where they can learn new words in context where the lesson is meaningful.

Antonyms

Identifying a word that has a different meaning may be useful to comprehend and to be able to practice the new words. This strategy enhances learners to recognize a word oppositely.

Synonyms

Recognizing a word that has a similar meaning contributes to learning the target language. It is one of the easiest ways to express communication. A positive aspect to use synonyms is to develop a great list of words.

Dramatization

This technique is very manageable in children due to the fact they like to learn using songs and movements which are part of their learning process. Miming a word is very understandable for learners, so that, they are able to apply the words in context and their daily lives. Some examples of dramatization are:

Drawing (drawing some animals)

Mechanics (using the tools to fix a car)

Cutting (cutting some paper)

Pictures and drawings

The use of colorful pictures is a useful strategy to acquire vocabulary and get the meaning of a word. On the other hand, drawing is an attractive way of teaching new vocabulary even if learners are not so skillful to draw.

Realia

The use of tangible items or models from real objects might produce results in a positive way to have a meaningful learning. It produces curiosity and it is an interesting activity to learn vocabulary.

Series, scales, systems

When we use the list of lexis, for instance, months of the year, numbers´ sequences house parts, body parts, so on and so forth. They are some vocabulary series to learn and practice in their own order.

Parts of words

Teaching parts of words is complicated, especially when we find compound words due to, they provide different meanings from the original words. To get a good result is recommendable to separate words to be taught.

Reading the word

This strategy works very well, it consists in saying the words aloud. It allows us to have some familiarization with the words so that they have to be associated to produce vocabulary acquisition. At the same time, reading can be practiced.

Writing the word

Practicing a new word enriches vocabulary by looking and writing them down enabling students to comprehend the context so they are able to identify the kind of word such as an adjective, a verb, etc.

Strategy for special types of words

According to the different strategies mentioned before some words are more difficult to learn.

Words that are easy to learn

It is very common to see the similarities between the form and the meaning of the words. So, it contributes to understanding them to be used for receptive and productive skills.

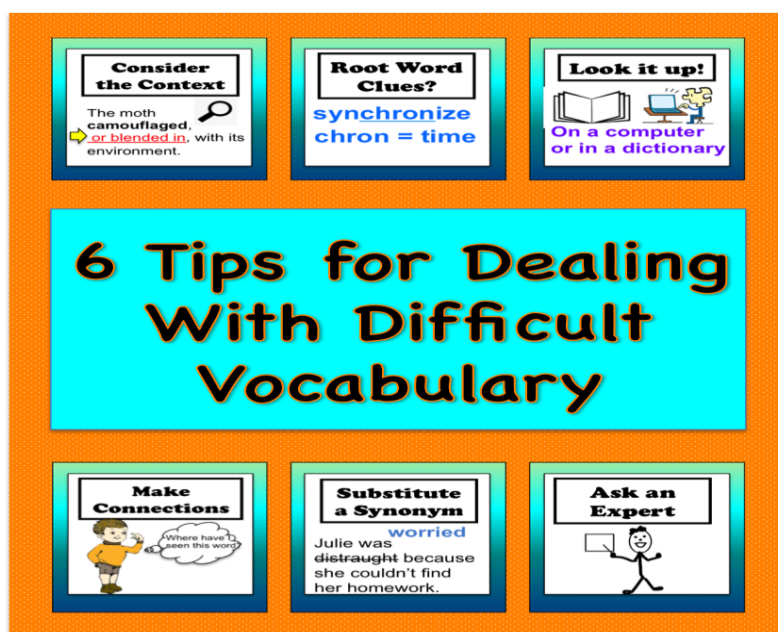
Words of normal difficulty

These types of words should be taught in context, among them, for example, family, accessories, some adjectives, animals, and so on. They have a connection among different texts and they are easy to be practiced by adding more words.

Difficult words

Finally, as in many other languages, some words are not easy to understand. They have to be taught with special methods depending on their meaning. Additionally, according to Mehta, it does not only depend on the teachers. The strategies they use for learners to acquire vocabulary by integrating them in different contexts depend on learners, they need to show interest, enthusiasm and to accumulate a variety of vocabulary to be used in their daily lives.

Figure 6. Vocabulary Difficulties

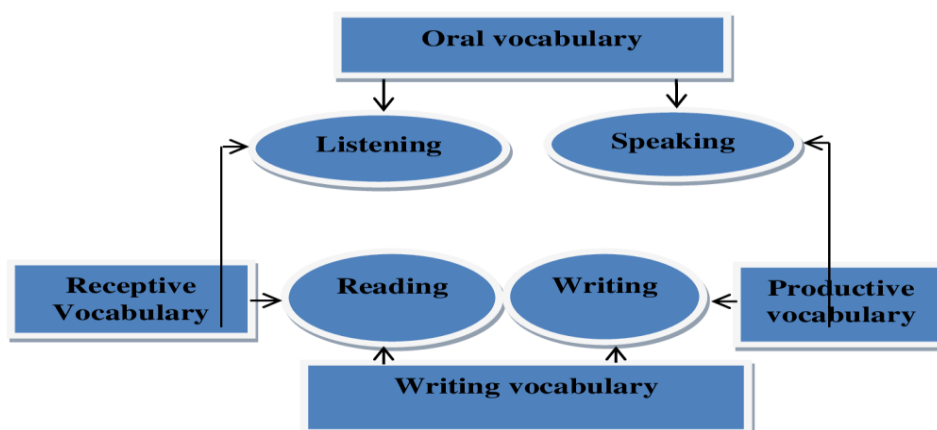


Source: Retrieved from: <https://www.mrelementary.com/5-tips-for-dealing-with-difficult-vocabulary/>

Types of vocabulary

In a study executed by (Mahyoub, 2020), previous research defines two kinds of vocabulary to teach learners whose first language is not English, even teaching vocabulary is challenging, and, it depends on the learner's interest.

Figure 7. Vocabulary Types



Source:<https://www.semanticscholar.org/paper/An-overview-of-productive-vocabulary-levels-amongst>

Receptive vocabulary

This vocabulary refers to the number of words students listen to in any source like podcasts, songs, readings, passages, articles, and any other sources. They have it in context, nonetheless they are not able to produce it in written or spoken language. Thus, they might have a great lexis accumulation.

Productive vocabulary

On the other hand, this kind of vocabulary is the one in which learners have the possibility to apply this skill in their own context. It means to interact with other people or to express their feelings by writing their thoughts. It includes putting into practice the receptive vocabulary and the development of productive skills at the appropriate time. Learning a second language is a procedure which involves having

a great vocabulary list, developing language skills, and, using adequate strategies to manage the target language.

(Schmitt, 2019), mentions six vocabulary areas that need deep research to be explored related to vocabulary acquisition.

1. Developing a practical model of vocabulary acquisition

Teaching vocabulary is still complicated, there are many components of words like form, meaning collocations, word parts, and spelling among others. So, the author previously mentioned recommends leading between receptive and productive vocabulary and the different elements of words. Taking these matters into consideration, it is not possible to determine the same words to their diverse components. So, it is advisable to look for both vocabulary usages.

2. Understanding how vocabulary knowledge develops from receptive to productive mastery

Receptive mastery is not as difficult to master as non-receptive mastery. It happens because learners are exposed to the language through passages and by listening to songs, news, and other resources. Additionally, it is recommended to use a combination of activities with the purpose of producing output instead of only using receptive activities. To conclude this idea, it is advisable to enhance research in order to identify the strategies to be implemented after the receptive activities are produced by using the language.

3. Getting lexical teaching and learning principles into vocabulary and language textbooks

Even though there are many principles of vocabulary instruction, as learners need to have at least 3,000 words to review, they are given many chances to practice vocabulary, to be exposed to the target language all the time, to provide their knowledge of vocabulary, and to have an explicit and contextualized vocabulary. On the other hand, the author mentions that mastering vocabulary depends on teachers. They do not have suitable resources, they have lack of time, lack of the

expertise to apply methods to teach vocabulary. Consequently, he recommends repeating the new vocabulary. Even though there is a negative aspect, texts focus more on connotation than on forms, which is the most relevant feature in vocabulary acquisition.

4. Exploring extramural language exposure and how it can best facilitate vocabulary acquisition

Exploring extramural language implies being exposed to the target language, for instance, by watching television programs from the beginning and then using captions to have a better understanding, this implies the use of technology through games for children which provide entertainment for them to learn. Finally, for adult learners, it is useful to have a lot of reading materials. Although it is not enough, it requires a good link to classroom instruction. Besides, it requires a large list of lexis to be learned for second language learners. Evaluations are another source to verify the vocabulary learning process considering the fact that gaming is a useful tool for kids who enjoy using it while speaking.

5. Developing more informative measures of vocabulary knowledge

At the evaluation time, it is recommended to assess different aspects with the purpose of identifying the learners' weaknesses. Schmitt also recommends evaluating form-meaning and recall to have a deep idea related to vocabulary. So, it is advisable to evaluate words in context, even if it is time-consuming to grade; however, it will show that learners are able to produce the language. It will reflect mastering the target language used in reading and listening activities.

6. Measuring fluency as part of vocabulary competence

Mastering vocabulary fluency implies having domain knowledge in a second language; however, it is not assessed completely due to being required to be evaluated according to the skill and the amount of its production. There are many strategies to assess vocabulary as a specific skill, depending on what we want to evaluate. Nonetheless, the use of some activities will show the ability to manage a variety of vocabulary. As a consequence, fluency shows an improvement in

vocabulary as well as receptive and productive skills. Furthermore, the author suggests doing more research related to assessing vocabulary.

Problems of Teaching and Learning Vocabulary

According to (Saidakhmedovna, 2023), vocabulary is more complex than the definitions he proposes. First, it is defined as the meaning recognition through spoken and written language, as well as its productive and receptive way. Vocabulary is essential to have a clear idea for reading comprehension, to understand, and to be able to interact with other people. It implies using expressions and clear sentences, not just repeating words. It is necessary to have the ability to comprehend the words and to use them according to their needs. Even so, to have effectiveness in vocabulary acquisition, learners must demonstrate their abilities, comprehension level, and interests they have in learning vocabulary.

On the other hand, teachers need to use a variety of strategies to provide meaningful learning. They need to provide a great diversity of tasks and activities so that they can learn on their own. For reading, (Dilbarkhon, 2023) recommends using different materials to verify their understanding such as articles, essays, stories. Besides, active listening is necessary to promote having more vocabulary, including the ones they have acquired at an early age. Later, to perform writing, learners start to write simple sentences and complex sentences after writing reports, essays, etc. So, teachers need to facilitate variation in vocabulary, and learners have to use the new words in their real lives.

In agreement with Saidakhmedovna, (Konca, 2023), mentions that teachers use different coursebooks to teach English, which provide a lot of vocabulary exercises such as matching and completing sentences. However, it is not enough because they give extra new words related to the topic and tools to work online. The participants have the opportunity to create the vocabulary meaning using their own new words. besides, they try to figure them out in passages.

However, it is not enough because it implies the teacher's expertise and how they act in front of their students, this fact is not completely covered due to the curriculum and time. Finally, learners need to have a large vocabulary repertoire. Nonetheless,

it must be practiced at their homes; otherwise, the results are not according to their beliefs.

To conclude all the relevant aspects detailed above, it is important to highlight the resources found in this research related to vocabulary acquisition due to the fact that it is one of the basis to learn a language. It is a process which has different stages, difficulties, and strengths. Learners have the necessity to be exposed to the target language by being provided with different resources from teachers during the process considering, for instance, the access to libraries, web sources, and, additionally emphasizing the motivation tools that are required in order to have positive results. On the other hand, the resources regarding the Duolingo platform, which is a friendly and an easy platform to use, provides collaborative exercises, tests and other interesting activities to involve learners in their language acquisition performance.

CHAPTER II. METHODOLOGICAL DESIGN

2.1. Research design

Approach

The main goal of this research is to confirm the methodological approach that uses Duolingo platform to support children from eight to ten years old in vocabulary acquisition. The quantitative approach was performed since its nature is based on numerical data, statistical analysis and the results of the proposed hypothesis.

The quantitative research attempts to verify quantifiable information and it simplifies the acquired data to get its interpretation. Moreover, this kind of research allows to recognize cause and effect so that the researcher is able to make predictions according to the collected information. Both variables are evidently defined as it follows:

Independent variable: (vocabulary acquisition) which had the influence in the dependent variable. Vocabulary acquisition is the skill that was verified with the purpose to identify any change after the intervention of the dependent variable, which was the enhancement in knowledge and grades in students' production.

Dependent variable: (methodological strategy which links the Duolingo platform) to test the experimental level. The researcher can manipulate this tool to verify the results and the levels that are necessary to reach the expected language production regarding vocabulary (independent variable).

A quantitative result requires, in this case, to measure students' vocabulary acquisition by the application of the platform intervention, together with its approach to set the corresponding hypothesis.

Design research

The design refers to the strategy that the researcher decides to answer regarding the problem or difficulty found on the study. As a consequence, according to the variables the experimental design was established because there is not variables manipulation or it is accomplished in very a low percentage. According to Palella & Martins (Metodología de la Investigación Cuantitativa , 2012) “Not all educational situation is possible nor convenient to be executed experimentally, however when the situations are appropriate and they allowed the experimental study should be applied” (p.85).

Type research

For this study a quasi-experimental type was applied. It allows a partial control based on identification factors which can have an internal or external intervention. The control group is similar to the experimental group, in all aspects, by receiving any level from the independent variable because there is no experimental intervention. For this study, the problem is defined first, then it the hypothesis is established, and after that, it is collected a systematic data is collected to assess objectively. The results are interpreted according to the researcher by applying a statistical analysis.

Research depth level

The research level refers to the depth degree identified in the problem or phenomenon that is studied in an investigation, therefore, for this study were administrated simultaneously for both for the control and the experimental group, a pre-test and a post-test group nevertheless, only the first group (experimental group) received the intervention from Duolingo platform and the other group (control group) received the conventional methodology. Finally, a post-test for both groups was applied in order to make a comparison whether the intervention influenced the two groups.

Population and sampling

From 34 students from sixth A and B classes, who were enrolled legally from Unidad Educativa Joaquin Lalama, comprise the population of interest for this study. The participants were divided in two groups, 17 individuals were in the experimental group and 17 individuals were in the control group. The mentioned groups are distributed as it follows:

Table 1. Population

Grade	Girls	%	Boys	%	Total	%
Sixth A (Control Group)	8	47,05	9	52,94	17	100
Sixth B (Experimental group)	11	64,71	6	35,29	17	100

Source: Elaborated by Delgado, M, 2024

The current study applied a non-probabilistic sampling for convenience where all the students are considered as sampling for the research. According to (Hernandez, 2019) related to the intentional or convenience sampling “It was selected intentionally to the population individuals whom are easy to get access through open calls where they accept freely to be part of the study” (p.78). On the other hand, the researcher recognized the sampling who works with identifying the population to collect the data information who have similar characteristics according to the variables analysis.

2.2. Characterization of the institution

The current research, related to the use of Duolingo Platform to improve vocabulary acquisition was performed at Unidad Educativa Joaquin Lalama with students from eight to ten years old. This public institution offers classes to students in presence both in the morning and in the afternoon, five days a week. Furthermore, it has different levels such as, Initial, Elementary, and High School where students, by the end of their education process, get a Senior degree in subjects such as Accounting, Computing, Mechanics, Farming, Tourism, among others. It is important to point out that students receive three hours of English as Second Language acquisition a week.

The institution is located in Tungurahua province, Ambato city, Parroquia Huachi Loreto, Zone 3, Educative District 18D02-Ambato 2, Circuit 18D02C02-07. The purpose to create this educational unit was to educate students in academic, scientific, technological, cultural, sportive and humanistic aspects.

On the other hand, it promotes the practice of well-being through convivence workshops, students' participation, environment protection, ABP (learning based in projects, meaning in Spanish) methodology, these aspects increase the collaborative work among the actors from the Educative Community which are students, teachers, and parents. As a consequence of this, its objective is to promote the integral development in human beings and their well-being.

The mission of the institution is to guarantee an integral and holistic education for children and teenagers through environments which contribute to researching, collaborative work, critical-logical thinking, using Tics, being creative and making proposals to solve problems around them.

The vision of the institution is to offer an education according to students and their environment needs as well as, the cultural and technological development from the Ecuadorian society, by making a special emphasis in values, harmony with nature and respect to the multi-ethnic, multi-cultural and inclusive reality from the community by means of applying, proactive, humanistic, and, democratic leadership.

The main goals of this institution are:

- To inspire students to be reflexive, propositive and critical thinkers by promoting respect to their thoughts and maturity level by means of being able to solve problems around them through collaborative work in the learning-teaching process.
- To make emphasis in both children and teenagers about love, respect, living, and self-esteem development through programs to join their families and community in their integral development.

- To promote respect and caring in favor of the natural environment.

2.3. Data Collection, techniques and instruments

This research had a process that started with the direct observation applied at the time to collect the information because the facts were perceived directly by the researcher. Then was used a pre-test and a post-test, applied to the sample individuals, in this case the experimental group which were first evaluated on their previous basic vocabulary knowledge; this group used the Duolingo platform for a specific period of time. Later, the quantitative data was collected for its analysis. On the other hand, the control group was in a conventional class with the usual methodology.

After the application and use of the platform, a post-test was taken to verify the individual's vocabulary advance. The use of Duolingo platform validated achievement in learners to consequently improved their vocabulary production. As a matter of fact, the positive result of this platform will allow other researchers to prove its effectiveness.

As the pre-test and the post-test contained 25 questions, 13 nouns and 12 verbs were included, where the highest score was 25 points. It was essential to take into consideration that this is an experimental methodology, where the 34 students, 17 from Sixth A grade and 17 from Sixth B grade were later assessed with the post-test. In addition to check students' attitudes toward the use of Duolingo platform, a survey, which was adapted from the Likert scale which has 5 aspects with the purpose to recognize the feelings, attitudes, and concerns related to Duolingo platform was applied. Its application was targeted to analyze the student's empathy towards it during the development of its activities.

Research instrument

Both a pre-test and a post-test containing English vocabulary questions (nouns and verbs) were validated by two experts who also teach English as a Second Language

production in public educative institutions from Ecuador. The main goal of the instrument was to verify vocabulary knowledge through the enhancement of Duolingo platform intervention.

Process of data collection The procedure to collect the data information is described in the following way:

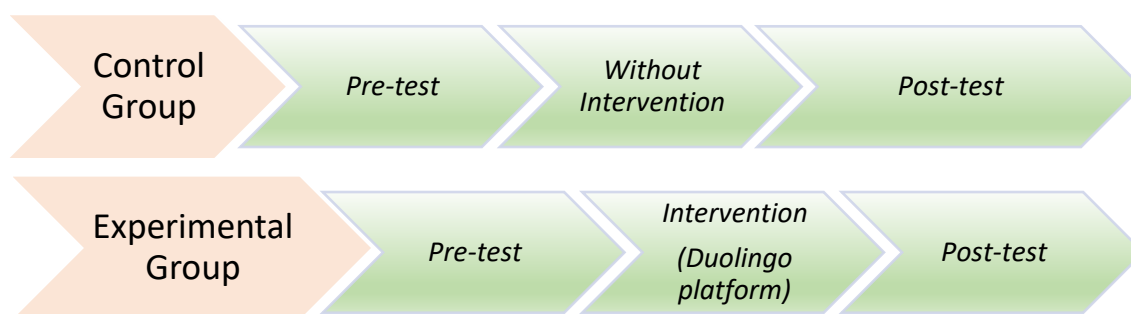
Pre-test: it was applied to verify the learner's vocabulary level based on nouns and verbs, it included 25 multiple choice questions, which were the starting point related to English vocabulary facts. Therefore, the pre-test was a reference for the researcher to comprehend the current English language proficiency in learners.

Intervention: The Duolingo platform, whose objective was to become familiar with the platform, by means of presenting its access, its use, its characteristics, and how its different activities work was introduced to the students. After, they received the teacher's explanation about how to complete each section in order to develop the different tasks programmed in advance. Inside the lessons learners would find several activities to be accomplish. These activities would be developed during their available time with no pressure. They had the opportunity to use it two hours a week within three months. However, they had the platform open the whole day to continue with their progress as needed.

Post-test: the use of this instrument contributed to assess the effectiveness of the platform to enhance the vocabulary acquisition for the young learners. The numerical data from the pre-test and the post-test is relevant information to the researcher to make comparisons and to make an analysis from the results.

Survey: it was used at the end of the intervention platform with the purpose to recognize the reactions and feelings towards they use of it.

Figure 8. Temporal Sequential Model



Source: Elaborated by Delgado, M, 2024

Process and analysis of information

Data Normalization

This study has established a quasi-experimental design because the variables manipulation is minimum, or, it does not apply. The development of the procedure was a pre-test and post-test to the control and the experimental group.

Therefore, to verify the data normalization related to the pre-test and post-test for both groups the Shapiro-Wilk test was applied due to it is used for population lower than 50 students. On the other hand, to confirm whether the data was taken, the decision criteria $p =$ which needs to be superior than 0,05. As a consequence, for the control group, it is not necessary to use other statistical tests to verify its data normalization.

On the contrary, according to Shapiro-Wilk test for the experimental group in the pre-test process the p value is 0,171 where the significance level showed data specifically. However, in the post-test procedure it is verified the p value is 0.030 therefore it is lower value of 0,05 where the data specifically has a non-normal distribution. As a consequence of this result it is necessary to apply other alternative specifically test for population less than 50 individuals to validate the data accuracy

T-Student Sampling and Formula

The t-test for paired samples, likewise identified as the paired-samples t-test or dependent-samples t-test, is used to establish whether there is a statistically significant variance between the arithmetic mean of the two related groups.

Scenario

The paired samples t-test is classically used when there are two sets of dimensions taken from the same group under different conditions. For instance, it might measure the effectiveness of a target language through an app or a platform before and after the intervention during a specific period of time.

Assumptions:

1. The paired differences (the differences between the paired observations) are normally distributed.
2. The paired differences are depending of each other.
3. The measurement scale of the paired differences should be at least an interval scale.

Formula:

The formula for the paired-samples t-test is:

$$t = \frac{\bar{d}}{\frac{S_d}{\sqrt{n}}}$$

Where:

\bar{d} = average of the differences

S_d = Standard deviation differences

n = Number of participants

t = t - student coefficient

Wilcoxon Sampling and Formula

The Wilcoxon signed-rank test, a non-parametric statistical test, is used to compare two related samples or measurements taken from the same individuals. It focuses on the median difference between the paired samples, unlike t-tests which rely on the mean. This makes it a valuable tool when dealing with skewed data or when the normality of the data is uncertain.

Formula:

$$W = \min(W^+, W^-)$$

W^+ is the addition of the ranks R_i corresponding to the d_i positive differences.

W^- is the addition of the ranks R_i corresponding to the d_i negative differences.

R_i is the assigned rank to each $|d_i|$ after sorting the absolute differences in ascending order

d_i is the difference between each pair of observation pair.

2.4. Research proposal

Background of the proposal

In today's world it is a requirement and motivation to learn English for English learners to have the language proficiency. Consequently, it is crucial to develop solid vocabulary skills in children at their early age, in this case, by the use of the interactive Duolingo platform to discover its effectiveness in English as a Second Language vocabulary acquisition. The main goal for teachers in an ESL language classroom is to create and to keep a productive learning environment for the students.

Moreover, it is important to emphasize on students' interests and needs together with motivation to perform the target language. It is believed that learners who are engaged in the teaching-learning process, for some reason, can show some lack of enthusiasm. Consequently, it is necessary to help them learn vocabulary avoiding

traditional techniques, they require to acquire the new language by using games and interactive tasks to become more interested.

In the EF blog (English First) (Adeline, 2022), a survey conducted in 2022 directed to public high school and students performed in some countries around the world, Ecuador ranked the 81st position. Consequently, it revealed that our country has a low English level proficiency, considering that the English language is required in different companies that need bilingual staffs. On the other hand, public educative institutions are required to get a B2 level according to the Common European Framework; however, the English class periods have been reduced and teachers have had the necessity to prepare themselves academically in order to enhance their knowledge. Subsequently, what is previously mentioned have reduced the English acquisition level in the country.

Moreover, the use of an interactive platform like Duolingo is an interesting tool to appeal students' attention to have a good vocabulary repertoire. They can also listen to pronunciation, read short paragraphs and some additional tasks to reinforce their learning process and to be able to communicate among partners. On the other hand, it is important to recognize that its frequent use promotes the ability to perform new words, thus, the guide or tutor contributes to master the language production in order to identify spelling and pronunciation mistakes.

Objectives

General objective:

- To investigate the efficacy of the Duolingo platform used as a traditional language training for the improvement of vocabulary acquisition among children.

Specific objectives:

- To evaluate the impact of integrating the Duolingo platform into the language curriculum which affects the vocabulary acquisition (English) for children.
- To assess the effectiveness of Duolingo's gamified method and contextualized vocabulary activities to support the learner's vocabulary acquisition comparing to the conventional language training techniques.

Justification

The choice to use the Duolingo platform as a methodological strategy for vocabulary acquisition has some key considerations:

First of all, Duolingo provides an organized and attractive learning environment. Its interactive exercises, organized lessons, and gamify features, encourage students to dynamically become involved with vocabulary learning activities. Furthermore, the availability and flexibility that Duolingo offers is an ideal complement to conventional classroom teaching. Therefore, by incorporating Duolingo into language learning process, educators can offer students supplementary opportunities for practicing, reinforcing knowledge, and self-directed learning at their homes.

This research provides diverse lessons that contain many interactive tasks starting from the beginner levels. This platform also helps teachers to look for information that is not found in books. It also allows to have a confident atmosphere in the learning performance. Vocabulary is one of the bases in any language, without it, there is not receptive and productive communication in the target language.

Likewise, a wide-range of vocabulary helps teachers and learners make every lesson engaging and productive, which gives positive outcomes. Subsequently, there are many benefits to use it in the classroom, such as the use of synonyms, antonyms, giving definitions, developing puzzles, creating simple and complex sentences, composing paragraphs and increasing more complicated tasks. They can use it in the speaking or written way, because, if learners have more repertoire words communication becomes easier in sociocultural and conventional events.

Furthermore, the use of listening activities is identified as a practical method in this creative proposal, since they include valuable information for learning vocabulary and grammar structures which are common features of the English language. Consequently, students are encouraged to participate during the teacher's class and accurate information by the use of new vocabulary found in the platform. This is a fabulous advantage to allow each student to acquire vocabulary at their own pace. As a consequence, learners have the probability to be active participants in building their own knowledge by performing sentences and interacting with the language in their personal lives.

Methodological strategy

The methodological strategy incorporates a structured approach by integrating the Duolingo platform into the language learning curriculum for children. It includes:

Participants group: Identify a sample group of children within the target age from 8 to 10 years old who took the pre-test.

Duolingo interaction: Assign specific activities focus on vocabulary acquisition which included games, creating new simple sentences by using the new words from Duolingo platform as a supplementary tool

Monitoring and progress checking: Monitor participants' advancement on the Duolingo platform to verify vocabulary acquisition.

Assessment and feedback: Measure frequent vocabulary acquisition through quizzes, contest, puzzles by providing positive feedback to recognize gaps to enhance and to track their progress.

Vocabulary acquisition

Vocabulary acquisition involves a process of learning and having the ability to retain new words or phrases in the target language. It implies to be exposed to the language and to use it in context by means of continuous practice.

Process of vocabulary acquisition

To success vocabulary acquisition includes a process:

- **Exposure:** the fact to use new words through the different skills such as reading, listening, or speaking allows the use of new vocabulary.
- **Attention:** Concentrate on exact useful and difficult words and their characteristics contributes to manage vocabulary acquisition.
- **Comprehension:** Understanding its meaning and usage of the words.
- **Integration:** The practice of the new words in diverse contexts promotes retention.

Duolingo platform:

Duolingo is one of the a widely-used language platforms to learn any language which offers structured lessons, vocabulary exercises, contextual learning, repetition tasks, personal learning experience, gamify activities, and quizzes to support users who study a new language. It has a gamification approach, which provides adaptive learning, and the variety of content to being and effective attractive platform for learners for any age.

The application of the methodological strategy of Duolingo platform has a previous requirement for the lessons plans so that students feel confident and comfortable while performing the activities in the platform it is important to take into consideration some suggestions for the planning:

To be familiarized with the Duolingo platform features, lessons and the available resources, involves learners to be prepared for some challenges.

State clear objectives for the vocabulary acquisition in the platform aligned to the learners needs and curriculum by mentioning the expectations in language learning process.

By promoting inclusive classroom environment with purpose, students feel motivated in the development of Duolingo platform activities, always empathizing on

their effort and perseverance which is as relevant as recognizing mistakes to have a positive learning.

Deliver clear guidelines for the platform navigation on how to use Duolingo includes its features, access to the activities, and improvement. It is important to do a demonstration to have positive learning and scaffold meaningful learning on the students.

Adapt the lessons according to learners' language level, interests, including learning styles by selecting topics about their real-life and cultural experiences. It is not mandatory to follow a curriculum which does not align to the students.

It is recommended to inspire a dynamic participation and to get familiarized with the platform in the different activities such as: discussions, tasks teamwork, providing opportunities to perform the different language skills.

Monitor learners' improvement in Duolingo platform frequently by giving some feedback on their learning process and by highlighting their effort by identifying their weaknesses and gaps. Their achievements have to be celebrated due to the fact that it provides motivation in their process of language acquisition all the time.

It is relevant to consider in students learning processes, difficulties and to look for innovative strategies for the Duolingo activities enhancement. Self-assessment contributes to assess learners' language ability and to establish their own personal goals related to their learning.

The integration of Duolingo activities with classroom instructions should be aligned according to the planning topics, and its objectives; should provide enough exercises in the platform; such as hands-on activities based on learners' language experiences.

By promoting cooperative learning, working in teams, like discussing, exchanging activities, performing social interaction, among others, students are will be using the Duolingo platform to develop the language acquisition performance.

Development methodology

For the development of the statistical was use Jmovie software to process the data collected in the pre-test and the post-test for the controlling ad experimental group statistical tabulation, we will proceed to the interpretation in the software used to verify the development of the research Ex bars, pies, etc. because it is important the methodology to get the best results by compiling the results obtained.

Duolingo Activities to Acquire English Vocabulary

“If you want one year of prosperity, grow grain. If you want 10 years
of prosperity, grow trees. If you want 100 years of prosperity,
grow people”

Chinesse Proverb

DUOLINGO INTRODUCTION

The objective of this proposal is to facilitate the learning of English vocabulary in a nontraditional way through the Duolingo Platform. To use this platform, it is necessary to have internet access, which is a technological resource for students who want to learn another language. The learning process is determined by the students' rhyme and the time they have available. Furthermore, learners have reinforcement activities to practice the language. It provides a variety of activities, and at the same time, they learn and play as well. I hope you have a lot of fun and get the productivity you want in language learning acquisition.

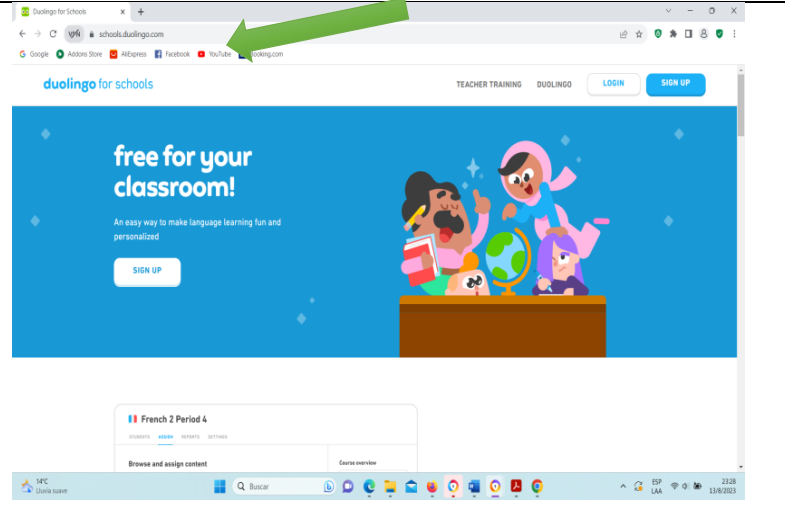
Duolingo facilitate language learning for both students and teachers alike. For students, Duolingo offers a structured approach to language acquisition through its interactive lessons and exercises. The platform uses gamification techniques such

as earning points and leveling up, which keeps learners motivated and engaged. Each lesson incorporates speaking, listening, reading, and writing exercises to ensure a comprehensive learning experience.

For teachers, Duolingo provides appreciated tools to monitor student development and tailor lessons to individual needs. Educators can create classrooms, enroll students, and track their performance through detailed analytics. Additionally, Duolingo supports communication between teachers and students, facilitating feedback and discussion to enhance learning outcomes.

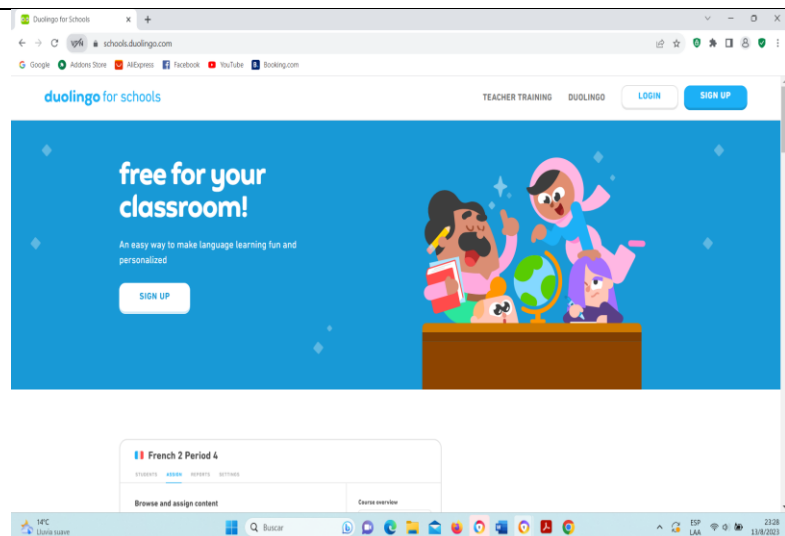
STEPS TO FOLLOW TO BE SIGN UP THE DUOLINGO PLATFORM

The following steps will guide teachers and students to register and take part of the Duolingo Platform.

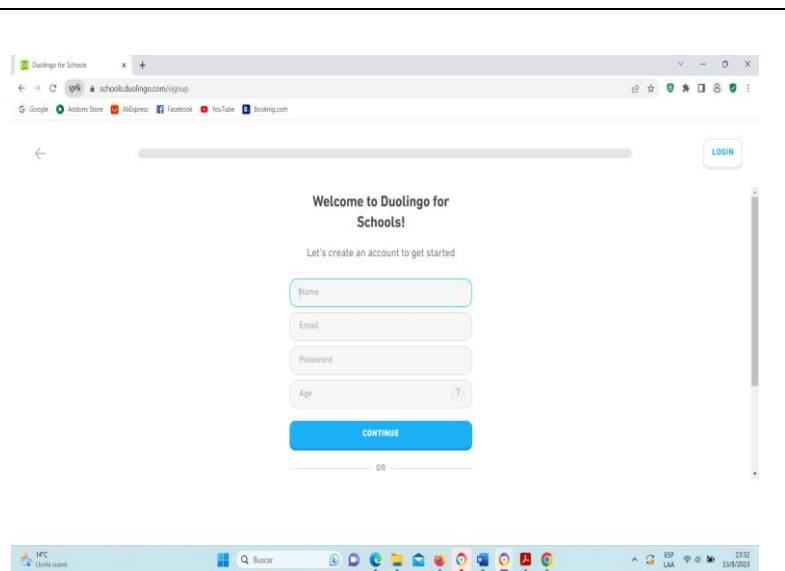
<p>Step 1.</p> <p>Type this link in your browser.</p> <p>https://schools.duolingo.com/</p>	
---	--

Step 2.

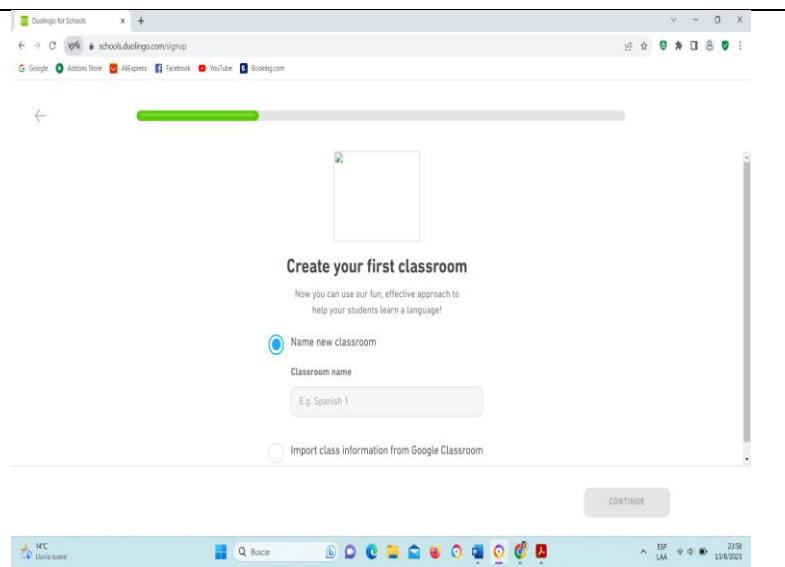
Click on **SIGN UP** to enroll in the platform.

**Step 3.**

Fill in the blanks with your personal information and then click on **continue**.

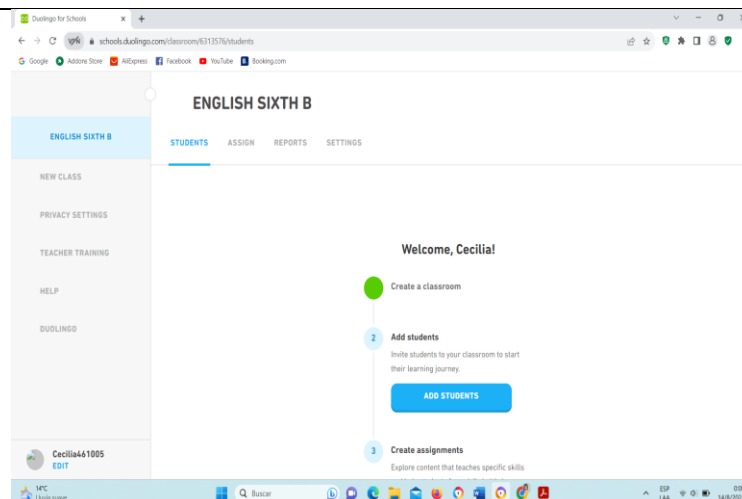
**Step 4.**

When you have completed the information, now it is time to start creating your first English class. Then click on **go to the classroom**.

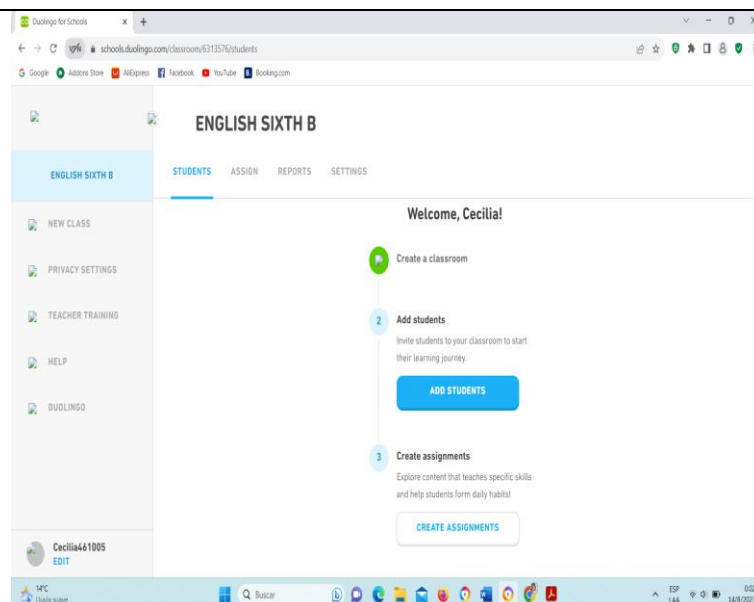


Step 5.

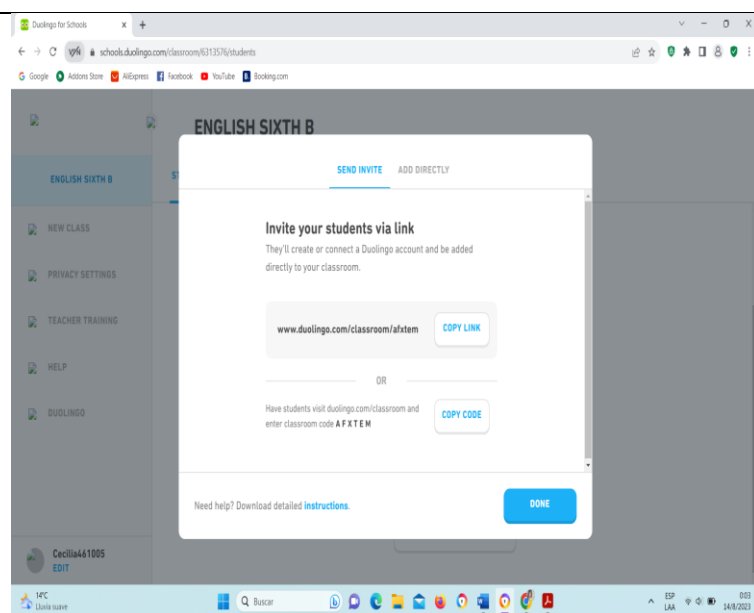
You are in the classroom
You can explore
the platform and
assign activities to your
students, however, you
need
to enroll your students in
your English class.

**Step 6. Joining students**

Now, it is time to join your
students in your class. To
do this, you must click on
add students.

**Step 7.**

Subsequently clicking **add students**, you will
visualize a
link and a code
. You can send
your students the link or the
code to sign into your class.



<p>Step 8. Enjoy teaching and learn English by using this amazing platform!</p>	
--	--

<p style="text-align: center;"><i>DUOLINGO CONTENTS</i></p> 	
<p>Lesson 1</p>	<ul style="list-style-type: none"> • Greetings • Trips • Food • Family
	<ul style="list-style-type: none"> •
<p>Lesson 2</p>	<ul style="list-style-type: none"> • Order in a restaurant • Food and drinks • Clothes • Free time activities
<p>Lesson 3</p>	<ul style="list-style-type: none"> • Likes and dislikes • Public places • Weather • Say goodbye



"The beautiful thing about learning is that no one can take it away from you." –

B.B King

DUOLINGO LESSON PLAN 1



Subject: English I

Length of lesson: one month (30 minutes, two days a week)

Total hours per month: 240 minutes.

Duolingo Lesson's Topics: greetings, trips, food, and family.

Duolingo Unit 1 Objective: Students will be able to accurately shorten sentences.

using vocabulary related to greetings, trips, food, and family.

Duolingo Specific objectives for the week:

Students will be able to ask and answer questions about basic personal information.

Students will be able to express their common obligations.

Students will be able to ask and answer questions about food.

Students will be able to describe their family and close social circle.

Lesson development

Time	Introduction
10´ minutes	<ul style="list-style-type: none"> The teacher provides explanation to students about how to start using the Duolingo Platform to learn new English vocabulary.
15´ minutes	<ul style="list-style-type: none"> The teacher asks students to get into the Duolingo platform and explains its use by asking them if they have any questions. After that, they go through the topic, in this case, "Greetings", where they will find two lessons to be developed with the teacher´s assistance besides their autonomous work. It is going to be performed during a week on Tuesday and Thursday. The teacher clarifies that the platform tasks have to be completed during the afternoon. If they have difficulties to get to the platform, or, if they do not have internet access when the teacher is available to help, (15:00 -16:00) they are able to complete the activity later that day.
10´ minutes	<ul style="list-style-type: none"> The teacher tells the students that they have two days to perform each activity during the week until they end the four topics. They will be monitored to confirm they are performing the assignments. The teacher explains that after the students have completed the tasks on the Duolingo platform, they should perform a vocabulary activity based on the platform to reinforce their knowledge. This will be checked during the class period.
	Activities to be developed during classes after the use of the Duolingo Platform.
25´ minutes	<ul style="list-style-type: none"> <ul style="list-style-type: none"> The teacher begins the class by reinforcing the 4 topics the students have learned in the platform. Topic 1: Complete a short dialogue Topic 2: Trips (5 flashcards) Topic 3: Food and fast food (8 flashcards) Topic 4: Family (6 flashcards) The teacher pronounces each word aloud while showing the flashcards and asks students to repeat them to check pronunciation. The teacher explains about the conversations for the two tasks and students look at the pictures to complete the activities. The tasks will execute the proper matching of words or phrases with corresponding images. Once the

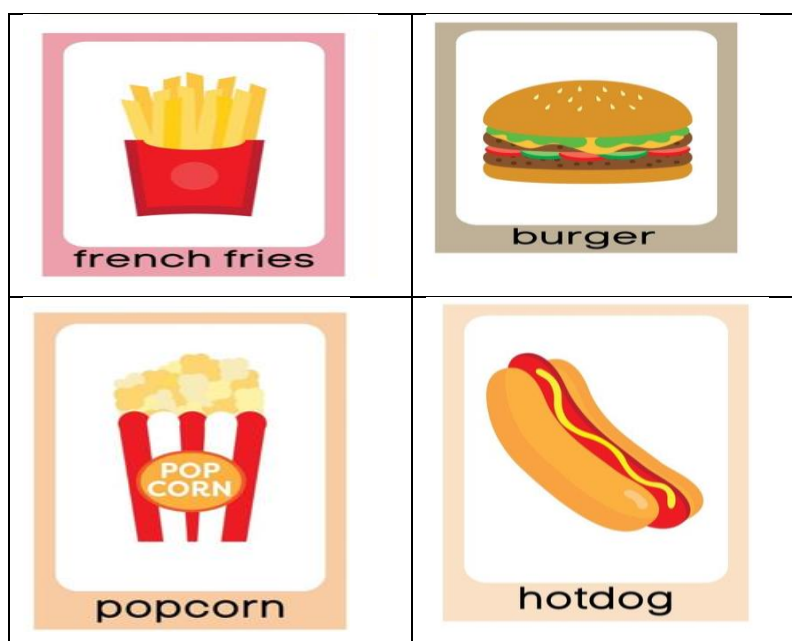
exercises are completed, students will compare their answers with the teacher to check their correctness.

Resources

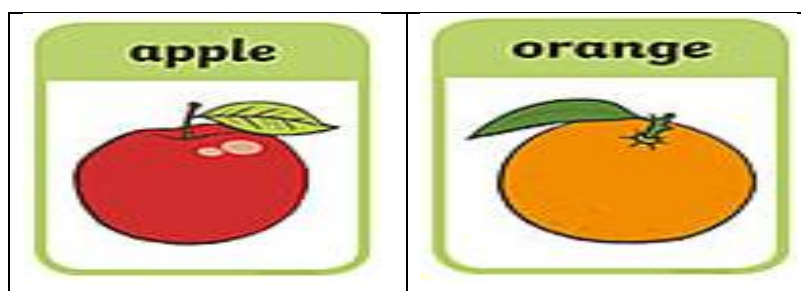
- Duolingo Platform: <https://schools.duolingo.com/>
- Hangouts
- Flashcards
- Youtube video:

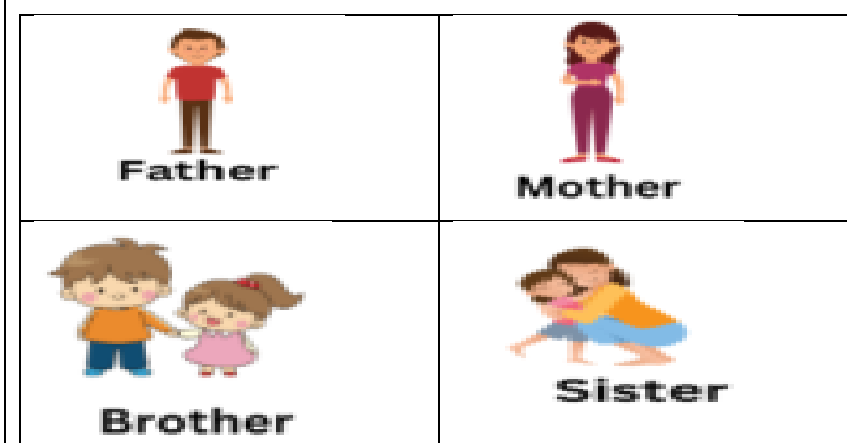
<https://www.youtube.com/watch?v=AA5hOCxIRal>

Flashcards: food



Flashcards: Fruit



**Flash cards: Trips****Flash cards: Family**

**Activities:****Worksheet 1**

Watching the video and completing the dialogue with the words from the box.

<https://www.youtube.com/watch?v=AA5hOCxIRaI>

Good morning.

Good ----- everyone.

How are ----- ?

Fine, thanks. -----are you?

Great.

Come -----, please.

Nice to meet -----

My ----- is Kate.

----- to meet you too.

Sit -----, please.

Thank -----.

you
morning
in
How
you
down
Nice
you
name

Worksheet 2

Look at the pictures and write the correct word under each of them.

















Worksheet 3

Look at the pictures, read the words for the list and write the correct answer.

- Pineapple
- Watermelon
- Hotdog
- French fries
- Apple
- sandwich
- Pizza
- Burger
- Orange
- tangerine

Worksheet 4

Look at this family tree draw or stick your main family members.

**DUOLINGO LESSON PLAN 2**

Subject: English I

Length of lesson: one month (30 minutes during two days of the week)

Total hours per month: 240 minutes.

Duolingo Lesson's Topics: order in a restaurant, food and drinks, clothes, and free time activities.

Duolingo Unit 1 Objective: Students will be able to use shorten sentences and

vocabulary related to order in a restaurant, food and drinks, clothes, and free time activities.

Duolingo Specific objectives for the week:

Students will be able to make short orders in a restaurant.

Students will be able to describe food and drinks.

Students will be able to discuss about prices on clothes.

Students will be able to describe daily routines and habits.

Lesson development

Time	
10´ minutes	<ul style="list-style-type: none"> • The teacher begins the class by providing some reinforcement about what students have learned in the previous lesson (4 topics) in the Duolingo platform. He or she explains students that over the week they will describe drinks and food in a restaurant, additionally, learning about clothing vocabulary and giving descriptions related to their daily routines.
15´ minutes	<ul style="list-style-type: none"> • The teacher provides explanation related to the topics to be performed during the month. Students have one week for each topic to develop the activities. <ul style="list-style-type: none"> ▪ Topic 1: Order in a restaurant dialogue ▪ Topic 2: Drinks (5 flashcards) ▪ Topic 3: Clothes (6 flashcards) ▪ Topic 4: Daily routines (6 flashcards)
<div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: fit-content;"> <p>Resources</p> <ul style="list-style-type: none"> • Duolingo Platform: https://schools.duolingo.com/ • Hangouts • Flashcards </div> <p>Order in a restaurant dialogue</p>	

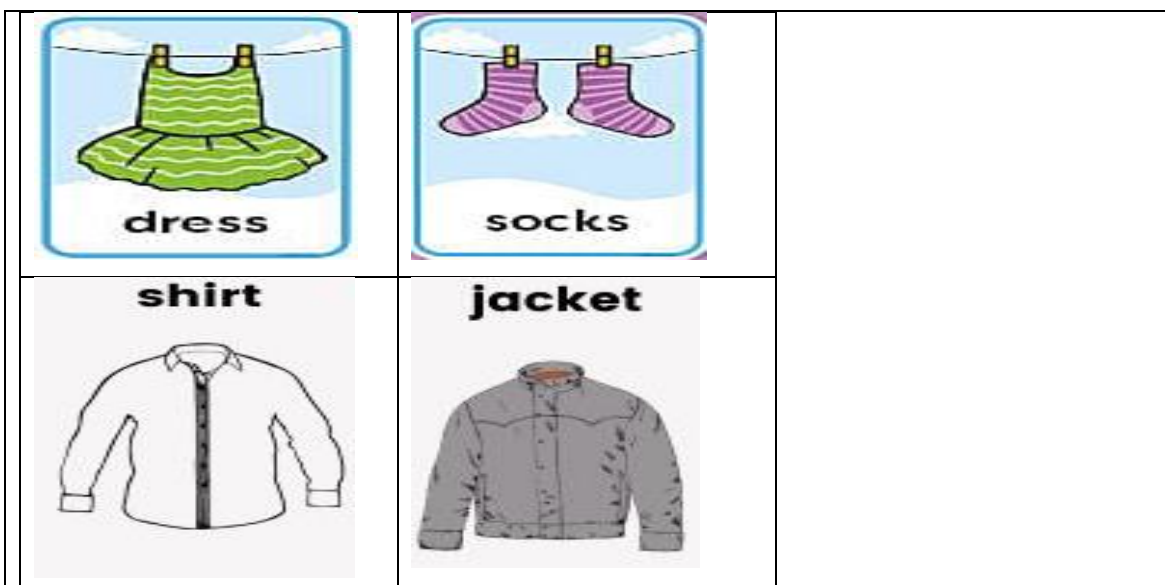


Flashcards: Drinks



Flash cards: Clothes





Flash cards: daily routines

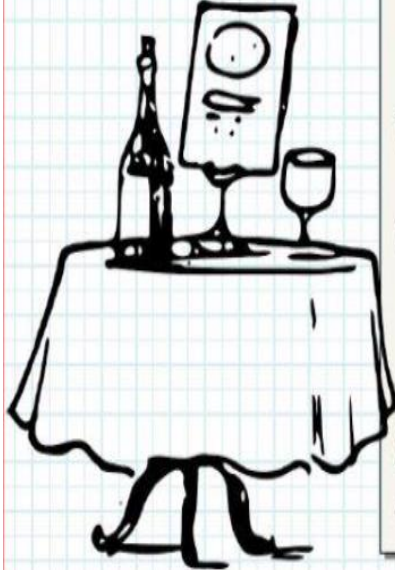


Activities:

Worksheet 1

Read and complete the dialogue with the words in the box.

a soda pizza please you sandwich Thank





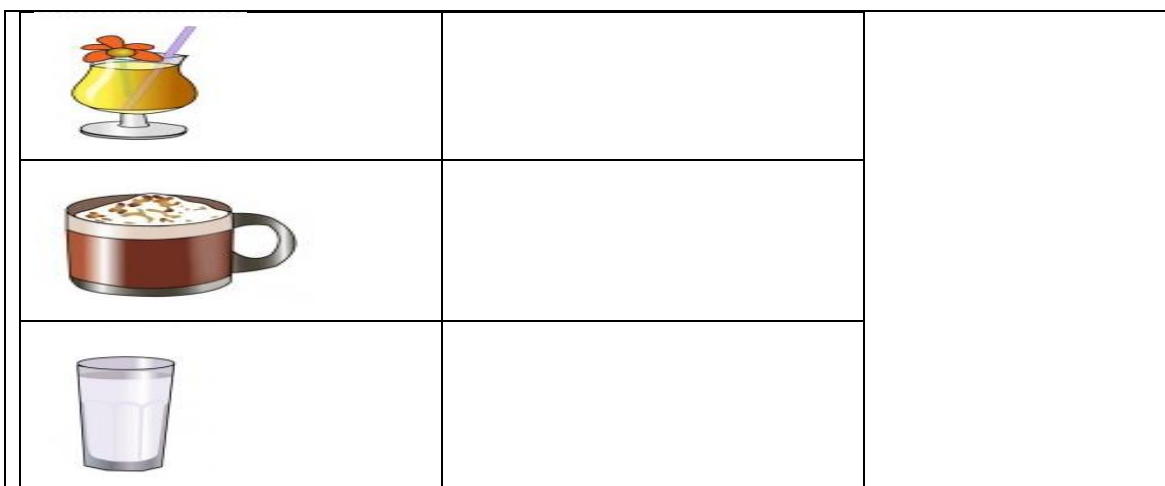
Waiter: Hi. Can I help you?
 Emily: Yes. Can I have a cheese ¹⁾ , please?
 Waiter: Sure. And for you?
 Alex: Can I have, ²⁾ , please?
 Waiter: Anything to drink?
 Emily: Can I have ³⁾ , please?
 Alex: Can I have a cup of tea, ⁴⁾ ?
 Waiter: Here you are.
 Emily: Thank, ⁵⁾ .
 Alex: ⁶⁾ , you.

Worksheet 2

Look at the pictures, read the words for the list and write the correct answer.

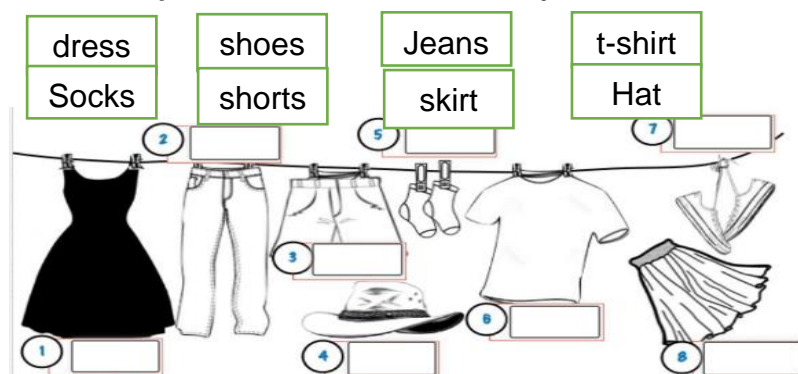
milk
 coconut milk
 Water
 hot chocolate
 Wine
 coffee
 beer
 juice

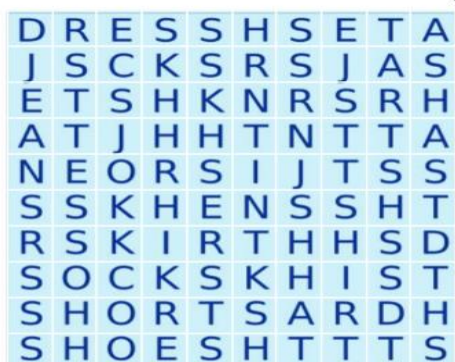


Worksheet 3





Look at the picture and find the vocabulary clothes in wordsearch.



Find the clothes (across → and down ↓).



Worksheet 4 Look at the daily routines and complete it with the missing vowels

	<p><i>h --- v ---- br--- --- kf ----st</i></p>
	<p><i>g --- t---- sch ---- --- l</i></p>
	<p><i>g---t ---p</i></p>
	<p><i>d --- y--- ---r</i> <i>h---m---w---rk</i></p>

DUOLINGO LESSON PLAN 3



Subject: English I

Length of lesson: one month (30 minutes two days a week)

Total hours per month: 240 minutes.

Duolingo Lesson's Topics: likes and dislikes, public places, weather, and saying good-bye

Duolingo Unit 1 Objective: Students will be able to use shorten sentences and vocabulary related to likes and dislikes, public places, weather, and saying good-bye

Duolingo Specific objectives for the week:

Students will be able to express likes and dislikes.

Students will be able to describe important places.

Students will be able to describe weather.

Students will be able to ask and answer basic personal information.

Lesson development

Time											
10´ minutes	<ul style="list-style-type: none"> • The teacher begins the class by reinforcing what students have learned in the previous lesson (4 topics) in the Duolingo platform. The teacher explains students that they will describe likes and dislikes, important places, weather and saying good bye during the week. 										
15´ minutes	<ul style="list-style-type: none"> • The teacher explains the topics to be performed during the month. Students have one week for each topic to develop the activities. • likes and dislikes, public places, weather, and saying good-bye <ul style="list-style-type: none"> ▪ Topic 1: Likes and dislikes ▪ Topic 2: Public places (5 flashcards) ▪ Topic 3: Weather (6 flashcards) ▪ Topic 4: Saying good bye (6 flashcards) 										
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>Resources</p> <ul style="list-style-type: none"> • Duolingo Platform: https://schools.duolingo.com/ • Hangouts • Flashcards </div> <p>Likes and dislikes</p> <table border="1" style="float: right; margin-left: auto;"> <thead> <tr> <th>I like</th> <th>I do not like</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>		I like	I do not like								
I like	I do not like										

Food Likes / Dislikes

Write down below the images the food you like and the food you don't like :

rice	spaghetti	fried potatoes	carrot	fried egg
milk	pizza	hamburger	fish	boiled egg
steak	salad	lemon	cucumber	corn



Flashcards: Places



clothing store



bus stop



airport



school



barber shop



garage

Flash cards: Weather

sunny



rainy



cloudy



snowy



cold



hot



Dialogue: Saying good bye

Hello
OR
Good bye

		<input type="text" value="Hello!"/> <input type="text" value="Goodbye!"/>
		<input type="text" value="Hello!"/> <input type="text" value="Goodbye!"/>
		<input type="text" value="Hello!"/> <input type="text" value="Goodbye!"/>
		<input type="text" value="Hello!"/> <input type="text" value="Goodbye!"/>

Activities:**Worksheet 1**LIKE AND DISLIKE

READ LOOK AND COMPLETE WITH:

LIKE**DON'T LIKE****LIKES****DOESN'T LIKE**

- 😊 ROSY _____ CHOCOLATE.
- 😞 BILLY _____ POP CORN.
- 😞 I _____ BANANA MILKSHAKES.
- 😊 MY CAT _____ MILK.
- 😊 TIM _____ TRAINS AND CARS.
- 😞 WE _____ BROCCOLI.
- 😊 GRANDPA _____ CHEESE SANDWICHES.
- 😞 SHE _____ ORANGE JUICE.
- 😊 I _____ CAKES AND PRESENTS.
- 😊 BOYS _____ FOOTBALL.

Worksheet 2: Look and choose the correct answer

	HOSPITAL THEATER SCHOOL		SUPERMARKET BAKERY MUSEUM
	SCHOOL SUPERMARKET BANK		BUS STOP BAKERY RESTAURANT
	FIRE STATION BANK MUSEUM		THEATER MUSEUM BANK
	BUS STOP LIBRARY PARK		SCHOOL MUSEUM HOSPITAL
	LIBRARY BANK THEATER		PARK BUS STOP FIRE STATION

Worksheet 3

What's the weather like today?



















Worksheet 4: Find the words saying goodbye

S	E	E	Y	O	U	I	V	B
E	E	O	W	P	E	H	A	Y
E	L	A	T	E	R	I	E	E
T	M	T	I	C	O	I	E	B
U	Q	P	L	O	S	E	U	Y
B	Y	E	U	X	A	O	Z	E

CHAPTER III. ANALYSIS OF THE RESULTS OF THE INVESTIGATION

3.1. Analysis and interpretation results

The current research performed the data collection by using a pre-test and a post-test for both diverse groups; the control and the experimental group, at Unidad Educativa Joaquin Lalama. The students who took part in this study were from Sixth A (control) and Sixth B (experimental). Individuals from the control group had conventional classes according to the lessons planning without any new methodology focused on vocabulary acquisition. Contrary to the experimental group, who received lessons by applying Duolingo platform to get improvement in their vocabulary learning process by performing different activities and tasks to enhance their target language.

Student´s survey results

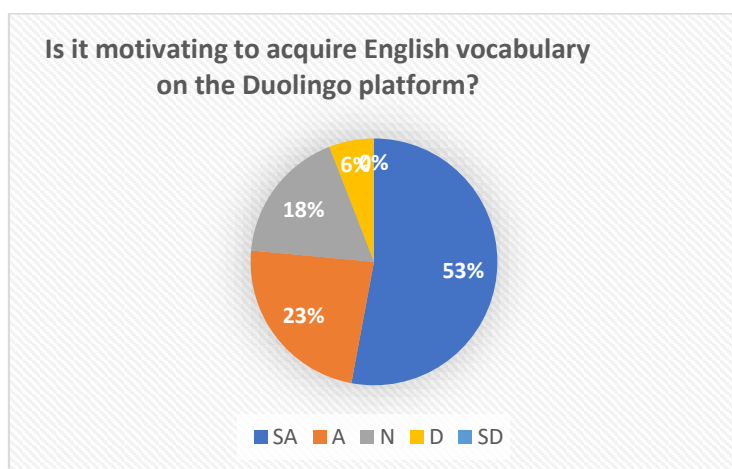
After the application of the techniques and instruments with the statistical tests, according to the needs of the research, this chapter details a deep analysis of the findings showed in reference to the variables defined above. The data collection is designed in graphics, tables and data gathering to 17 students from Sixth B at Unidad Educativa Joaquin Lalama. It was performed in three phases: 1) a pre-test applied to the control and experimental group, 2) intervention of Duolingo platform performing vocabulary activities for the experimental group, 3) finally, the post-test to control and experimental group was applied.

For the data analysis it was applied the Likert scale was applied with the following criteria:

Table 2. Likert Scale

Quantitative scale	Frequency scale	Meaning
5	SA	Strongly agree
4	A	Agree
3	N	Neutral
2	D	Disagree
1	SD	Strongly disagree

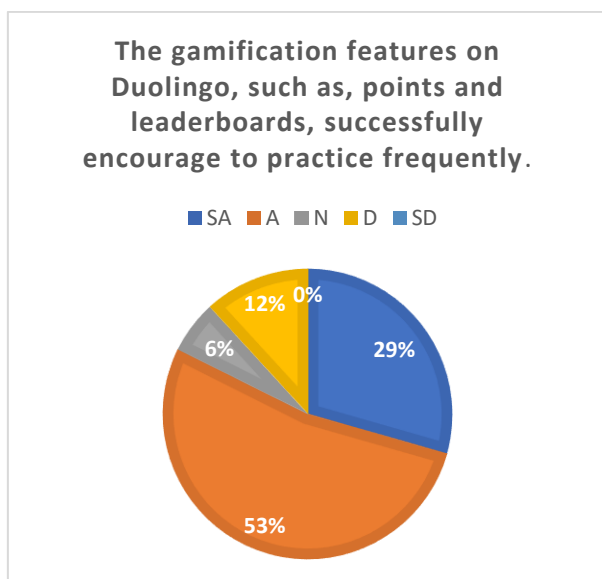
Source: Elaborated by Delgado, M, 2024

Figure 9. Question 1: It is motivating to acquire English vocabulary on the Duolingo platform

Source: Self made

In figure 1, related to motivation for acquiring vocabulary through the Duolingo platform, 9 students corresponding to the 53% mentioned they strongly agreed, 4 students representing the 23% mentioned they agreed, 3 students representing the 16% mentioned they have a neutral opinion, and, 1 student, corresponding to the 6% mentioned he disagreed.

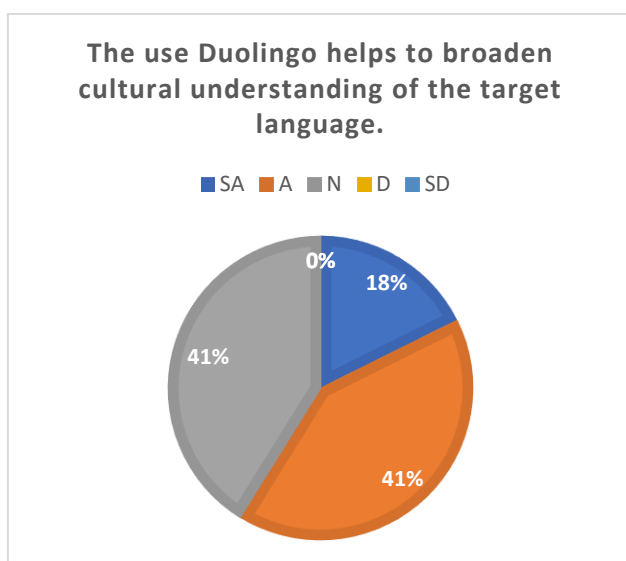
Figure 10. Question 2: The gamification features on Duolingo, such as, points and leaderboards, successfully encourage to practice frequently.



Source: Self made

In figure 2, related to the gamification features together with the Duolingo platform, 5 students corresponding to 29% mentioned they strongly agreed, 9 students represented by the 53% mentioned they agreed, 1 student represented by the 6% mentioned he had a neutral opinion and 2 students, corresponding to the 12% mentioned they disagreed to use gamification.

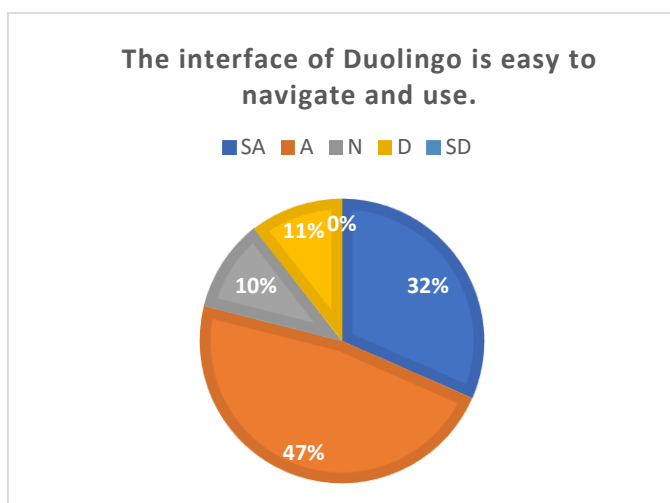
Figure 11. Question 3: The use of Duolingo helps to broaden cultural understanding of the target language.



Source: Self made

In figure 3, related to whether the Duolingo platform contributes to increase the cultural understanding, 3 students corresponding to the 18% mentioned they strongly agreed, 7 students represented by the 41% mentioned they agreed, 7 students represented by the 41% mentioned they had a neutral opinion.

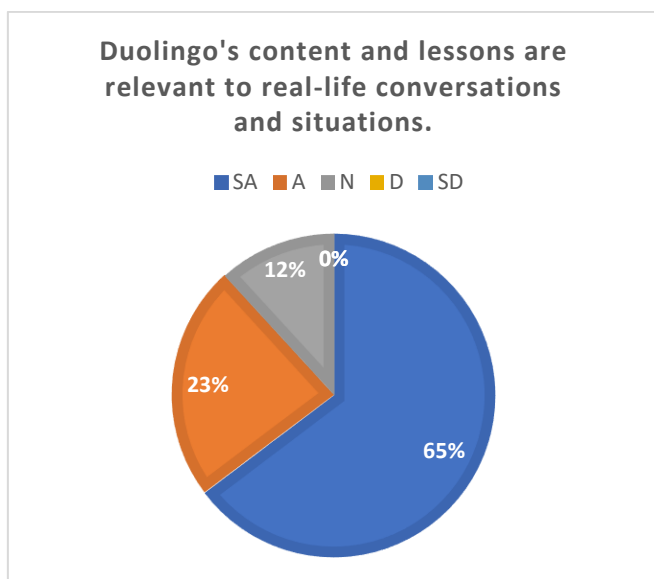
Figure 12. Question 4: The interface of Duolingo is easy to navigate and use.



Source: Self made

In figure 4, related to the Duolingo platform interface navigation, 6 students corresponding to the 32% mentioned they strongly agreed, 9 students represented by the 47% mentioned they agreed, 2 students represented by the 10% mentioned they had a neutral opinion, and, 2 students corresponding to the 11% mentioned they disagreed to navigate in the learning platform. This happens because students do not have internet connexion and electronic devices.

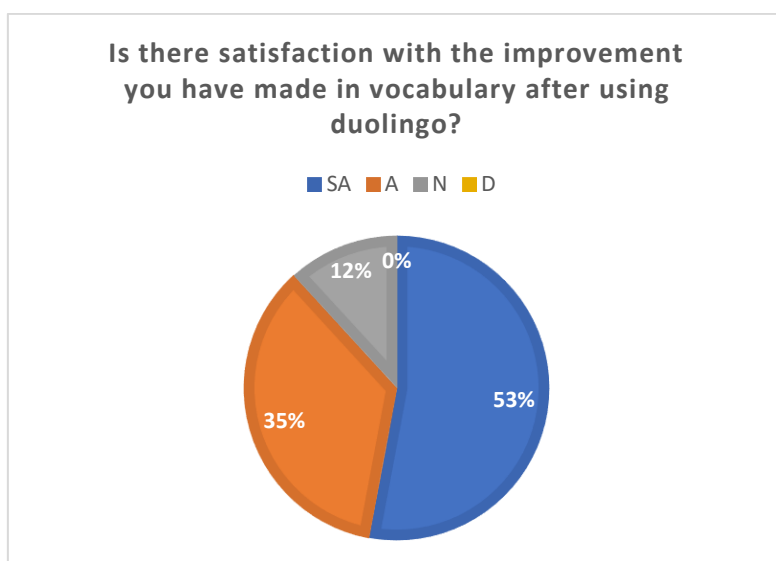
Figure 13. Question 5: Duolingo's content and lessons are relevant to real-life conversations and situations.



Source: Self made

In figure 5, related to the Duolingo platform content for real life situations, 11 students, corresponding to the 65% mentioned they strongly agreed, 4 students, being part of the 23% mentioned they agreed and 2 students who represented the 12% mentioned they had neutral opinion to use the platform in their lifetime.

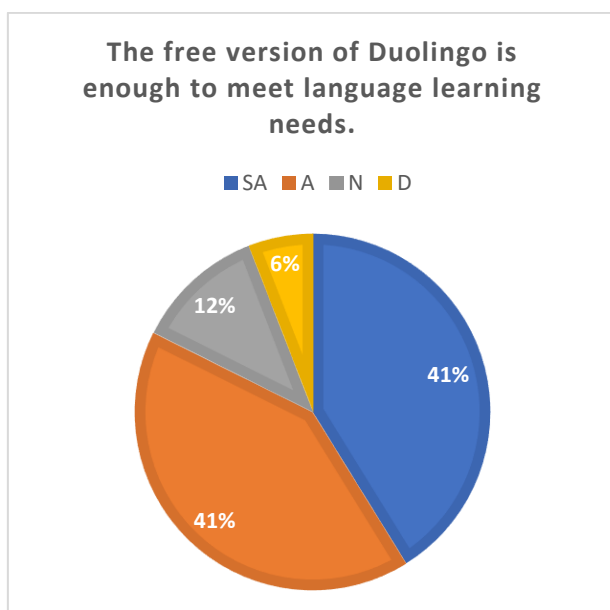
Figure 14. Question 6: Is there satisfaction with the improvement you have made in vocabulary after using Duolingo?



Source: Self made

In figure 6, related to the enhancement in vocabulary acquisition by using Duolingo platform, 9 students corresponding to the 53% mentioned they strongly agreed, 6 students represented by the 35% mentioned they agreed and 2 students represented by the 12% mentioned they had a neutral opinion to express their improvement in learning vocabulary.

Figure 15. Question 7: The free version of Duolingo is enough to meet language learning needs.

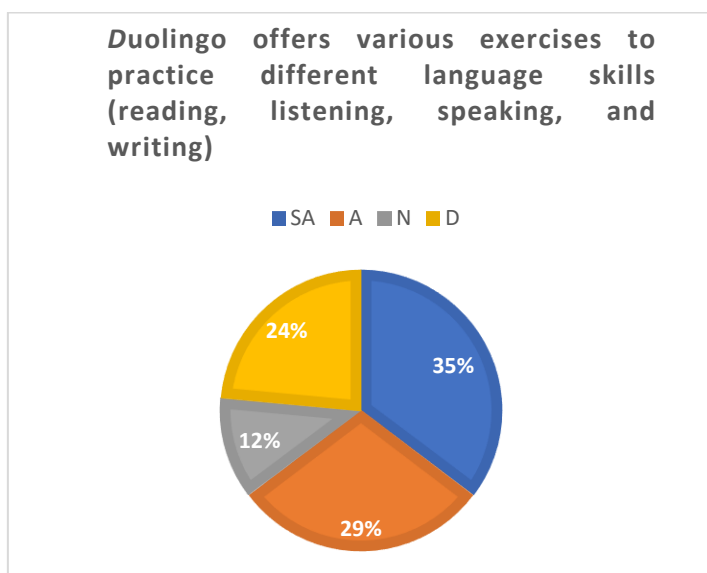


Source: Self made

In figure 7, related to the free version of Duolingo platform to fulfill learning needs, 7 students corresponding to the 41% mentioned they strongly agreed, 7 students represented by the 41% mentioned they agreed, 2 students represented by the 12% mentioned they have a neutral opinion, and, 1 student mentioned that she disagreed with the free version.

Figure 16. Question 8: Duolingo offers a great variety of exercises to practice different language skills (reading, listening, speaking, and writing)

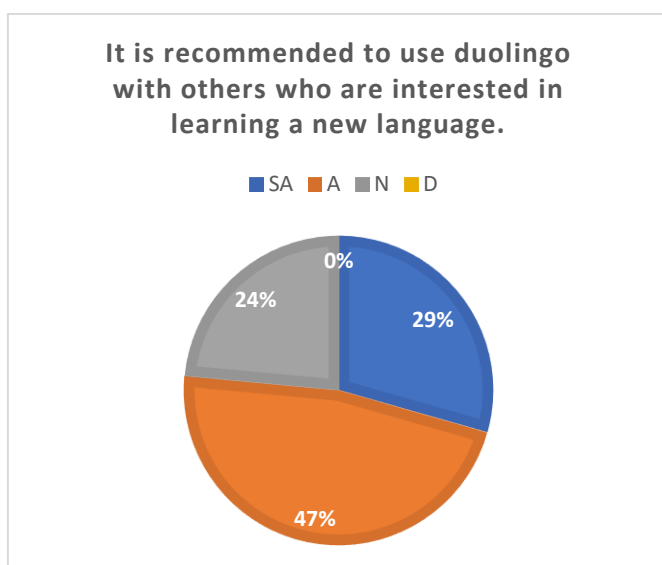
Duolingo offers various exercises to practice language different skills (reading, listening, speaking, and writing).



Source: Self made

In figure 8, related to the free version about Duolingo platform to fulfill learning needs, 7 students corresponding to the 41% mentioned they strongly agreed, 7 students represented by the 41% mentioned they agreed, 2 students represented by 12% mentioned they have a neutral opinion, and, 1 student mentioned that she disagreed with what the platform offers.

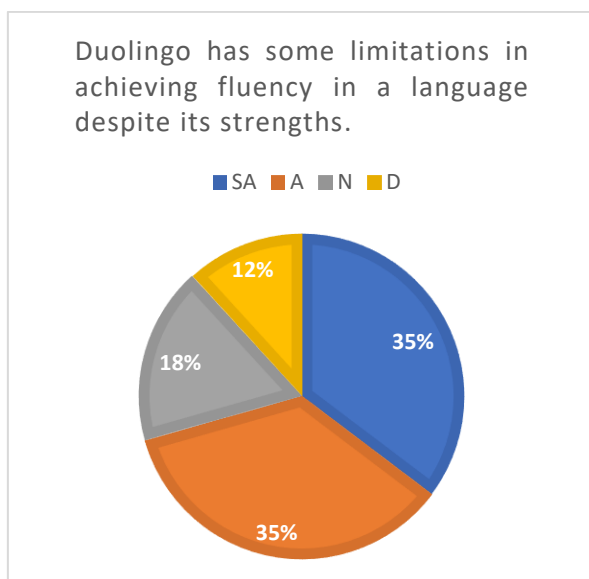
Figure 17. Question 9: It is recommended to use Duolingo with others who are interested in learning a new language.



Source: Self made

In figure 9, about recommending other languages learners to use the Duolingo platform, 7 students corresponding to the 29% mentioned they strongly agreed, 8 students representing the 47% mentioned they agreed, and, 4 students represented by the 24% mentioned they have a neutral opinion to advice the acquisition of a new language by using this platform.

Figure 18. Question 10: Duolingo has some limitations in achieving fluency in a language despite its strengths.



Source: Self made

In figure 10, about Duolingo platform limitations to become fluent in a language, 6 students corresponding to the 35% mentioned they strongly agreed, 6 students represented by the 35% mentioned they agreed, 3 students represented by the 18% mentioned they have a neutral opinion, and, 2 students represented by the 12% mentioned they disagreed about the platform limitations because it needs to have all the features to learn a language without any restrictions for the different activities.

Control group scores.

The following table displays the scores each individual from the control group obtained in the pre-test and post-test results.

Table 3. Score of Pre-Test and Post-Test in Control Class
Before and after scores of 17 individuals in the control group.

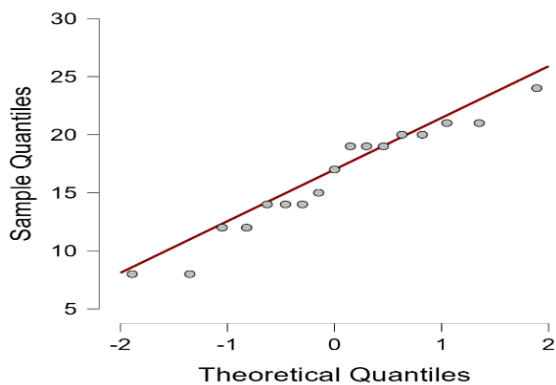
Students	Pre-test	Post-test
Student 1	12	14
Student 2	14	16
Student 3	12	12
Student 4	8	16
Student 5	15	19
Student 6	19	24
Student 7	24	16
Student 8	14	9
Student 9	17	18
Student 10	8	10
Student 11	21	22
Student 12	20	21
Student 13	14	15
Student 14	19	19
Student 15	19	20
Student 16	20	21
Student 17	21	21

Note: The numbers obtained in the pre-test and post-test correspond to the obtained grades during the assessing.

Elaborated by Delgado, M, 2024

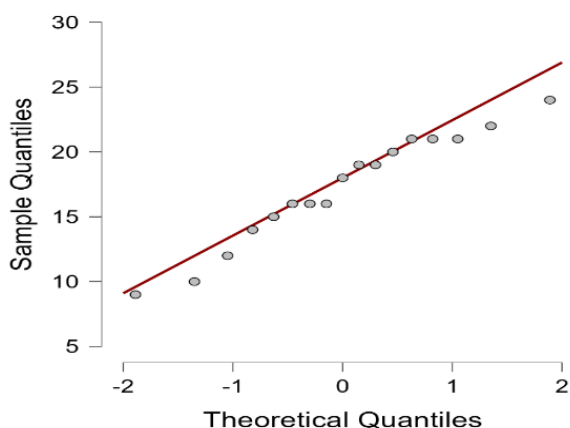
Normalization data result

Figure 19. Normalization test pre-test control group



Elaborated by Delgado, M, 2024

Figure 20. Normalization test post-test control group



Elaborated by Delgado, M, 2024

Table 4. Descriptive Statistics

	Pre-test	Post-test
Valid	17	17
Mean	16.294	17.235
Std. Deviation	4.647	4.280
Shapiro-Wilk	0.944	0.956
P-value of Shapiro-Wilk	0.362	0.562

Elaborated by Delgado, M, 2024

The normalization test in the pre-test and the post-test for the control group p value was higher to 0.05. In the pre-test was 0.362 and in the post-test was 0.562. As a consequence, the data has normal distribution so that, it fulfills with the parametric statistic criteria. As this group did not have any intervention the students continue

with the conventional methodology. The arithmetic media in the pre-test was 16.294 while the arithmetic media in the post-test was 17.235.

Experimental group scores

The following table displays the scores each individual from the experimental group obtained in the pre-test and post-test results.

Experimental group scores

Table 5. Score of Pre-Test and Post-Test in Experimental Class

Before and after scores of 17 individuals in the control group.

Students	Pre-test	Post-test
Student 1	13	23
Student 2	15	22
Student 3	13	22
Student 4	16	24
Student 5	17	25
Student 6	18	25
Student 7	10	23
Student 8	15	24
Student 9	13	23
Student 10	24	25
Student 11	14	23
Student 12	15	24
Student 13	14	23
Student 14	12	22
Student 15	15	25
Student 16	19	24
Student 17	17	23

Note: The numbers obtained in the pre-test and post-test correspond to the obtained grades during the assessing.

Elaborated by Delgado, M, 2024

Experimental Group

Paired Samples T-Test

Table 6. Paired Samples T-Test

Measure 1	Measure 2	t	df	p
Pre-test	Post-test	-1.106	16	0.285

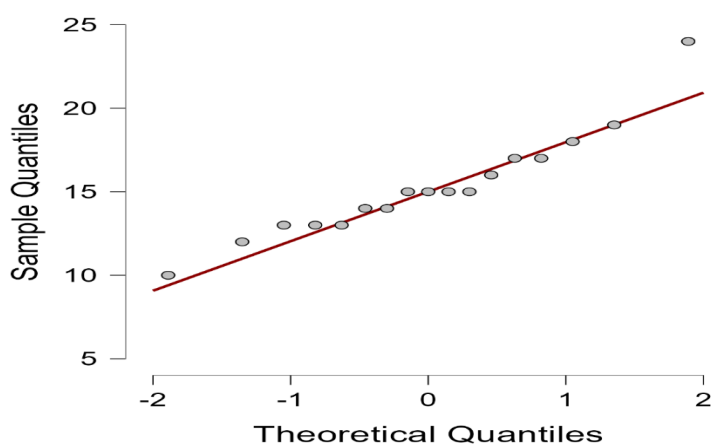
Note. Student's t-test pre-test and post-test.
Elaborated by Delgado, M, 2024

For the experimental group it was applied the paired samples T-test in the pre-test and the post-test where it showed the p value is 0.285 therefore, there is data normalization fulfilling with the parametric statistic criteria.

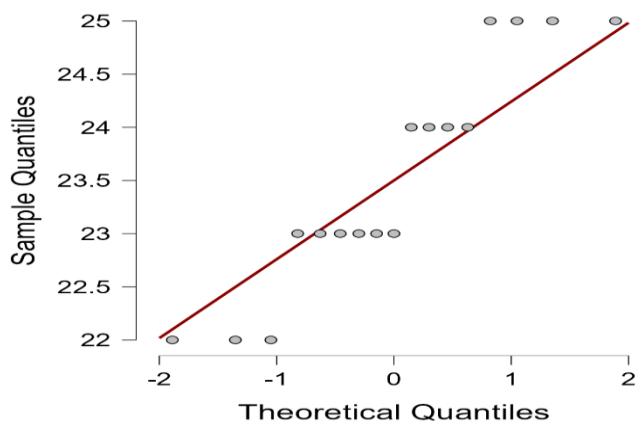
Experimental Group

Q-Q Plots

Pre-test



Post-test

**Table 7. Descriptive Statistics**

	Pre-test	Post-test
Valid	17	17
Mean	15.294	23.529
Std. Deviation	3.177	1.068
Shapiro-Wilk	0.924	0.879
P-value of Shapiro-Wilk	0.171	0.030

Elaborated by Delgado, M, 2024

Table 7 explains the data obtained the pre-test media is 15.294 which calculated over 10 the score is 6.11. while the score obtained in the post-test is 23.529 which calculated over 10 the score is 9.41. After the intervention of Duolingo platform it can be observed that there was an improvement in vocabulary acquisition by increasing the difference of 3.30, since the post-test application.

Table 8. Paired Samples Wilcoxon**Experimental Group**

Measure 1	Measure 2	W	z	p
Pre-test	Post-test	0.000	-3.621	< ,001

Note. Mean of the pre-test and post-test results for the experimental group. Developed by Wilcoxon signed-rank test.

Elaborated by Delgado, M, 2024

The table 8 shows the pre-test and the post-test mean score for the experimental group, this score is -3.621 according to the p value score on the table is < 0,001 which shows a value less than 0.05. It determines the difference during the intervention of Duolingo platform.

Table 9. Control and Experimental Post-test (2 POST TEST)

Measure 1	Measure 2	W	z	p
Post-test	Post-test	0.000	-3.621	< .001

Note. Mean of the post-test results for the experimental and control group. Developed by Wilcoxon signed-rank test

Elaborated by Delgado, M, 2024

The table 9 displays the pre-test and the post-test mean score for control and the experimental group, this score is -3.621 according to the p value score on the table is $p = < .001$ which shows a value less than 0.05. It determines there is significant differences at the time to apply the intervention of Duolingo platform. On the other hand, the table shows the improvement on vocabulary achievement in the students.

Post-test for the control and experimental

Table 10. Post-test for the control and experimental

	Post-test control	Post-test experimental
Valid	17	17
Mean	17.235	23.529
Std. Deviation	4.280	1.068
Shapiro-Wilk	0.956	0.879
P-value of Shapiro-Wilk	0.562	0.030

Elaborated by Delgado, M, 2024

Table 10 displays the media obtained in the post-test, for the control group is 17.235, which, calculated over 10, the score is 6.89, while the media obtained in the post-test for the experimental group is 23.529 which calculated over 10 the score is 9.41. As a consequence of this, it can be observed that there is the difference of 2.52 on the score between both post-tests applied to the two groups.

Table 11. Control y Experimental group Post-test results

Measure 1	Measure 2	W	z	p
Post-test	Post-test	0.000	-3.621	< .001

Note. Wilcoxon signed-rank test.

Elaborated by Delgado, M, 2024

3.2. Hypothesis verification

The current project aimed to establish how vocabulary acquisition will be improved in order to use the target language in a productive way. Taking into consideration this research question about the Duolingo platform was applied to enhance the vocabulary skill of 17 students to difference the result with the control group which did not have the opportunity to use the learning languages platform.

The research determined two hypotheses focused in the following variables

1. Independent variable: Duolingo Platform
2. Dependent variable: Vocabulary Acquisition

Hypotheses.

- 1. Null Hypothesis (H₀):** Duolingo Platform does not enhance vocabulary acquisition in children.
- 2. Alternative Hypothesis (H₁):** Duolingo Platform enhances vocabulary acquisition in children.

The Paired Samples Wilcoxon test was applied in this research whether the media score of the post-test for the experimental group was higher than the media score of the pre-test subsequently to be exposed to the Duolingo platform. Furthermore, the experimental group displays better scores than the control group. Tables 7 and 8 demonstrate the score media and the standard deviation. Based on this result it is refused the Null Hypothesis and is accepted the researching hypothesis.

Interpretation

After a quick examination based on the statistics between the control and experimental groups results, it was revealed that both groups got improvement on their scores in their post-test. Even though, there were a few students from the control group who obtained high scores. Nonetheless, the post-test scores of the

experimental group were meaningfully higher associated to the pre-test. It happened for the intervention of the gamified platform Duolingo. Certainly, this learning tool allowed learners to enhance their vocabulary acquisition.

CONCLUSIONS

- The application of Duolingo enhanced the different collaborative activities and assessments inside the platform, in which most of the learners had struggles in increasing their vocabulary learning process.
- The academic advantages of Duolingo contributes to vocabulary in the target language which included individual learning tasks, interactive activities, and instantaneous feedback, which allowed significant learning for children.
- The application of Duolingo challenged effectively in young learners engaging dynamically in the target language acquisition; the use of the platform offered a gamified approach and a variety of exercises which encouraged students to be motivated during their learning experience.
- The interactive platform's nature got meaningful improvement vocabulary regarding acquisition in children; activities to practice listening, were included; besides different tests and challenged vocabulary tasks promoting a positive improvement for helping the new language retention.

RECOMMENDATIONS

- Schools should motivate learners to have a continuous practice on the Duolingo platform in order to promote their language acquisition by means of getting an important improvement, fluency and retention among the performed exercises where grammar activities are used as well as language patterns to keep an engaging learning process.
- Exploring and using all Duolingo's features such as listening, speaking, writing, and other assessment tasks should enhance effectiveness and confidence in the different language skills.
- Students should set personal vocabulary objectives learning to enhance their learning progress, using different features to build confidence and foster interaction with other learners.
- It is recommended to enhance fluency and comprehension to engage in real life language training through activities such as watching Tv shows, reading articles and books, and practicing in dialogues with other speakers to gain an authentic language experience.

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ANNEXES

ANNEX I: Pre-test and Post-test

PONTIFICIA UNIVERSIDAD CATÓLICA DEL ECUADOR-SEDE AMBATO
ESCUELA DE IDIOMAS
 Programa de maestría en pedagogía del inglés como lengua extranjera

VALIDATION FORM

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(Firma) _____

(Cedula de Identidad) 0102511508

Ambato, 07 de febrero de 2023

Magíster

SONIA VALLEJO

Presente

De mi consideración:

Conocedora de su alta capacidad profesional, me permito solicitarle muy comedidamente su valiosa colaboración en la validación del instrumento a utilizarse en la recolección de datos para el proyecto **“Use of Duolingo Platform Activities to Improve Vocabulary Acquisition for Children from eight to ten years old”**.

Sírvase seguir las instrucciones que se detallan en la siguiente página, por lo cual se adjuntan los objetivos, la matriz de operacionalización de variables y los respectivos instrumentos.

Por la atención que brinde a la presente, le anticipo mi sentimiento de más alta consideración y estima.

Atentamente,



Mónica Delgado
180323028-1

Instructions to validate the content of the instrument about “Use of Duolingo Platform Activities to Improve Vocabulary Acquisition for Children from eight to ten years old”.

Read carefully the objectives, the matrix of the independent variable operationalization, the diagnostic test and the rubric.

1. Conclude about the relevance between objectives, variables, and indicators with the items of the instrument.
2. Determine the technical quality of each item to which the instrument is directed to.
3. Record the observations in the corresponding space.
4. Perform the same activity for each item, using the following categories:

A. Relation of the instrument questions with the objectives, variables and indicators.

P Pertinent

NP Not Pertinent

In the case of **NP**, go to the observations space and justify your opinion.

B. Technical quality and representativeness.

Check the appropriate box

O Optimum

G Good

R Regular

P Poor

In case of **R** or **P**, go to the comments space and justify your opinion.

C. Language.

Check the appropriate box

S SUITABLE

I INADEQUATE

In case of **I**, go to the space for observations and justify your opinion.

Thank you for your cooperation!

Objectives of the Instrument for the Diagnostic Phase

“Use of Duolingo Platform Activities to Improve Vocabulary Acquisition for Children from eight to ten years old”.

Objectives

General Objective

- To improve vocabulary acquisition in students from eight to ten years old by the use of Duolingo platform.

Specific Objectives

- To investigate bibliographically the Duolingo platform advantages with the purpose to increase vocabulary acquisition
- To analyze students' weaknesses regarding the development of vocabulary acquisition.
- To enhance vocabulary learning through interactive activities promoting the acquisition of new words.
- To apply Duolingo platform which challenges vocabulary acquisition in eight to ten years old learners.

Validation of contents of the pretest instrument about "Use of Duolingo Platform Activities to Improve Vocabulary Acquisition for Children from eight to ten years old".

1) Please read the rubric and the relation it has with the objectives and the indicators of the dependent variable instrument.

Questions for students

Categories Items	A. Relation of the instrument questions with the objectives, variables and indicators P= Pertinent NP= Not Pertinent		B. Technical quality and representativeness O= Optimum G= Good R= Regular P= Poor				C. Language. S= Suitable I= Inadequate		Observations
	P	NP	O	G	R	P	S	I	
1									
2									
3									
4									
5									
6									
7	P		O				S		

Vocabulary Acquisition Pretest and Posttest


Six grade -----

Total score: 25

Name:

Push yourself because No one else is going to do it for you.

Instructions:

- ❖ Look at the pictures, read carefully each sentence and choose the correct answer.
- ❖ Good luck all of you. 

1. There is a ----- on the table.



- a. pencil
- b. sharpener
- c. glue
- d. ruler

2. The grapes are



- a. blue
- b. yellow
- c. green
- d. purple

3. My ----- is in the backpack.



- a. pencilcase
- b. book
- c. eraser
- d. pen

4. The trees are -----



- a. brown
- b. pink
- c. green
- d. black

5. I ----- at five o'clock.



- a. have lunch
- b. do homework
- c. play soccer
- d. get up

6. The children ----- a song.



- a. sing
- b. play
- c. swim
- d. sleep

7. I usually ----- soccer.



- a. play
- b. drink
- c. write
- d. eat

8. I ----- a poem to my mom.



- a. sing
- b. listen
- c. drink
- d. write

9. They ----- cold water.



- a. drink
- b. eat
- c. watch
- d. play

10. I love to eat -----



- a. apple
- b. grapes
- c. pineapple
- d. tangerine

11. I ----- the Language book.



- a. paint
- b. read
- c. do
- d. write

12. My family go the ----- on



Sunday.

- a. park
- b. museum
- c. library
- d. swimming pool

13. They love to wear a ----- .



- a. shirt
- b. skirt
- c. belt
- d. cap

14. We ----- vegetables.



- a. drink
- b. swim
- c. eat
- d. play

15. I ----- in the afternoon.



- a. get up
- b. have diner
- c. do homework
- d. copy the task

16. My ----- are black.



- a. scarf
- b. shoes
- c. blouse
- d. T-shirt

17. Today the weather is -----



- a. sunny
- b. windy
- c. foggy
- d. cloudy

18. I ----- my landscape.



- a. drink
- b. swim
- c. paint
- d. eat

19. My friends eat some delicious -----



- a. apples
- b. strawberries
- c. cherries
- d. oranges

20. I ----- at ten thirty at night.



- a. sleep
- b. swim
- c. read
- d. write

21. My friends ----- in the morning.



- a. sleep
- b. read
- c. watch Tv
- d. go to school

22. The weather was ----- yesterday.



- a. rainy
- b. cloudy
- c. foggy
- d. sunny

23. She is my ----- .She is a nurse.



- a. grandfather
- b. brother
- c. aunt
- d. uncle

24. He is my ----- . He is an engineer.



- a. mother
- b. brother
- c. sister
- d. grandmother

25. The students ----- their family.



- a. copy
- b. draw
- c. watch
- d. listen

ANNEX 2: Principal approval



UNIDAD EDUCATIVA "JOAQUÍN LALAMA"



Ambato, 13 de febrero de 2023

Mg. Hugo Jesús Guerrero Altamirano

RECTOR DE LA UNIDAD EDUCATIVA "JOAQUÍN LALAMA"

Presente. -

De mi consideración:

Yo, Mónica Cecilia Delgado Oñate, con C.I. 1803230281 estudiante de la Maestría en Pedagogía del Inglés como Lengua Extranjera de la Pontificia Universidad Católica del Ecuador, sede Ambato, solicito a Ud. muy comedidamente autorice la ejecución de mi proyecto de titulación, en la institución que usted dignamente dirige. El tema del Proyecto de titulación es: "Use of Duolingo Platform to Improve Vocabulary Acquisition for Children". El mismo que va a ser ejecutado en modalidad virtual después del horario de clase por la conectividad de internet.

Con sentimientos de distinguida estima y consideración.

Atentamente,

Lic. Monica Delgado
C.I: 180323028-1

ANNEX 3: Survey and validation



Pontificia Universidad Católica del Ecuador | Sede Ambato

**PONTIFICIA UNIVERSIDAD CATÓLICA DEL ECUADOR-SEDE AMBATO
ESCUELA DE IDIOMAS
Programa de Maestría en Pedagogía del Inglés como Lengua Extranjera**

VALIDATION FORM

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Título de Postgrado: MAGISTER EN PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS MENCIÓN EN INGLES	
Área: EDUCACIÓN	
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Ambato, February 13th 2023

Magister
Jairo Medina
English Teacher

Innovative and highly qualified professional in the learning English teaching field. Through this document, I have the pleasure to ask you for your trustworthy collaboration to validate this document to be used for the data collection of the research work entitled "USE OF DUOLINGO PLATFORM FOR VOCABULARY ACQUISITION IN CHILDREN"

Please help yourself the following instructions in detail which are enclosed below. Review the survey that has been kindly included.

I would feel rather grateful for your support and help in this correct research if you accepted my request.

Kind regards,



Lic. Monica Delgado
CC. 180323028-1



Pontificia Universidad Católica del Ecuador | Sede Ambato

“SURVEY ADDRESSED TO SIXTH A OF BASICA MEDIA”

UNIDAD EDUCATIVA JOAQUIN LALAMA

Objective:

To collect and review relevant information to assess the effectiveness by using Duolingo Platform for the vocabulary acquisition.

Directions:

Dear student

Please read the following statements and select the corresponding option according to yourself agreement or disagreement. Note: there is not right or wrong answer.

Scale: 5: SA= Strongly agree, 4: A= Agree, 3: N= Neutral, 2: D= Disagree 1: SA= Totally disagree

		Frequency scale	SA	A	N	D	SD
	Items	Quantitative scale	5	4	3	2	1
1	It is motivating to acquire English vocabulary on the Duolingo platform.						
2	The gamification features on Duolingo, such as, points and leaderboards, successfully encourage to practice frequently.						
3	The use of Duolingo helps to broaden cultural understanding of the target language.						
4	The interface of Duolingo is easy to navigate and use.						
5	Duolingo's content and lessons are relevant to real-life conversations and situations.						
6	There is satisfaction with the improvement you have made in vocabulary after using Duolingo						
7	The free version of Duolingo is enough to meet language learning needs.						
8	Duolingo offers a great variety of exercises to practice different language skills (reading, listening, speaking, and writing).						
9	It is recommended to use Duolingo with others who are interested in learning a new language.						
10	Duolingo has some limitations in terms of achieving fluency in a language despite its strengths.						

Thank you for your collaboration

ANNEX 4: Pre-test and post-test students

