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CAMPUS PUJILI

DEGREE IN PEDAGOGY OF NATIONAL AND FOREIGN LANGUAGES

RESEARCH PROJECT

DUOLINGO TO DEVELOP LISTENING SKILLS IN EFL YOUNG LEARNERS

Research report before obtaining the bachelor's degree in National and Foreign Language Pedagogy, English Major

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DECLARATION OF AUTHORSHIP

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Furthermore, We certify that the ideas, concepts, procedures and results expressed in this investigative work are our exclusive responsibility.

Pujilí, February 25, 2025



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ENDORSEMENT OF THE TUTOR OF THE RESEARCH PROJECT

As Tutor of the research project with the title:

“DUOLINGO TO DEVELOP LISTENING SKILLS IN EFL YOUNG LEARNERS”
by Guamán Yupangui Tatiana Jazmín, from the career of Pedagogy of National and Foreign Languages, I consider that said Investigative Report is worthy of approval by complying with the technical standards, translation and formats provided, as well as having incorporated the observations and recommendations proposed in the pre-defense.

Pujilí, February 25, 2025



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ENDORSEMENT OF APPROVAL OF THE DEGREE TRIBUNAL

As the Readers' Tribunal, approved the present Research Report according to the regulations issued by the Technical University of Cotopaxi, and by the Pujilí Extension; because, the postulant: Guamán Yupangui Tatiana Jazmín, with the title of the Research Project: **"DUOLINGO TO DEVELOP LISTENING SKILLS IN EFL YOUNG LEARNERS"**, has considered the recommendations issued in a timely manner and meets the sufficient merits to be submitted to the act of sustaining the degree work.

Therefore, it is authorized to save the corresponding files on a CD, according to the institutional regulations.

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GRATEFULNESS

I would like to express my gratitude in advance to my beloved Technical University of Cotopaxi for providing me with the opportunity to train as a professional and turn my goals into reality.

I also want to extend my heartfelt thanks to my tutor, Dr. Olga Lorena González Ortiz, who guided me with her knowledge and dedicated time throughout this process, ensuring the successful completion of my project.

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Tatiana Guamán

DEDICATION

I dedicate this work to my mother, Maria Yupangui, for her unconditional support since the beginning of this dream

To my dad, Luis Guamán, who has been attentive to the financial needs of my education. He has always worked to solve any challenges I faced and has been my guiding light throughout this journey.

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To my family, Jhonatan Chancusi and Sheerazade Chancusi, who inspire me and give me the strength to strive for improvement every day.

Tatiana Guamán

**TECHNICAL UNIVERSITY OF COTOPAXI
UNDERGRADUATE PROGRAM**

**DEPARTMENT OF NATIONAL AND FOREIGN LANGUAGE PEDAGOGY
ENGLISH MAJOR**

THEME: Duolingo to develop listening skills in EFL young learners.

Author: Tatiana Guamán

ABSTRACT

Developing listening skills is critical to teaching English as a foreign language (EFL), particularly for young learners who benefit from interactive and engaging learning environments. However, many EFL learners face challenges in effectively developing listening skills like limited exposure to real-life listening contexts, monotonous exercises, and a lack of technological integration further hinder students' ability to comprehend spoken English effectively. This study aimed to analyze the effectiveness of Duolingo in enhancing listening skills among young EFL learners in the seventh grade at a school in Cotopaxi Province during the academic period from October 2024 to March 2025. The study employed a descriptive method to obtain comprehensive insights into student progress and experiences. A diagnostic test and progress test using the Cambridge A1 Movers Listening Test were administered to assess the listening proficiency of 22 students before and after the intervention. Additionally, a survey was conducted to measure students' perceptions of Duolingo's impact on their listening skills, motivation, and overall learning experience. The intervention consisted of 12 structured lessons that incorporated Duolingo as a supplemental tool for listening comprehension practice, allowing students to engage with diverse listening exercises, interactive tasks, and gamified activities. The progress test results demonstrated a significant improvement in listening comprehension, with students achieving notably higher scores than the diagnostic test. The survey results further revealed that Duolingo's gamification elements, such as rewards, progress tracking, and interactive exercises, enhanced student engagement and motivation. However, some students encountered difficulties with specific listening tasks, such as distinguishing similar-sounding words and understanding fast-paced dialogues. The study concluded that Duolingo is a useful tool for improving listening skills when used in conjunction with teacher guidance and adaptive learning strategies. Future research should explore personalized learning models, AI-powered adaptive platforms, and long-term retention effects to further optimize technology-based language teaching.

Keywords: Duolingo, Gamification, Language Acquisition, Learners Listening Skills

UNIVERSIDAD TÉCNICA DE COTOPAXI

PROGRAMA DE PREGRADO

DEPARTAMENTO DE PEDAGOGÍA DE LENGUAS NACIONALES Y EXTRANJERAS

CARRERA DE INGLÉS

TÍTULO: Duolingo para desarrollar habilidades de escucha en jóvenes estudiantes de EFL.

Autor: Tatiana Guamán

RESUMEN

El desarrollo de las habilidades de escucha es fundamental para la enseñanza del inglés como lengua extranjera (EFL), en particular para los estudiantes jóvenes que se benefician de entornos de aprendizaje interactivos y atractivos. Sin embargo, muchos estudiantes de EFL enfrentan desafíos para desarrollar eficazmente las habilidades de escucha, como la exposición limitada a contextos de escucha de la vida real, ejercicios monótonos y la falta de integración tecnológica que obstaculizan aún más la capacidad de los estudiantes para comprender el inglés hablado de manera efectiva. Este estudio tuvo como objetivo analizar la eficacia de Duolingo para mejorar las habilidades de escucha entre los jóvenes estudiantes de EFL en el séptimo grado en una escuela en la provincia de Cotopaxi durante el período académico de octubre de 2024 a marzo de 2025. El estudio empleó un método descriptivo para obtener información completa sobre el progreso y las experiencias de los estudiantes. Se administró una prueba de diagnóstico y una prueba de progreso utilizando el Cambridge A1 Movers Listening Test para evaluar la competencia auditiva de 22 estudiantes antes y después de la intervención. Además, se realizó una encuesta para medir las percepciones de los estudiantes sobre el impacto de Duolingo en sus habilidades de escucha, motivación y experiencia de aprendizaje en general. La intervención consistió en 12 lecciones estructuradas que incorporaron Duolingo como una herramienta complementaria para la práctica de la comprensión auditiva, lo que permitió a los estudiantes participar en diversos ejercicios de comprensión auditiva, tareas interactivas y actividades gamificadas. Los resultados de la prueba de progreso demostraron una mejora significativa en la comprensión auditiva, y los estudiantes obtuvieron puntuaciones notablemente más altas que en la prueba de diagnóstico. Los resultados de la encuesta revelaron además que los elementos de gamificación de Duolingo, como las recompensas, el seguimiento del progreso y los ejercicios interactivos, mejoraron la participación y la motivación de los estudiantes. Sin embargo, algunos estudiantes encontraron dificultades con tareas de comprensión auditiva específicas, como distinguir palabras que suenan similares y comprender diálogos de ritmo rápido. El estudio concluyó que Duolingo es una herramienta útil para mejorar las habilidades de comprensión auditiva cuando se utiliza junto con la orientación del profesor y estrategias de aprendizaje adaptativo. Las investigaciones futuras deberían explorar modelos de aprendizaje personalizados, plataformas adaptativas impulsadas por IA y efectos de retención a largo plazo para optimizar aún más la enseñanza de idiomas basada en la tecnología.

Palabras clave: Adquisición de idiomas, Duolingo, Estudiantes de inglés como lengua extranjera, Gamificación, Habilidades de escucha.

INDEX

DECLARATION OF AUTHORSHIP	ii
ENDORSEMENT OF THE RESEARCH REPORT TUTOR.....	iii
ENDORSEMENT OF APPROVAL OF THE DEGREE.....	iv
DEDICATION.....	vi
ABSTRACT	vii
RESUMEN.....	ix
INDEX.....	xi
1. General Information.....	1
2. Problem Statement.....	2
2.1 Research Question	3
2.2 General Objective	3
2.3 Specific Objective.....	3
3. Activities and Task System about the Objectives Proposed	4
4. Justification.....	6
5. Scientific and Technical Foundation.....	7
5.1 Background.....	7
5.2 Theoretical Framework	10
6. Methodology.....	23
6.1 Research approach	23
6.2 Research design	24
6.3 Participants.....	25
6.4 Data collection.....	25

6.5. Data analysis.....	25
7. Analysis and Discussion of Results.....	27
7.1 Diagnostic test and Progressive test analysis and interpretation.....	27
7.2 Survey about Duolingo and listening skills	35
7.3 Discussion.....	41
7.4 Research Impacts (technical, social, environmental, educational, or economic).....	43
8. Conclusions and Recommendations.....	45
8.3 Conclusion	45
8.4 Recommendations	45
9. References	46
10. Appendices	52

1. General Information

Theme: Duolingo to develop listening skills in EFL young learners.

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Sponsoring Faculty: Extension Pujilí

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Macro Project of the Major: Academic discourse: A transdisciplinary study of education and linguistics in linguistic-communicative contexts for English language teaching.

Work Team: Tatiana Jazmín Guamán Yupangui

Knowledge Area: Education

University Research Line: Education, communication, and design for human and social development.

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2. Problem Statement

In Latin America, the challenge of developing listening skills in English as a foreign language (EFL) remains a major barrier to effective language acquisition. Despite the growing importance of English for global communication, education systems across the region often rely on outdated teaching methodologies that emphasize grammar and reading and neglect listening comprehension. According to the English Proficiency Index, Latin American countries, including Ecuador, consistently rank low in English proficiency, highlighting systemic weaknesses in language teaching (Banegas, 2022). Limited access to authentic listening materials, lack of technological integration, and insufficient teacher training further hamper students' ability to develop strong listening skills. Additionally, socioeconomic disparities prevent many students from accessing modern learning resources, such as language learning apps, online courses, or interactions with native speakers.

Furthermore, English as a foreign language learner must learn to listen and understand audio messages, but this skill is very difficult to master. The ability to understand speech forms the basis of good communication and helps students develop oral reading and writing skills, according to Gonulal (2020). Despite linguistic changes in education and global communication, Ecuador still experiences problems in teaching English well. The English Proficiency Index (2017) ranks Ecuador 13th out of 15 Latin American nations that show serious problems with language learning.

New technologies offer language learners mobile tools that help them learn better. The Duolingo learning tool proves to be effective in improving spoken language comprehension. According to Mohammed (2022), ninth-grade students showed better listening comprehension results with Duolingo thanks to its interactive and gamified features. Tuong et al. (2024) showed that Duolingo helped 11th-grade students learn better when they practiced listening comprehension in an immersive learning space. Successful outcomes of these tools face ongoing difficulties when adopted to serve individual students and fit curriculum requirements.

At the Lenin School in Latacunga, students struggle to improve their English listening skills because outdated learning materials and traditional teaching methods remain in place. Teachers need better exposure to effective strategies for teaching listening skills because their current approaches lead students to become demotivated and learn less (Ghonivita et al., 2021). Problems with access to modern technology make it difficult to use modern teaching tools like Duolingo.

This research is relevant because it examines whether Duolingo helps 7th-grade EFL students better understand spoken English. The research evaluates Duolingo's learning features to support the goal of helping Ecuadorian students increase their English proficiency. The research will help instructors who plan to use technology in their EFL classes and guide them in teaching practices that help students better understand English. Bouchrika et al. (2021), the research shows how Duolingo can be accessed by students of all grade levels, while also helping students learn to listen better.

2.1 Research Question

1. How does Duolingo enhance listening comprehension skills among EFL learners?
2. What is the student's opinion about the contribution of the Duolingo app to the development of listening skills in EFL learners?

2.2 General Objective

To analyze the usefulness of Duolingo in learning listening skills in young 7th-grade EFL students from the Lenin School in the province of Cotopaxi in the academic period October 2024-March 2025.

2.3 Specific Objective

1. To identify the theoretical literature about the Duolingo app on developing listening skills.
2. To describe the role of Duolingo in enhancing listening comprehension skills.
3. To determine the students' opinions about the contribution of the Duolingo app in developing listening skills.

3. Activities and Task System about the Objectives Proposed

Table 1.

Activities and Task

Specific objective	Activities	Verification Means
To identify the theoretical literature about the Duolingo app on developing listening skills.	<ul style="list-style-type: none"> -Find previous and relevant studies, and use academic databases like Google Scholar, ERIC, JSTOR, and ResearchGate. -Analyze previous studies, purpose, methods, and findings of the studies the investigator finds. -Outline topic and subtopics: The researcher created an outline that divides the project into manageable sections. -Search for supplementary resources such as case studies, reports, and reviews on Duolingo’s impact on language learning. - Develop the theoretical framework by incorporating key language acquisition Theories 	<ul style="list-style-type: none"> -Theoretical framework -References

To describe the role of Duolingo in enhancing listening comprehension skills.

Select participants who are representative of the study's target group. For the current project, select young EFL learners.

-The data collection instrument.

- Diagnostic test, lesson plans and progress test

-Select an appropriate method for gathering data and instruments: Choose the descriptive method that aligns with the research objectives.

-Create the instrument: Choose the instruments like the pre and post-test based on the Cambridge university listening test.

- Apply the instrument: Administer the listening test to participants before they begin using Duolingo and after they have completed a set amount of practice.

- Process the information: Once data is collected, analyze the results systematically. Compare the pre-and post-test scores to assess improvements in listening skills.

<p>To determine the students' opinions about the contribution of the Duolingo app in developing listening skills.</p>	<ul style="list-style-type: none"> -Sampling and Participant Selection. - Data Collection Plan. -Define objectives for the survey and write Likert scale questions based on the research topic. -Data Analysis. -Identify the conclusion and recommendation of the research. 	<ul style="list-style-type: none"> -Methodology. -Instruments, survey -Conclusions and recommendations.
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4. Justification

The research aims to solve the problem of teaching EFL listening comprehension to young learners in Ecuador. Listening comprehension is an indispensable skill in language education because it helps students learn to speak, read, and write better (Gonulal, 2020). Education First (2017) shows that Ecuador has a poor performance in English in Latin America, for this reason, it is necessary to adopt meaningful teaching methods. Students at Lenin School struggle because they have few opportunities to use modern learning materials or teaching methods for their listening practice. This study examines whether Duolingo's interactive language app is an effective and affordable way to teach students better listening skills.

The relevance of this study is to explore the integration of technology in EFL teaching because current teaching methods need to be updated to meet current educational needs. This study examines how Duolingo helps people learn languages so that we can better understand how the game's features teach us to understand what we hear. This research provides essential teaching tips on combining technology with learning in the EFL classroom. This research supports Ecuador's EFL requirements that promote creative and student-oriented learning methods to help students achieve the language levels of the Common European Framework of Reference (Ministerio de educación, 2015).

The beneficiaries of this research are the seventh-grade students and other students at Lenin First School. Students at Lenin First School will learn better because Duolingo's personalized game system helps students practice listening skills. Teachers find this tool easy to use to assist them in their instruction while also addressing individual student needs. Educational authorities throughout Ecuador should examine these results to help them decide how best to incorporate Duolingo into national classes to boost language learning efficiency.

The study is feasible because there are resources available, including the global accessibility of the free Duolingo app, in addition to the cooperation of teachers and students at Lenin First School. The study uses recognized instruments, including the A1 Movers Listening Test to measure how students understand spoken English both at the beginning of the study and after completing the training. Thanks to the researchers' resources, such as access and academic support, along with the Technical University of Cotopaxi and the available resources, the study can be carried out effectively.

The results of this study can help language learners learn better through games and provide useful improvements in listening skills for EFL learners with limited resources available.

5. Scientific and Technical Foundation

5.1 Background

Some previous international research contributes to this research study. For example, Monje (2022), researched a study entitled “M-Learning (Duolingo app) and the listening skills” The purpose was to explain the importance of Duolingo in the improvement of listening skills in students of the ninth year at Educational Unit “Las Americas”. This thesis used a pre-experimental design and quantitative research method that involved a group of 28 students. Furthermore, the data was collected through a pretest and post-test. These tools were standardized tests A1 Movers (YLE) from Cambridge English to evaluate students' listening levels before and after the treatment. The results obtained were analyzed using SPSS, and the findings showed that Duolingo can improve students'

listening skills and make the teaching-learning process easier and more enjoyable for them.

Santana (2023) carried out research entitled "Influence of the use of Duolingo in the development of listening skills in English in 9th-grade students of Colegio Laureano Gómez in Aguachica". This research aimed to evaluate the impact of the Duolingo application on the development of listening comprehension in English. The participants were 11th-grade students from the Laureano Gómez Castro school in Aguachica, who used Duolingo to practice and improve their listening comprehension. The qualitative methodology focused on understanding the students' experiences and perceptions and analyzing their listening skills before and after the intervention through standardized tests. The results of the tests applied to the students' evidenced failures in their listening skills. To correct this situation, a class proposal was implemented using Duolingo. At the end of this proposal, the tests were applied again, showing an improvement in the students.

Rojas et al (2022) with the research entitled "The use of Duolingo for learning English as a Foreign Language". The purpose of the study was to examine the efficacy of Duolingo as an EFL learning tool and the advantages of using it to teach EFL, particularly about the development of communicative competencies mentioned in the CEFR. For this study, 332 Colombian high school students from four different schools in the city of Duitama and the Department of Boyacá were selected. This research followed the guidelines of descriptive quantitative methodology. The main results of the study showed that the impact of technological tools today is evident, this has led the current research to consider that ICTs are very effective resources in training processes. Most of the schools in the municipality of Duitama have improved after using Duolingo for the English language learning process. The comparison made between the control and experimental groups revealed that the latter presented a higher academic performance than the former group.

Irwir et al (2023) conducted research entitled "Review of Duolingo Application in Learning English". The purpose was to review the extent of the studies that have been carried out related to the Duolingo application in learning English. The study employed a descriptive quantitative research method with a content analysis approach. The data was

obtained from the Google Scholar database in the form of journal articles about the Duolingo application in learning English which were published during the 2018-2022 period. The findings showed that teachers and students considered the use of Duolingo media to be effective in learning English because it increased students' willingness to do homework through Duolingo media and language skills in learning English. Students are excited and interested in doing homework with the Duolingo app.

Ambarwati et al (2022) carried out a study entitled “The Effectiveness of Duolingo in Learning English”. The main objective was to know all the benefits in the use of Duolingo as an academic tool in EFL classes. The study employed a qualitative approach. Principal results show that Duolingo is a great gateway to those who are completely new to English. Duolingo gave the user the very basic of English that students can build of it. Students who are unfamiliar with English can take advantage of Duolingo to get familiar with English. Users can use it to widen their vocabulary and learn basic grammar.

Maldini and Islamiati (2018) conducted research entitled “Teaching listening using Duolingo application”. The main objective was to reveal whether using an application called Duolingo in English learning significantly improves students' listening skills. The research employed pre-experimental design and quantitative research methods. This study involves 799 consisting of 24 classes in SMKN 2 Karawang and the author takes only one class of 36 students in X- Tata Boga 3 Class. This study found that the test of normality consists of the data of the pretest is (0.076) and the data of the posttest (0.200) in 33 samples. In addition, the value of Sig. (2-tailed) 0.000 because of the value of the Sig value. (2-tailed) < 0.005 It can be concluded that using Duolingo Applications can improve students' listening skills and be able to make the teaching list to motivate students to learn English.

Also, Arumsari and Octaviani (2022) directed research entitled “Duolingo Mobile Application for English Listening Skill Improvement of Vocational School Students”. The main objective was to find out the progress of ninth-grade students' English listening skills in SMK Analis Kesehatan Nasional Surakarta using Duolingo and students' perceptions toward the mobile application. The investigation used quantitative research with a pre-

experimental design to analyze the data. Meanwhile, its data collection used pre-test, post-test, and close-end questionnaires. The findings show that scores of students' pre-test and post-test show significant improvement in students' English listening skills with 73.25 of the average students' pre-test scores, 83.3 of the average students' post-test scores, and 90% of students' positive perception of the usage of Duolingo mobile application in English language learning.

In conclusion, this project stands out from previous studies by pointing to Duolingo as a tool to improve young EFL learners' listening ability, with an emphasis on listening skills in contrast to speaking- or grammar-oriented apps. Although many previous projects investigate the general efficiency of language learning apps, the current study focuses solely on the effects of listening practice on Duolingo on the specific educational challenge of young EFL learners. The significance of this work revolves around the potential it has to offer important findings on how technology can facilitate the development of listening, which is one of the fundamental elements of languages and therefore of communication. Therefore, this study is expected to advance knowledge in the field of how resource-poor education can benefit from the use of tools such as Duolingo about their influence on listening comprehension.

5.2 Theoretical Framework

5.2.1 Listening skills

Listening is a cognitive process that goes beyond the simple perception of sounds. It involves a series of interrelated mental processes that allow the listener to decode, interpret and understand the meaning of the spoken message in English. This skill is fundamental to effective communication in any context, whether academic, professional or social, and is considered one of the four essential language skills, along with speaking, reading and writing (Gonulal, 2020).

The process of listening in English begins with the auditory perception of speech sounds, that are then processed by the brain to identify phonemes, syllables and words. However, listening does not stop there. The listener must use his or her knowledge of English

vocabulary, grammar and pronunciation to understand the meaning of words and sentences. In addition, he or she must interpret the tone, intonation and rhythm of speech to infer the speaker's intent and the context of the communication (Thuy, 2021).

Listening in English is not a passive process. The listener must be constantly attentive and focused to be able to follow the thread of the speech, identify main ideas and relevant details, and make inferences about implicit information. In addition, the listener must be able to adapt to different speaking styles, accents, and dialects, and use comprehension strategies to overcome difficulties that may arise during listening (Wagner, 2021). Developing English listening skills is a gradual process that requires constant practice and exposure to a variety of listening materials. Some effective strategies for improving English listening include active listening, practicing extensive and intensive listening, using transcripts and subtitles, participating in English conversations, and using technology tools such as Duolingo. Also, as the information mentioned, listening is a useful skill to develop the English language, it is indispensable to enhance listening skills.

5.2.1.1 Listening in the English language

Listening is a fundamental skill for effective communication in English. It is not simply hearing sounds, but understanding the meaning of words, phrases, and sentences in different contexts. This skill involves the ability to identify sounds, recognize words, understand grammar and vocabulary, interpret the speaker's tone and intent, and respond appropriately (Afriyuninda et al., 2021). According to Wagner (2021), listening is essential to learning English for several reasons:

- **Basis for language acquisition:** Listening comprehension is the first language skill we naturally develop when learning our native language. By listening to others speak, we acquire vocabulary, grammar, and pronunciation intuitively. This same principle applies to learning a second language such as English.
- **Effective communication:** Listening is essential for participating in conversations, understanding instructions, following presentations, watching

movies and series in English, and enjoying music in English. Without good listening comprehension, communication becomes difficult and frustrating.

- **Developing other language skills:** Listening is closely related to other language skills such as speaking, reading, and writing. By improving our listening comprehension, we also improve our ability to speak fluently, read with comprehension and write accurately.

Several strategies can help EFL learners improve their listening comprehension in English. According to Rayhona and Burayma (2021):

- **Active listening:** Paying attention to the content of the message, identifying main ideas and relevant details, and making inferences about meaning. It is not only about listening; but also, about paying attention to the content of the message, and identifying the main ideas, relevant details, and keywords. Taking notes, asking questions, and summarizing what you hear are useful techniques for practicing active listening.
- **Extensive listening:** Listen to a variety of English materials, such as podcasts, songs, movies, and series, to become familiar with different accents, speech rhythms, and registers of the language. Exposure to a wide variety of listening materials in English, such as podcasts, songs, movies, series, and lectures, helps you become familiar with different accents, speech rhythms, and registers of the language. Extensive listening also increases vocabulary and overall language comprehension.
- **Intensive listening:** Listening to an audio clip several times, paying attention to specific details such as pronunciation, vocabulary, and grammar. This strategy involves listening to a specific audio excerpt several times and paying attention to details such as pronunciation, vocabulary, and grammar. Transcripts and dictionaries can be used to aid comprehension and analyze the speech in depth.
- **Using transcripts:** Reading an audio transcript while listening can help students identify words and phrases they did not understand.

- **Conversation participation:** Participating in conversations in English, either with native speakers or with other EFL learners, is an excellent way to practice listening comprehension in a real context.
- **Repetition and shadowing:** Repeating phrases and sentences after listening to them helps improve pronunciation and intonation. Shadowing, consisting of repeating the speaker's speech almost at the same time, is an advanced technique that helps develop fluency and accuracy.
- **Use of visual aids:** Pictures, videos, and captions can be useful tools to support listening comprehension, especially for beginning learners. These visual aids provide context and facilitate the association between sound and meaning.
- **Participation in conversations:** Oral interaction in English is fundamental to developing listening skills in real contexts. Participating in conversations with native speakers or other EFL learners allows you to practice listening comprehension in authentic situations and receive feedback on your performance (Goodwin & Naismith, 2023).
- **Use of online applications and platforms:** Tools such as Duolingo, Babbel, and Memrise offer interactive and personalized exercises to practice listening in English in a fun and effective way. These platforms also provide immediate feedback and allow students to track their progress.

5.2.1.2 Listening for Kids

Listening is a fundamental skill in children's language acquisition and cognitive development.

According to (Brown, 2007). First listening refers to the process where children are exposed to language input in meaningful contexts before they engage in speaking or other productive language skills. This principle is supported by Krashen's Input Hypothesis (1982), which posits that comprehensible input is essential for language acquisition.

5.2.1.3 Theories Supporting First Listening

Krashen's Input Hypothesis

Krashen (1982) argues that learners acquire new language best when they receive input slightly above their current proficiency level ($i+1$). This theory is fundamental to first listening, as children must be exposed to language naturally and engagingly to facilitate comprehension and acquisition.

Vygotsky's Sociocultural Theory

Vygotsky (1978) emphasizes the role of social interaction in learning. For children, listening activities, such as storytelling and interactive dialogues, promote cognitive development and language acquisition within their Zone of Proximal Development (ZPD).

Phonological Awareness Theory

According to Anthony & Francis (2005), phonological awareness—an understanding of the sound structure of language is developed through listening. Early exposure to spoken words, rhymes, and songs enhances children's ability to recognize and reproduce linguistic patterns.

Applications in Early Learning

First listening strategies in classrooms include:

- Storytelling and Read-Aloud Sessions: Children develop listening comprehension skills through engaging narratives (Mol et al., 2009).
- Songs and Rhymes: Music-based learning aids phonological development (Gordon et al., 2015).
- Interactive Audio Activities: Tools such as audiobooks and podcasts provide exposure to rich linguistic input (Rog & Burton, 2010).

Several types of listening support the acquisition of the English language through listening skills.

5.2.1.4 Types of Listening

Listening in English is not a monolithic skill, but is composed of several types, each with its own objectives, strategies, and challenges. Understanding these different types of listening is essential to developing a complete and effective listening proficiency in English.

- **Intensive Listening:** This type of listening focuses on the detailed understanding of a specific piece of audio, such as a short conversation, an interview or a presentation. The objective is to understand the exact meaning of words, grammar and pronunciation, as well as to identify the main ideas and relevant details. Intensive listening requires concentrated attention and may involve the use of transcripts and dictionaries to aid comprehension (De Wilde et al., 2020).
- **Extensive Listening:** Unlike intensive listening, extensive listening focuses on the overall comprehension of a longer speech, such as a lecture, a podcast, or a movie. The goal is not to understand every detail, but to grasp the overall meaning of the message and the main ideas. Extensive listening helps improve fluency and overall understanding of the language and can be more relaxed and enjoyable than intensive listening (Zhang et al., 2020).
- **Selective Listening:** This type of listening involves listening to a speech for specific information, such as dates, names, places, or instructions. The goal is to identify and extract relevant information, ignoring irrelevant details. Selective listening is useful in everyday situations, such as listening to the news or following instructions in a manual (Parks & Bennett, 2024).
- **Inferential Listening:** Inferential listening goes beyond literal comprehension of the message and requires the listener to make inferences and deductions based on context, the speaker's tone of voice, and nonverbal cues. The goal is to understand the implied meaning of the message, the speaker's intent, and the emotions conveyed.
- **Critical Listening:** This type of listening involves evaluating the information heard critically, questioning the validity of arguments, identifying the speaker's

biases, and distinguishing between fact and opinion. Critical listening is essential for making informed decisions and participating in constructive discussions (Gonulal, 2020).

- **Appreciative Listening:** Appreciative listening focuses on enjoying the listening experience, whether listening to music, poetry, or a story. The goal is to appreciate the beauty of the language, the creativity of the speaker, and the emotions conveyed by the message (Wagner, 2021).
- **Interactive Listening:** This type of listening occurs in two-way communication situations, such as conversations, interviews, and debates. The listener must not only understand the speaker's message but also respond appropriately, ask questions, clarify doubts, and maintain the flow of the conversation (Xu et al., 2020).
- **Real-time Listening:** This type of listening occurs in situations where the listener must process and respond to auditory information immediately, such as in a telephone conversation or a videoconference. Real-time listening requires rapid comprehension and processing of information, as well as the ability to formulate coherent and relevant responses in the moment (Elaish et al., 2019).

Understanding and practicing these different types of listening comprehension is essential to developing a full listening proficiency in English. By mastering each type of listening comprehension, EFL learners will be better prepared to deal with a variety of communicative situations and achieve their language learning goals. In addition, acquiring this listening skill requires a process.

5.2.1.5 Listening process

The listening process in English is a complex web of interconnected stages involving the perception, decoding, comprehension, and interpretation of spoken language (Jun & Shen, 2023). This process is neither linear nor passive but requires the active participation of the listener in each of its phases. According to Shariyevna and Atxamovna (2020), the following is a detailed analysis of the different stages of the listening process in English:

- **Auditory Perception:** The first stage of the listening process is the perception of

speech sounds in English. Ear picks up the sound waves and transmits them to the brain, where they are processed and analyzed. At this stage, the listener must be able to analyze the different sounds of English, such as phonemes, syllables, and words, and recognize the intonation patterns and rhythm of speech.

- **Phonological Decoding:** Once the sounds have been perceived, the brain begins to decode them, that is, to identify the individual phonemes and combine them to form words. This process requires prior knowledge of the phonological system of English, i.e., the sounds and the rules of sound blending that characterize the language.
- **Word Recognition and Lexicon Access:** At this stage, the listener uses his or her knowledge of English vocabulary to recognize the words he or she has decoded. Lexicon access involves the activation of mental representations of words and their meanings, allowing the listener to understand the individual meaning of each word in the discourse.
- **Syntactic Analysis:** Once the words have been recognized, the listener must analyze the grammatical structure of the sentences to understand how the words relate to each other and what the overall meaning of the sentence is. The syntactic analysis involves identifying the different constituents of the sentence, such as the subject, verb, and complements, and understanding the grammatical relationships between them.
- **Semantic Integration and Meaning Construction:** In this stage, the listener integrates lexical and syntactic information to construct the overall meaning of the message. This involves combining the meaning of individual words with contextual information and prior knowledge of the world to interpret the message in a coherent and meaningful way.
- **Pragmatic Interpretation:** The listening process is not limited to literal understanding of the message, but also involves pragmatic interpretation, i.e., understanding the speaker's intent and the communicative context. This involves inferring implicit information, recognizing the speaker's tone and attitude, and

understanding the social and cultural conventions that may influence the meaning of the message.

- **Response and Feedback:** The last stage of the listening process consists of the listener's response to the message. This response may be verbal or nonverbal and may include questions, comments, actions, or simply a sign of understanding. The speaker's feedback on the listener's response is important to verify understanding and clarify any misunderstandings.

5.2.2 Technology

Technology, in its constant evolution, has permeated all areas of human life, including education. Its influence has extended to the way to teach, learn, and access knowledge, radically transforming the educational landscape. In this context, technology has become a tool for innovation and the improvement of teaching-learning processes, offering new resources, and approaches that enhance the development of skills and competencies in students (De Wilde et al., 2020).

Technology has democratized access to education, allowing people of all ages and socio-economic backgrounds to have the opportunity to learn and develop a new language. Online platforms, massive open online courses (MOOCs), and mobile apps have removed geographical and time barriers, giving students the flexibility to learn at their own pace, anytime and anywhere (Gonulal, 2020). In addition, technology has enriched the learning environment by providing a wide range of multimedia resources, interactive tools, and simulations that make learning more attractive, dynamic, and effective. Students can access up-to-date information, interact with experts from around the world, collaborate with peers on online projects, and receive personalized feedback on their performance (Niah, 2019).

Technology has also transformed the role of the teacher, making them a facilitator and guide of learning rather than a mere transmitter of information. Teachers can use technology to customize teaching, tailor content to students' individual needs, create more interactive and collaborative learning experiences, and evaluate students' progress more effectively (Shortt et al., 2023). Despite its multiple benefits, technology in education also poses major challenges. One of the main challenges is the digital divide, referring to inequalities in access to and use of technology between different socio-economic groups and geographical regions. It is essential to ensure that all students have equal access to the technological tools necessary for their learning (Rintaningrum, 2023).

Another challenge is the need to train teachers in the effective use of technology in the classroom. Many teachers do not feel prepared to integrate technology into their teaching practice, limiting the impact of these tools on student learning. Moreover, it is important to keep in mind that technology is not the only solution to all educational problems. Technology can be a powerful tool, but its effectiveness depends on how it is used. It is essential to design and implement pedagogical strategies that maximize the potential of technology and adapt to the needs and characteristics of students (Ihtiyaryer, 2023).

5.2.2.1 Technology in Learning the English Language

Technology, in its various manifestations, has opened a range of possibilities to enrich and energize the process of learning English as a foreign language (EFL), offering tools and resources that were previously unimaginable (Xu et al., 2020). Technology has transcended its role as a support tool to become an integral component of modern pedagogy. Its ability to facilitate access to information, interaction, collaboration, and personalized learning has transformed classroom dynamics and empowered students as active agents in their educational process. In the realm of language learning, technology has proven to be especially valuable, allowing students to immerse themselves in authentic communication environments, practice language skills interactively, and receive immediate feedback on their performance (Elaiash et al., 2019).

The use of technology in language learning is supported by various theoretical approaches that guide its implementation and evaluate its effectiveness. One of the most relevant approaches is connectivism, emphasizing the importance of connections and networks in the learning process. In the context of language learning, connectivism promotes the use of technological tools that allow learners to connect with other learners, share resources, and collaborate on joint projects. Another important theoretical approach is social constructivism, which empathizes with the importance of social interaction and the joint construction of knowledge. Technology, in this sense, can facilitate the creation of online learning communities, where students can interact with peers and teachers, share experiences, and build knowledge collaboratively (Kearney et al., 2020).

In the area of listening comprehension, technological tools such as podcasts, videos, and mobile apps offer students the opportunity to listen to the English language in different contexts and accents, allowing them to improve their ability to understand authentic speech. In the area of oral expression, technological tools such as videoconferencing, voice chats, and voice recordings allow students to practice their pronunciation, fluency, and intonation, and receive feedback from teachers and peers (Rintaningrum, 2023). In the reading area, technological tools such as e-books, online articles, and reading apps offer students access to a wide variety of English texts, allowing them to improve their vocabulary, reading comprehension, and reading speed. In the area of writing, technological tools such as word processors, grammar checkers, and collaborative writing platforms allow students to improve their grammar, spelling, and style, and receive feedback from teachers and peers (De Wilde et al., 2020). On the other hand, in the area of listening comprehension, different tools can help develop this skill, and one of them can be Duolingo, which has a wide variety of audio activities that can help develop this skill.

5.2.2.2 Duolingo app

Duolingo, founded in 2011 by Luis von Ahn and Severin Hacker, has emerged as one of the most popular and disruptive language learning platforms worldwide. With over 500 million registered users and a wide range of languages available, Duolingo has

democratized access to language learning, offering a free and accessible alternative to traditional teaching methods. Its innovative approach, based on gamification, personalization, and adaptive learning, has revolutionized the way people learn languages, making it more fun, engaging, and effective (Shortt et al., 2023).

Duolingo is distinguished by its intuitive and user-friendly interface, making it easy to navigate and use the platform. Users can choose from a wide variety of languages, from the most popular ones such as English, Spanish, French, and German, to fewer common languages such as Esperanto, Navajo, and Klingon. Each language course is divided into thematic units (Loewen et al., 2019). Duolingo lessons combine different types of exercises, such as translation, speech recognition, matching, and sentence completion. These exercises are designed to develop the four main language skills: listening, speaking, reading, and writing. In addition, Duolingo uses gamification to motivate users by awarding points, rewards, and levels as they progress through the course.

Gamification is one of the fundamental pillars of Duolingo. The platform uses game elements, such as points, rewards, levels, and challenges, to motivate users and make learning more fun and engaging. Gamification also encourages regular practice and positive reinforcement to contribute to more effective learning. Duolingo uses different game mechanics to keep users engaged. For example, users can compete with friends and other users on leaderboards, unlock achievements, and earn virtual rewards. In addition, the platform uses a "streak" system that incentivizes users to practice daily, contributing to the formation of consistent study habits (Li et al., 2022).

Duolingo for Kids

Duolingo is an application that adapts to the age of each person such as children

Duolingo for Kids applies gamification principles to facilitate language learning. Deterding et al. (2011) define gamification as "the use of game design elements in non-game contexts to enhance user engagement" (p. 14). This is evident in Duolingo's interactive exercises, reward systems, and adaptive learning paths, which make learning engaging for children.

Deci and Ryan (1985) in their Self-Determination Theory (SDT) highlight the importance of intrinsic motivation in learning. They state that "when children feel autonomy, competence, and relatedness, they are more likely to engage in learning tasks" (p. 23). Duolingo for Kids leverages these principles by offering self-paced lessons, personalized feedback, and interactive challenges to sustain motivation.

Effectiveness of Digital Learning Platforms for Children

Mayer (2009) in his Multimedia Learning Theory posits that children learn best when verbal and visual inputs are combined. Duolingo incorporates images, sounds, and interactive exercises to reinforce auditory and written language learning.

According to Clark and Mayer (2016), e-learning design should support active cognitive processing. Duolingo for Kids applies spaced repetition and adaptive learning, ensuring that vocabulary and grammar are reinforced systematically to enhance retention.

5.2.2.3 Duolingo as a learning resource

As said by Kessier et al. (2023), Duolingo has had a significant impact on language learning globally. This has allowed millions of people around the world to have the opportunity to learn a new language, regardless of their geographic location or socioeconomic status. Duolingo has also changed the way people perceive language learning. Thanks to its playful and gamified approach, the platform has made learning

more fun and engaging, which has contributed to increased learner motivation and engagement.

Duolingo has found a prominent place in the educational field, being used by students of all ages and levels of knowledge. Its intuitive and user-friendly interface, together with its playful and gamified approach, makes it an attractive and motivating tool for students. The platform offers a wide variety of languages, allowing learners to choose the one that best suits their interests and needs. In addition, Duolingo is easily integrated into the school curriculum, complementing traditional teaching and offering students a fun and practical way to reinforce their knowledge (Li et al., 2022).

In addition, Duolingo encourages autonomy and self-learning, as learners can use the platform independently and make decisions about their learning process. The platform also provides immediate feedback, allowing learners to identify and correct errors in a timely manner. Finally, Duolingo promotes social interaction and collaboration through its online community, where learners can share experiences, resolve doubts and support each other on their path to language proficiency (Kessler, 2023).

5.2.2.4 Developing listening skills with Duolingo

Listening skills are fundamental to effective communication in any language. Traditionally, developing this skill has been a challenge for English as a foreign language (EFL) student, as it often relies on unappealing and repetitive methods. However, Duolingo, with its innovative and gamified approach, has become a promising tool for improving the development of EFL listening skills (Li et al., 2022). Duolingo offers a wide range of exercises and activities specifically designed to improve listening comprehension. These exercises include:

- **Word and phrase recognition:** Students hear words or phrases and must select the corresponding picture or write the word they heard.
- **Conversation comprehension:** Students listen to short conversations and answer questions about the content.

- **Dictation:** Students listen to sentences and must write them correctly.
- **Stories:** Students listen to short stories and answer comprehension questions (Goodwin et al., 2023).

These exercises are designed to develop different aspects of listening comprehension, such as auditory discrimination, identification of keywords, understanding of general meaning, and the ability to infer information. Duolingo implements a set of pedagogical and technological strategies to optimize the development of listening comprehension skills in its users (Niah, 2019). These strategies are based on proven learning principles and take advantage of the platform's interactive capabilities.

- **Variety of auditory stimuli:** Duolingo presents a wide range of auditory stimuli, including voices of different genres, ages, and accents, as well as recordings in a variety of contexts and communicative situations. This diversity allows learners to become familiar with the richness and variability of spoken language, preparing them to understand English in the real world.
- **Adaptive learning:** Duolingo uses adaptive learning algorithms to adjust the difficulty of the listening exercises based on each student's performance. If a student can't develop one type of exercise, the platform will present similar but simpler exercises, while if they demonstrate good mastery, they will be offered more challenging exercises. This personalized approach ensures that each student receives the right level of challenge for their progress.
- **Spaced repetition:** The platform implements the spaced repetition technique. This strategy takes advantage of the principle that information is best remembered when reviewed periodically, helping students to consolidate their listening comprehension over the long term.
- **Immediate and corrective feedback:** Duolingo provides immediate and specific feedback after each listening exercise. If the student answers incorrectly, the platform shows them the correct answer and explains why their answer was incorrect. This corrective feedback helps students identify their mistakes and learn

from them, improving their listening comprehension as they progress through the course.

- **Gamification and motivation:** Duolingo use gamification elements, such as points, rewards, and levels, to keep learners motivated and engaged in learning. The ability to compete with friends, earn achievements, and unlock new content encourages regular practice and continuous effort.
- **Skills integration:** Duolingo is not limited to isolated listening exercises, but integrates listening comprehension with other language skills, such as reading and writing. For example, some exercises require students to listen to a sentence and then write it correctly, or to read a text and then answer listening comprehension questions on the same topic. This integration of skills promotes more holistic and contextualized learning.
- **Contextualized learning:** Duolingo presents listening content in contexts that are meaningful and relevant to learners. For example, lessons may include dialogues about everyday situations, telephone conversations, job interviews or news. This contextualized approach helps students understand the meaning of language in real-life situations, improving their ability to apply their listening skills in everyday life.
- **Use of visual cues:** Duolingo uses visual cues, such as images and animations, to support students' listening comprehension. These visual cues can help learners associate words and phrases with their meanings, facilitating comprehension of the auditory content (Pureanto et al., 2022).

6. Methodology

6.1 Research approach

This study adopted a mixed method because it has a quantitative and qualitative methodology. It is quantitative research because it uses a diagnostic test, a progress test, and an opinion survey to allow the researcher to encourage the study population to reveal more relevant data about the topic of study and to measure the participants' listening skills

(Monje, 2022). Also, the quantitative method quantifies and analyzes facts regarding interaction, correlation, characteristics, and tendencies (Creswell, 2012). Moreover, it is a qualitative research method using action research to gather qualitative information. It is a process of gathering and interpreting qualitative data in the form of text or multimedia data (Creswell, 2012). Also, it is a quasi-experimental method that is a research design used to evaluate the effect of an intervention or treatment when random assignment of participants is not possible. Unlike true experimental research, which randomly assigns subjects to control and experimental groups, quasi-experimental studies work with pre-existing groups, making them more practical for real-world settings such as classrooms, workplaces, or communities (Madadizadeh, 2022).

6.2 Research design

The research is descriptive because it analyzes the improvement of the Duolingo app in listening skills. This research aims to accurately and systematically describe a population, circumstances, or phenomena. It can look at one or more variables using a variety of research techniques. In contrast to experimental research, the researcher just observes and measures the variables without controlling or modifying any of them. (Siedlecki, 2020). Therefore, this study adopted non-experimental research that observes events as they occur naturally, and no external variables are introduced. It is a study design in which the variables are not regularly modified, and the environment is not controlled. It does not have a control group or an experimental group. There are several types of non-experimental research, such as descriptive or correlational research (Radhakrishnan, 2023). In addition, this study uses classroom intervention research because it is a type of educational study that examines the effects of specific teaching strategies, tools, or programs implemented in a real-world classroom setting. The goal is to evaluate how an intervention, such as a new teaching method, technology, or curriculum change, affects student learning, engagement, or behavior (Beaudrie, 2021).

Furthermore, the researcher received official permission from the school principal and all the school's English teachers to investigate the effects of Duolingo on the development of seventh-grade students' listening skills. The school's management team approved the

research plan after the researcher presented all the details about the objectives, methodology, and advantages, and for this reason, the school's teachers showed their support for the research.

6.3 Participants

Twenty-two students from a school in the province of Cotopaxi participated in this study. Ten students were female and twelve were male. The age range of the participants was between 10 and 12 years old. Regarding the selection criteria for the participants, seventh graders were chosen because the content is focused on that level, and it is an accessible group. The participants had no prior knowledge of the Duolingo application or experience in using it to develop listening skills. The participants were selected using the convenience sampling criterion because they had easy access to participate in the research. According to Emerson (2021), convenience sampling is a non-probabilistic sampling method where units are selected for inclusion in the sample because they are the most easily accessible for the researcher.

6.4 Data collection

The study applied diagnostic tests and progress testing techniques to collect the data, which were validated by Cambridge University and the A1 Movers Listening test provides a test that measures children's listening ability and comprehension of simple English (see Appendix I). The test consists of about 10 items from different categories of questions. For the first 5 items the students must complete the statements according to what they hear in the audio and the last 5 items are multiple-choice, the answer the students choose according to the audio. The student listens to a short audio based on familiar topics such as family, friends, and school to demonstrate their understanding of spoken English in real-life situations.

Furthermore, in this study, there are three phases. In the first phase, a diagnostic test based on the A1 Movers Listening test was conducted (see Appendix I). In the second phase, the Duolingo app was used to develop listening skills in seventh-grade students. The researcher made twelve 40-minute lesson plans, which were divided into 3 classes per week (see Appendices VI). These classes included audio exercises from the Duolingo application.

Finally, the last phase was applied where a progressive test was used to verify the validity of the study (see Appendices II). The diagnostic test, progressive test, and opinion survey were categorized by motivation and exercise categories.

In addition, an opinion survey was conducted with seventh-grade students from the school in the city of Latacunga to find out their opinions on the impact of Duolingo on the development of listening skills (see Appendices III). This survey used multiple choice questions based on a Likert scale, which were answered with Strongly Disagree, Disagree, Neutral, Agree, and Strongly Agree.

The researcher informed the authorities of the Lenin School with the informed consent of the students who were part of the research population. The researcher informed the authorities about the benefits of participating in the study.

6.5. Data analysis

The results of the diagnostic test, progress test, and opinion survey of quantitative data were analyzed using a parametric statistical test to compare the performance of both groups and establish the difference in listening comprehension levels after the intervention of the Duolingo application. Because of this, the Statistical Package for Social Sciences (SPSS) was used to descriptively analyze the accumulated questionnaires. This allowed us to explain the overall performance shown by the students in the listening comprehension test, as well as to differentiate the performance that was performed at the beginning and the end of each of the groups. The analysis of these variables defined if there was a variation in the experience in the listening skills of the students when the Duolingo application intervened in the study.

7. Analysis and Discussion of Results

RESEARCH QUESTION 1: How does Duolingo enhance listening comprehension skills among EFL learners?

7.1 Diagnostic Test, analysis and interpretation

7.2 Table 1.

Diagnostic Results and Progressive test

Student	Total Points (Diagnostic- Test)	Student	Total Points (Progressive- Test)	Improvement
1	3	1	10	7
2	6	2	9	3
3	6	3	9	3
4	6	4	9	3
5	3	5	8	5
6	3	6	9	6
7	3	7	10	7
8	7	8	10	3
9	8	9	8	0
10	7	10	10	3
11	7	11	10	3
12	4	12	10	6
13	4	13	9	5
14	4	14	8	4
15	4	15	8	4
16	1	16	9	8
17	1	17	8	8
18	2	18	9	7
19	5	19	9	4
20	6	20	9	3

21	5	21	9	4
22	3	22	9	6

Source: Scores were obtained from seventh-level students at Lenin School (2024)

Analysis

Students showed improved listening skills through Duolingo as their secondary learning source according to the test results from the diagnostic and progressive test stages. The first diagnostic test demonstrated different levels of listening skills among students, as many participants scored lower than expected competencies would indicate. Students showed substantial progress in their listening skills after the intervention period, resulting in many students earning significant grade increases. Students achieved the greatest improvement by eight points, while others earned three points according to the assessment results. Just one student maintained his original performance level. Although Duolingo demonstrates strong effectiveness in improving listening skills, students' involvement along with external factors impacts the overall results.

Interpretation

The findings on Duolingo's positive effects are in line with academic research in the field. The research showed that EFL classrooms can benefit from mobile learning apps like Duolingo, which improve students' listening comprehension. Duolingo's gamified features led to increased student engagement and greater retention of listening skills. The research data shows that the majority of students demonstrated consistent improvement, proving that interactive learning systems help students learn better than traditional approaches.

Discussion

Duolingo demonstrates its motivational strengths through one of the main findings of this research project. Students' learning experiences are enhanced when they use platforms that provide quick feedback and rewards while also providing interactive learning activities, according to Goodwin and Naismith (2023). Student performance demonstrated six-point improvements after sustained engagement in gamified listening skills, evidencing the improvement of their listening comprehension. Through its adaptive learning mechanism, Duolingo allowed students to dynamically interact with listening content, which accentuated their proficient areas and resolved their areas of weakness.

The overall achievement was positive, but some students experienced obstacles while others successfully reached the same improvement milestone. Maldini and Islamiati (2018) established that

language learning apps do not support all students because they do not serve students who face obstacles with phonetic distinctions and rapid speech comprehension. Listening exercises beyond their current proficiency level likely led to the singular student who did not improve in the study. According to Gonulal (2020), listening demands active participation from students as it is a complex cognitive process that could explain the restricted improvement of students. This research demonstrates that Duolingo is an effective platform for EFL learners to develop their listening skills when it works alongside conventional teaching methods.

The results obtained are in line with established research showing that gamification and immediate feedback coupled with interactive learning enable positive outcomes. Future studies should establish customized Duolingo approaches to meet different student learning requirements while ensuring accessibility of technological intervention for all students.

7.3 Survey about Duolingo and listening skills

Table 4.

Research Question 2: What is the student's opinion about the contribution of the Duolingo app to the development of listening skills in EFL learners?

Benefits of Duolingo

Criteria	Totally agree	Agree	Neutral	Disagree	Totally disagree
<i>Statement 5: Duolingo motivates me to practice listening skills regularly.</i>	42,9%	33,3%	14,3%	0,0%	9,5%
<i>Statement 8: I can see improvement in my ability to recognize spoken words and phrases after using Duolingo.</i>	47,6%	14,3%	23,8%	0,0%	14,3%
<i>Statement 10: I feel more confident understanding spoken English after using Duolingo.</i>	47,6%	19,0%	14,3%	14,3%	4,8%

Source: The percentages were obtained from seventh-level students at Lenin School (2024)

Analysis

In statement 5: Duolingo motivates me to practice listening regularly. The majority of respondents (42.9%) agreed that Duolingo encourages them to practice listening regularly, while 33.3% remained neutral. A smaller portion (14.3%) strongly agreed, indicating strong motivation, while no respondents disagreed and only 9.5% strongly disagreed. In statement 8: I can see an improvement in my ability to recognize spoken words and phrases after using Duolingo. Almost half (47.6%) of respondents agreed that Duolingo helped them improve their ability to recognize spoken words and phrases, while 14.3% strongly agreed. However, 23.8% remained neutral and 14.3% strongly disagreed, with no disagreements. In Statement 10: I feel more confident in understanding spoken English after using Duolingo. A significant portion of users (47.6%) agreed that Duolingo increased their confidence in understanding spoken English, with 19.0% strongly agreeing. However, 14.3% were neutral, another 14.3% disagreed, and 4.8% strongly disagreed.

The majority of students consider that Duolingo motivates, helps the development of listening, making them feel more confident when using the application.

This is in line with Kessler's (2023) findings, which emphasize the effectiveness of gamification elements, such as rewards and progress tracking, in improving learner motivation. Goodwin and Naismith (2023) also highlight that quick feedback and interactive learning activities enhance learner engagement in language learning.

These results align with studies by Rojas et al. (2022), who found that Duolingo had a positive impact on EFL learners' listening comprehension. Furthermore, Monje (2022) showed that Duolingo contributes to significant progress in English listening skills among learners. However, some learners (23.8%) remained neutral and 14.3% disagreed, suggesting that individual learning differences, such as difficulties with phonetic distinctions and rapid speech, may limit the app's effectiveness for some learners.

This finding supports research by Li and Loewen (2022), which suggests that interactive, self-paced learning environments contribute to learner autonomy and confidence. Similarly, Gonulal (2020) explains that listening comprehension requires active participation, which may explain why

some students still face challenges.

Despite the overall positive response, 14.3% of students disagreed, suggesting that factors such as difficulty understanding rapid speech or lack of real-world speaking practice may impact confidence levels. Responses suggest that Duolingo positively contributes to both improved listening and confidence in understanding spoken English. However, individual experiences vary, and while most users report benefits, a small percentage feel neutral. According to (Smith, 2023) mentions that “individual experiences vary, and while most users report benefits, a small percentage feel neutral.”

Table 4.

Exercises

Criteria	Totally agree	Agree	Neutral	Disagree	Totally disagree
<i>Statement 3: Duolingo’s activities make listening practice engaging and enjoyable.</i>	42,9%	23,8%	28,6%	0,0%	4,8%
<i>Statement 4: The app provides a variety of listening exercises that keep me interested.</i>	42,9%	33,3%	9,5%	4,8%	9,5%
<i>Statement 6: The listening exercises in Duolingo match my current level of English proficiency.</i>	42,9%	33,3%	9,5%	9,5%	4,8%
<i>Statement 9: The audio tasks in Duolingo are clear and easy to follow.</i>	61,9%	9,5%	9,5%	14,3%	4,8%

Source: The percentages were obtained from seventh-level students at Lenin School (2024)

Analysis

In statement 3: Duolingo’s activities make listening practice interesting and enjoyable. The survey results show that 66.7% of learners (42.9% strongly agree and 23.8% agree) find Duolingo’s listening activities interesting and enjoyable. However, 28.6% remained neutral, indicating that some users may not find the gamified approach engaging. Only 4.8% strongly disagreed, showing that negative perceptions were minimal.

In Statement 4: The app offers a variety of listening exercises that keep my interest. A majority of 76.2% (42.9% strongly agreed, 33.3% agreed) believe that Duolingo offers a variety of listening exercises. However, 9.5% of learners disagreed and another 9.5% strongly disagreed, suggesting

that some users might feel that the exercises lack sufficient diversity or challenge.

In statement 6: Duolingo's listening exercises match my current level of English proficiency. A majority of 76.2% (42.9% strongly agree, 33.3% agree) felt that Duolingo's listening exercises matched their level of English proficiency. However, 9.5% were neutral, 9.5% disagreed, and 4.8% strongly disagreed, indicating that a portion of learners felt the difficulty level was either too high or too low for their needs.

In Statement 9: Audio tasks on Duolingo are clear and easy to follow. A solid 71.4% (61.9% strongly agreed, 9.5% agreed) found Duolingo audio tasks to be clear and easy to follow. However, 19.1% disagreed and 4.8% strongly disagreed, indicating that some learners may struggle with the clarity, pronunciation, or speed of the audio.

Interpretation

Positive feedback in statement 3 suggests that Duolingo's gamification elements such as rewards, levels, and interactive exercises contribute to engagement.

The results from statement 4 highlight that most learners appreciate the variety of listening tasks offered by Duolingo.

The positive responses from statement 6 indicate that Duolingo's adaptive learning approach successfully adjusts difficulty levels for many learners. Duolingo adapts content based on users' progress, ensuring that they practice at an appropriate level.

The positive comments found in statement 9 of the majority suggest that Duolingo offers high-quality audio recordings, which are crucial for listening comprehension.

Discussion

In statement 3 as Goodwin and Naismith (2023) mention that gamification activities make listening practice interesting and enjoyable and encourage motivation and constant practice. The engagement and motivation provided by Duolingo play a crucial role in improving and developing interest and enjoyment of listening skills. Research by Li et al. (2022) supports this by highlighting that interactive digital platforms improve learners' motivation and retention. However, Maldini and Islamiati (2018) found that some learners struggle with rapid speech understanding in app-based learning, which may explain the neutral responses. To further enhance engagement, Duolingo could incorporate real-life listening situations and speaking practice.

In claim 4, research indicates that the app offers a variety of listening exercises that keep students engaged. Furthermore, the variety of exercises enhances both improvement and confidence in

listening skills. Goodwin et al. (2023) argue that the diversity of listening activities helps students adapt to different speech patterns, which increases comprehension skills and confidence in real-world communication. To address the needs of students who felt that variety was insufficient, Duolingo could expand its listening materials to include natural conversations, different dialects, and task-based comprehension exercises.

In statement 6, confidence in language learning is achieved by practicing at the appropriate level, and Duolingo's listening exercises are tailored to students' current English proficiency. According to Clark and Mayer (2016), adaptive e-learning platforms should continually adjust the difficulty of tasks to match students' evolving proficiency. Some students may benefit from a feature that allows them to manually adjust difficulty or choose specific listening challenges. Incorporating real-world audio clips and role-play exercises could also enhance both improvement and confidence.

Clear pronunciation and appropriate speech rate in the Duolingo app help language learners to understand spoken content effectively as mentioned in statement 9. Furthermore, ensuring clear and comprehensible listening materials is key to building confidence in listening comprehension. According to Gonulal (2020), effective listening exercises should expose learners to different speech rates and accents in a gradual manner to improve adaptability. To accommodate all learners, Duolingo could provide adjustable playback rates, transcriptions, and increased exposure to different accents.

7.4. Research Impacts (technical, social, environmental, educational, or economic)

This research has an impact on some branches such as society and education, for example, in society, the Duolingo application can be used as an innovative and accessible language learning tool since it is a free application that can be downloaded on a computer or a smartphone. Its gamified approach not only promotes motivation but also supports the development of self-paced learning habits. Furthermore, by improving listening skills, a fundamental aspect of communication, this research improves students' ability to participate in globalized social and professional environments, which contributes to their personal and academic growth.

Furthermore, this research has an impact on education, the Duolingo application offers teachers a model to add technology to their English language teaching process. The results

show that the Duolingo application helps traditional teaching to be modified and interactive audio tasks to be added to students. Also, the research shows educators how to combine modern learning tools with teaching methods that best benefit all students. The study shows that technological training and institutional support help teachers better use these systems to create better learning experiences for all.

In conclusion, this study details how students learn and develop English listening skills thanks to Duolingo and how this study has an impact on society and education, making a significant contribution to the teaching of the English language.

7.5. Limitation of the study

This study had as its main limitation the small participant base, which consisted of 22 seventh-grade students from Lenin School, who might not adequately represent the universal demographics of EFL education. Within the short study period, the researchers limited their ability to track student retention and progress because the observation period exceeded the intervention duration. The study faced a significant shortcoming because it used Duolingo as its platform, but this platform does not provide adaptability for the unique listening comprehension abilities of different students. Not all students were able to effectively complete specific listening comprehension exercises because these tasks were beyond their region of proficiency and thus harmed their results. The findings could have been affected by several external elements, as internet access and student drive played a role. Further research should seek participants from various communities across different study periods with multiple integrated assessment tools to achieve a full understanding of the results.

8. Conclusions and Recommendations

8.3 Conclusion

- It was concluded that identifying theoretical foundations regarding the use of the Duolingo app to develop listening skills provided a clear understanding of its relevance and effectiveness as a gamified tool for language learning. The research showed that Duolingo helps students understand spoken words better because its interactive design delivers engaging training at matching difficulty levels.
- The implementation of Duolingo improved students' listening comprehension skills by providing a variety of interactive exercises, such as word recognition, conversation comprehension, and dictation, which cater to diverse learning styles. Student performance increased when they used the app to build their listening skills in English language conversations.
- The survey shows that students like Duolingo to improve their listening skills, with gamification. They feel more confident in recognizing spoken words. In addition, they feel more motivated using gamification in their classes to develop listening skills.

8.4 Recommendations

- Teachers should study research materials to apply their results in their classroom teaching. Teachers need to learn how educational apps like Duolingo work and match their use with proven teaching methods for better language listening development.
- Therefore, it is suggested that teachers should use Duolingo as an extra practice to support their students' listening skill development. Teachers need to help students use the app better by organizing practice lessons while watching their improvement steps.
- Moreover, it is recommended that teachers continue to improve these strategies, making sure that the Duolingo app develops listening skills, which includes proper material and the use of gamification strategies that facilitate the listening strategies in the students.

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