

UNIVERSIDAD TÉCNICA DE AMBATO

FACULTAD DE CIENCIAS HUMANAS Y DE LA EDUCACION

CARRERA DE PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS

Proyecto de Trabajo de Graduación o Titulación previo a la obtención del Título de Licenciada en Ciencias de la Educación Mención: Inglés.

Them	ne:
•	ELSASPEAK APP AND THE PRONUNCIATION

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Ambato – Ecuador

2020-202

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I, Mg. Ximena Alexandra Calero Sánchez, with ID 180288406-2 in my capacity as tutor of the Research Dissertation on the topic: "ELSASPEAK APP AND THE PRONUNCIATION" investigated by Mister. Christian Andres Pazos Lara with ID No. 050350148-8, confirm that this research meets the technical, scientific and regulatory requirements, so the presentation of it is authorized to the corresponding organism in order to be submitted for evaluation by the Qualifying Commission appointed by the Board of Directors.

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DECLARATION PAGE

I declare this undergraduate dissertation entitled "ELSASPEAK APP AND THE PRONUNCIATION" is the result of the author's investigation, and has reached the conclusions and recommendations described in the present study.

Comments expressed in this report are the author's responsibility.

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DEDICATION

I dedicate this effort to my three loves:

To My grandmother for her patience, teachings, values and always giving me those words of encouragement to keep going.

To my mother, for her support, her unconditional love, for having believed in me, for fighting all her life, and teaching me that does not lose the one who falls, loses the one who surrenders.

To my engine, to my reason of life, to Magdalena, for coming into my life, and giving me that motivation that only she can give me to get ahead and never stop. Because her eyes are my light, and her love is my strength. My beloved daughter, when you read this, never forget that everything I do is for you, I love you.

Andrés

ACKNOWLEDGEMENTS

First, grateful to God, for allowing me to finish another stage of my life and be a professional.

I thank all my family for their words of support, and always being with me when I needed it most. This achievement is also yours.

Thanks to my teachers, for teaching me that being a teacher goes beyond the classroom and theory.

I am very grateful to my Thesis tutor for the support and dedication she gave to help me develop this research project.

And finally, I thank the Technical University of Ambato, for opening its doors and allowing me to study in its prestigious classrooms.

Andrés

TABLE OF CONTENTS

TUTOR APPROVAL	ii
DECLARATION PAGE	iii
APPROVAL OF THE DIRECTIVE COUNCIL	iv
COPYRIGHT REFUSE	v
DEDICATION	vi
ACKNOWLEDGEMENTS	vii
ABSTRACT	x
B. CONTENT	13
CHAPTER I. THEORETICAL FRAMEWORK	13
1.1 Investigative Background	13
1.2 Theoretical framework	16
1.2.1 Independent variable	16
1.2.1.2 Methods and Approaches	17
1.2.1.3 Language Teaching Methodology	18
1.2.1.4 Flexible Methodology	19
1.2.1.5 Flipped Classroom	21
1.2.2 Dependent variable	26
1.2.2.1 English Language	26
1.2.2.2 Language Skills	27
1.2.2.3 Productive Skills	28
1.2.2.4 Oral Skill	28
1.3 Objectives	31
1.3.1 General Objective	31
1.3.2 Specific Objectives	31
CHAPTER II. METHODOLOGY	32
2.1 Resources.	32
2.2 Methods	32
2.3 Basic mode of investigation	33
2.3.1 Field Research	33
2.4 Level or type of investigation	33
2.4.1 Exploratory Research	33
2.4.3 Experimental Research	33
2.5 Population and Sample	34
2.6 Data Collection	35

2.7 Hypothesis	35
CHAPTER III. RESULTS AND DISCUSSION	36
3.1 Pre-test results	36
3.2 Post-test results	38
3.3 Comparative results	40
3.4 Discussion of results	44
3.5 Hypothesis verification	47
CHAPTER IV: CONCLUSIONS AND RECOMMENDATIONS	47
4.1 Conclusions	49
4.2 Recommendations	51
References	51
Annex 1: Approval	56
Annex 2: Download Instructions	57
Annex 3: ELSA test	58
Annex4: Student's Survey	59

ABSTRACT

UNIVERSIDAD TÉCNICA DE AMBATO FACULTAD DE CIENCIAS HUMANAS Y DE LA EDUCACIÓN CARRERA DE PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS

Topic: "ELSASPEAK APP AND THE PRONUNCIATION"

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Date: December

Technology has motivated students to learn a new language, and has helped with their pronunciation when transmitting a message. Therefore, this Project was conducted with the objective of determining the importance of using ElsaSpeak app to develop the pronunciation of second semester students of the "Pedagogía de los Idiomas Nacionales y Extranjeros" (PINE) program at "Universidad Técnica de Ambato". To accomplish the objectives, a bibliographic research was used, in order to obtain theoretical support for the variables of the research project. On the other hand, an experimental investigation was applied, where the students took a pre-test using ElsaSpeak app, which evaluated the level of pronunciation of each one of them. After the pre-test, instructions were given on how to use the app to familiarize users with it, and for phoneme recognition, awareness and production. Finally, a post-test was applied using the same app to see if the use of ElsaSpeak app helped the students to improve their pronunciation. The development of this study indicated that using ElsaSpeak app had a positive impact on improving the pronunciation of the research group. After the time of the experimental study, it was noticed that the pronunciation, fluency and accent in the students were reinforced with the help of the mobile application, and there was a significant improvement in the development of oral skills.

Keywords: Mobile app, Pronunciation, recognition, phoneme, production,

INTRODUCTION

Pronunciation is an essential and crucial part of speaking and communicating in a foreign language. This is because mispronouncing words can give a bad impression, misunderstanding and ineffectual communication. When speaking, especially in a daily talk, limited vocabulary is not the biggest inconvenient, since unfamiliar or difficult words can be changed for easier ones. on the other hand, what is most taken into account throughout a conversation is the correct pronunciation. For this reason, a person can be perceived as someone with a low level of English only because of his or her bad pronunciation. In addition, misunderstandings can occur and exist due to these types of errors. A clear example of this is when a seller who is a native speaker delivers an incorrect item if he encounters a foreign buyer who mispronounces the product. Besides, a person could be considered rude even if he does not pretend to be. Furthermore, ineffective communication can cause annoyance among speakers, since asking the other people to repeat expressions or words in order to understand what they are saying can become an obstacle.

One of the problems encountered by the EFL students regarding pronunciation is the influence of their native language. Agudelo et al (2017) stated that the majority of learners in Latin America have difficulties to pronounce or express themselves correctly in English because they are affected by their mother tongue. Therefore, the articulation and accent of the students sound like English with an Ecuadorian character. In addition, in Ecuador the dialect or accent is varied. For this reason, most English Learners are influenced by their own dialect depending on their region.

This research project seeks to show the importance of using ElsaSpeak app to develop the pronunciation of English language learners. Because this mobile application breaks down the pronunciation into phonemes and different levels where after taking the pretest, ElsaSpeak app gives an individual and personalized class for each user with activities that reinforce weaknesses and mispronunciations, in order to bring the students closer to the pronunciation and intonation of a native speaker. It is proposed that this tool should be used and applied more frequently within the classroom, which with the help and guidance of the tutor will represent a notable improvement in the

performance and level of the students. In the same way, the lack of application of this type of technological tools has been noticed, which can represent difficulties, since pronunciation is an essential and relevant part in the English language. For this reason, the present study is structured as follows:

Chapter I. Theoretical framework: This chapter is focused on giving theoretical support to the research by citing several authors that allow the researcher to provide information about the investigation variables, in order to increase his cognitive knowledge and theoretical development on the topic.

Chapter II. Methodology: This chapter details the process that will be developed to achieve the study objectives. It also details the basic methodology, type and level of research that will be applied to the study in order to verify if the application of this study is viable.

Chapter III. Results and discussion: Here the results are presented in graphs and tables that are obtained through instruments and statistical tools, which help to demonstrate the importance of applying ElsaSpeak app to develop the pronunciation of students.

Chapter IV. Conclusions and recommendations: The last chapter establishes the conclusions and recommendations based on the analysis and collection of the data obtained and the theoretical support, and they are mentioned according to the objectives established in the research work.

B. CONTENT

CHAPTER I. THEORETICAL FRAMEWORK

1.1 Investigative Background

After carefully reviewing through databases containing a large number of academic journals, several researchers whose study is directly related to the topic of this research project have been found. Those that are more related are described in this section.

According to Samad & Aminullah (2019), their study "Applying ELSA Speak Software in the Pronunciation Class: Students' Perception" aimed to study and know the students' perception towards the mobile application ElsaSpeak within their pronunciation class, to determine if this tool was useful or not in the development and improvement of the pronunciation skills. Twelve students were involved in the research in order to demonstrate the usefulness of this tool and that the pronunciation is an essential and important part in learning the English language, for which they used a theoretical foundation research. The methodology applied within this study was a quantitative descriptive research where a questionnaire was applied, analyzed and collected through a Likert scale. The results obtained in this study showed that the students had a positive reaction towards the app and concluded that it is a very useful and adequate tool to improve the pronunciation and intonation of its users.

In the study "ELSA Speak Application as a Supporting Media in Enhancing Students' Pronunciation Skill" carried out by Samad & Ismail (2020), it is described how ElsaSpeak app develops the pronunciation skills of students through its different activities. The methodology used to verify the effectiveness of the use of this mobile application was through a pre-experimental research design where a pre-test and a post-test were applied to a population of 12 students from the first semester of the Muhammadiyah Enrekang University of Indonesia. The data were collected and analyzed through a quantitative approach, in order to have more precise results in this investigation. The results showed that there was a significant improvement in the pronunciation of the students, therefore the author concluded that this technological tool should be applied more frequently within the classroom, especially in those students, who are learning a foreign language.

A research work was found in the digital repository of the Universidad Técnica de Ambato. Which was developed by Núñez (2020), with the theme "English pronunciation IPA mobile app in the English pronunciation", its main objective was to determine the relationship between the mobile app and the English pronunciation of third-level students of the "CTT de los Andes" language center, in which 30 participants were involved in the project. The research methodology used by the investigator was a mixed approach in which a pre-test and a post-test were applied, and the research group was divided into a control group and an experimental group in order to apply the strategy to one of the two groups and thus determine and achieve the objectives of the study. After conducting the investigation, the following conclusions were obtained:

- There is a direct relationship between the mobile app and the English pronunciation of the students.
- Theoretical foundations support the use of technology to improve language learning.
- English pronunciation IPA app helped to improve the pronunciation to the students of the experimental group.

(Tualombo, 2018) developed a degree work with the theme: "The use of English Pronunciation App and the English Pronunciation in the third semester from Pedagogía de los Idiomas Nacionales y Extranjeros from Ambato Technical University, Tungurahua Province" which was found in the digital repository of the Universidad Tecnica de Ambato. This research work aimed to investigate the influence that this app has on the English pronunciation in students and to determine the impact of technology on English language learning and the reason for the poor pronunciation of learners. For this study, a research methodology with an exploratory level was used, in which questionnaires were applied with structured questions to a total of twenty students and two teachers of the third level of the PINE program. The results obtained through a rigorous analysis showed the following conclusions:

- Teachers show a lack of continuous training to know the importance of the use of the application of pronunciation in English.
- One of the reasons for the low level of pronunciation of the students is the lack

- of activities and innovative tools that motivate students to constantly improve.
- Students lose interest in learning a foreign language due to the lack of new teaching methods.

In another degree work with the topic "Quality of evaluation of PTS (pronunciation training software) and the intention to use technology among English teachers from Ambato technical university "by Ramos (2018), the PTS (pronunciation training software) is analyzed and evaluated as a tool to improve the oral English skills of students and has the objective of identifying the validity of this software as an applicable tool within the teaching and learning process of the English language. For this study, an exploratory and quantitative research approach was performed, since a check list was applied to a total of seventy-four professors, and the data obtained were tabulated and analyzed through Chi-cuadrado. The results obtained from the investigation delivered the following conclusions:

- Technology positively influences students learning; therefore, the validity of pronunciation training software is trustworthy.
- PTS are technological tools that motivate students to self-learning.
- The use of PTS must be controlled and guided by the teacher for a correct advance in the students' progress.

All these research works theoretically and practically support the use of technological tools within the learning of a foreign language. Nowadays, students are more involved in technology and their learning style varies every time, for this reason, teachers must constantly innovate their methodology, techniques and tools to motivate their learners to learn. Through the analysis of these previous research works, it can be concluded and determined that the use of mobile applications to improve pronunciation is viable and over time will be a very useful tool in the development of English skills in the classrooms.

1.2 Theoretical framework

1.2.1 Independent variable

1.2.1.2 Information and communication technology (ICT)

Cantoni (2015) affirms that Information and communications technology (ICT) refers to all the technology used to handle telecommunications, broadcast media, intelligent building management systems, audiovisual processing and transmission systems, and network-based control and monitoring functions. Although ICT is often considered an extended synonym for information technology (IT), its scope is broader.

Rouse (2019) claims that although there is no single, universal definition of ICT, the term is generally accepted to mean all devices, networking components, applications and systems that combined allow people and organizations (i.e., businesses, non-profit agencies, governments and criminal enterprises) to interact in the digital world.

ICT is a broad subject and the concepts are evolving. It covers any product that will store, retrieve, manipulate, transmit, or receive information electronically in a digital form

Technology in education

Technology has become a very important part of people's lives, since it is immersed in most important fields, such as medicine, economics, communication, and of course within education. Selwyn (2018) claims that educational technology refers to the set of information and communication tools, processes and resources that are applied to the structure and activities of the educational field, throughout its system and levels. In addition, Dhanavandan et al (2016) state that ICTs influence every aspect of people's lives, and that these are tools that help students and teachers to learn and have the opportunities required by the skills of the 21st century. Dhanavandan et al (2016), also affirm that information and communication technologies, especially the internet and multimedia tools, are an essential focus for future education, for this reason it must be integrated effectively into the educational system.

E-learning is basically an educational tool based on technology and the internet, which allows the student to learn anytime and in anywhere. But apart from allowing its users

to learn online, it facilitates the possibility of accessing information from any smart device in any database within the internet. For this reason, technology has made education a simpler, more comfortable and affordable process. (Mayer, 2019).

Aboagye et al. (2020) affirms that technology has become an essential tool within the educational process, and that e-learning has allowed both teachers and students to continue with their training despite the problems encountered in 2020. This researcher establishes the following advantages of technology in education:

- It allows the student to shape their learning, varying the schedule, their needs, and encourages active participation.
- It has excellent tools to plan and organize the class and teaching for teachers
- Virtual platforms are capable of integrating all those who are part of the educational process, in order to maintain better communication among all.
- Allows teachers to be aware of their students and solve any need or problem they may face.
- In economic terms, technology implies great savings and even helps to take care of the planet's ecology.

Technology, after the gift of life, is one of the greatest gifts from God. Undoubtedly, it has changed the way of life of each human being, and has facilitated the work of many during all these years. The 21st century is considered to be a technological and digital age. Technology is the basis for the growth of the economy, an economy with poor technology will not be able to grow in today's scenario. It can be seen the impact that technology has had in possibly all fields, and without exception, education has also been immersed in it (Raja, 2018)

The new generation of students, especially the youngest ones, are known as the generation of digital natives, it is the part of the human population that was born after the appearance of the internet. For this reason, it is necessary to implement technology within education, since it provides many benefits that will improve the teaching and learning process within the classroom, as well as increase the interest and motivation of children and young people in the proposed activities by the teacher. In addition, it encourages self-learning and self-awareness. Just as it is necessary to incorporate technological tools in the classroom, it is also necessary to train teachers with the necessary knowledge to be able to develop and to take better advantage of these tools that will facilitate their work and make it more efficient. In addition, many academic

activities can be optimized with the use of digital applications and in the long term it will not only benefit them, but also their students. Finally, it is necessary that the use of these technological tools be used with the teacher's guidance, since all kinds of information can be found on the web, and not all of it can be reliable and true.

1.2.1.3 Blended Learning

E-learning has contributed a lot to learning and its advantages are very noticeable, nevertheless, this type of learning also has many limitations. For this reason, a new methodology has appeared within the educational field. Blended learning is a methodology that mixes classroom or face-to-face education with online or virtual education (Dziuban et al, 2018)

Despite the fact that the term blended learning is ambiguous, it has been tried to find the most appropriate terms that support this research. Graham (2006) defined blended learning as a learning system that combines face-to-face learning with learning through the use of a computer. While Garrison & Kanuka (2004) established blended learning as a teaching-learning methodology that integrates classroom learning experiences with learning experiences through the internet. Both authors have something in common and agree that blended learning is a mixed methodology that is made up of e-learning and traditional or face-to-face learning. On the other hand, Hrastinski (2019) supports the theory that states that blended learning is not only the mixture of traditional learning with technology, but also of pedagogical approaches, teaching methodologies and technology.

Blended learning favors both the improvement of productive skills and receptive skills. In addition, both live classroom and virtual classroom learning are complementary to each other, owing to the fact that both meet educational requirements that they may not individually meet. Kintu et al (2020) implied that e-learning offers broader learning instruments and tools than face-to-face learning, as well as promoting and motivating self-learning in students. While live classroom learning, despite its limitations, favors interaction between students, develops physical skills and completes those gaps that appear in virtual lessons.

1.2.1.4 Mobile apps

Valdellon (2020) defines mobile aps as a computer application that runs on mobile devices, tablets, smart watches, among others. Its function is to allow users to perform a wide variety of tasks, access services, manage activities, distractions, activities leisure, learning, professionals, and many more. These mobile applications can be found on certain distribution platforms from the operational systems of each smartphone such as, Google play (Android) or the App store (IOS). Due to the popularity that this type of application has been gaining in the world market, a wide variety of software has been developed that fulfill many functions that make life easier for users. Mroczkowska (2020) classifies mobile applications in 8 categories:

- **Gaming apps**, which are designed for the entertainment of users through a variety of games that aim to de-stress people.
- **Business or productivity apps**, which allow their users to perform a wide variety of activities ranging from sending emails online to money transfers to other users.
- **Lifestyle apps**, mainly focused on various aspects of users' lifestyles, such as diet apps, dating, etc.
- **M-commerce apps**, which allow users to access a wide variety of products so that they can buy or sell them online.
- Entertainment apps, like gaming apps, aim to free users from tensions through social platforms, video or audio content, among others.
- **Utility apps**, which contain a large number of functions that make life easier for users, such as calculators, scanners, calendars, among others,
- **Travel apps**, which in a few words allow users to travel more easily, with information on the places they visit, recommendations from other users, etc.
- **Learning apps**, this category is where this research will focus, as it contains software that allows users to develop their skills and increase their knowledge.

Language learning apps

Gangaiamaran (2017) claims that mobile technology has become an attractive tool in teaching and learning methodologies. In recent years, mobile applications have been effectively incorporated into the education system. Rosell-Aguilar (2018) concludes that the approaches that involve the use of electronic devices, which use internet connection and mobile applications, have become the new traditional teaching methodology within the classrooms. Loewen (2019) remarks that the fourth technological generation, also known as the digital generation, includes the use of smartphones and digital networks without connection. These concepts can also be studied, modeled, built and measured in any investigation in which it is included. Mobile applications in conjunction with web companies give new possibilities to the world of education.

Technopedia (2017) explains that applications designed to develop language learning have changed the way languages are learned. This author examines the fifteen most relevant applications in the world of language learning and evaluates them using his own evaluation criteria. The highest rated applications are found in those aimed at learning vocabulary in isolated units rather than in relevant contexts. It can also be found as the best applications those that adapt to the abilities of each student. Within the ranking of the best valued, there are also those applications that give feedback to their users. Although these applications provide a pedagogical change and the approaches tend to be more communicative, the nature of these applications is behavioral level. to better alienate the acquisition of a second language with this pedagogical research, it is necessary to incorporate a more contextualized language. adaptive technology and a more detailed explanation of these applications.

1.2.1.5 ElsaSpeak app

What is ElsaSpeak app?

ElsaSpeak app is a virtual tool found on mobile devices and on its online platform, with this tool users develop their communication skills through a personal pronunciation coach, which focuses on the speaker weaknesses in order to assign activities through of the use of Artificial Intelligence (AI). ELSA corp (2017) defines ElsaSpeak app as a mobile application designed to learn and master English pronunciation, in order to neutralize accent and improve user fluency. This mobile application makes use of a very advanced voice detector, which compares the user's pronunciation with that of a Native American speaker, and then gives a percentage of the similarity in the pronunciation and agreement of the words, and thus be able to give feedback after the lessons. This app offers a very detailed report that allows to know the characteristics of the pronunciation of students and what things should be done to improve and perfect their performance.

Pronunciation test

This software has a voice and pronunciation analysis system that will allow it to determine the level of the speaker, where it asks the speaker to record his voice by reading 16 sentences, which can be heard, re-recorded or sent to the program and continue with the next sentence. At the time of finishing the recording of the prayers, the results will be received that will contain:

- the general level (beginner, intermediate or advanced),
- an individual score for pronunciation, fluency and accent.
- An overall score.
- IELTS score predictor
- And phonetic sound scores divided into 18 categories.

All these scores are presented as a percentage and a more detailed report of the score can also be obtained, providing an analysis of each recorded sentence and how close it was to sounding like a native speaker.

ELSA corp (2017) selects the evaluation parameters and divides them into the following categories:

- / l /, / r /: these consonants are very difficult to pronounce for some users, and it causes confusion in their pronunciation, an example is found in (right /r/ and light /l/).
- /i /, /I / it is very common for non-native speakers to pronounce these two sounds in the same way, although they are similar, they are not the same. When pronouncing it, the sound /I / is found and when pronouncing eat the sound of this vowel is /I /.
- / w /, / v /, / b /: What these sounds have in common is that the lips are used to pronounce these sounds, such as in west/w/, vest/v/, and best/b/, which have unique sounds. However, not all languages have these three sounds in their phonetics.
- / ϵI /, / ϵ /, / ϵ /: these sounds are pronounced with the tongue in front of the tongue. There are several pronunciation errors in these sounds by speakers, for example, it is very common to hear that late and let are pronounced in the same way, the same happens with set and sat.
- / \mathbf{j} /, / \mathbf{y} /, / $\mathbf{3}$ /, / $\mathbf{d3}$ /: these sounds are commonly confused, since they have certain similarities, but they are not the same, / \mathbf{j} / represents the sound of the consonant y, the sound of the consonant form zh is generally presented with / $\mathbf{3}$ /, and the j sound that is represented by / $\mathbf{d3}$ / is found in words like just. It is very common to find people who instead of pronouncing yellow, pronounce jellow.
- Ending sounds: it is usually found in the consonant sound at the end of a word, where speakers omit consonants (saying Word instead of world), add an extra vowel to the end of the consonant (saying hado instead of had), or change the sound of the consonant (saying back instead of bag).
- **Diphthongs:** this sound involves pronouncing certain vowels by moving the tongue or lips from one position to another. There are 5 types of diphthongs that can be found in pay / eɪ /, most / oʊ /, in fly / aɪ /, in noice / ɔɪ /, and in the vowel in cow / aʊ /. In many languages, the sound of or does not involve moving the tongue or lips, causing the pronunciation of / oʊ / to be done incorrectly.
- / \int /, / \int /, / \int / represents (sh) and is the first sound in *sh*ip, / \int / is found when pronouncing usual (zh), / \int / is the sound of (ch) when pronouncing *ch*air, and /

- d_3 / (j) found when pronouncing *jump*. Some languages do not include these sounds in their pronunciation, which is difficult for many non-native speakers.
- / \mathbf{p} // \mathbf{t} // \mathbf{k} /: these sounds, despite being very different, have in common that their pronunciation is aspirated. This means that it takes a puff of air to be pronounced, as in the first sound of pet / p /, two / t /, and cat / k /. Since many languages do not have this puff of air, it causes the sound of these consonants to sound more like / b /, / d /, and / g /. for example, many people pronounce do instead of two.
- **R sounds** / \mathbf{r} /, / \mathbf{a} /, / \mathbf{a} /: this sound can act as a vowel or consonant, an example of this is in the first sound of run / \mathbf{r} / where it is pronounced as a consonant, and in the last sound from siste \mathbf{r} / \mathbf{a} / or / \mathbf{a} /, which is pronounced as a vowel. In some cases, speakers confuse the sounds and replace them with others (saying wed instead of red).
- Nasal / m /, / n /, / η /: these sounds involve blocking the exit of air from the mouth and letting it escape through the nose. They can be found in consonants as in the first sound of mouth / m /, the last sound of queen / n / and the last sound of King / η /. Many people change nasal sounds, especially those at the end of words (instead of saying home they say hone, or instead of saying thing, they say thin).
- Consonant clusters: this sound appears when two or more consonants go together. The words black and spray begin with consonant clusters, and the words asked and tests end with clusters. The most common mistakes in this sound appear when non-native speakers drop consonants (saying ask instead of asked) or add sounds (saying gulue instead of glue).
- / s /, / \int /, / z / these sounds can be found in the first sound of salt / s /, sheep / \int /, and zero / z /. It is common to find people who do not realize the difference between these sounds, pronouncing see and she in the same way, or pronouncing the / z / sound as / s /.
- Schwa / \mathfrak{d} /: this sound is known as the most common vowel in English, and it sounds like uh, it is generally found in unstressed syllables, such as around or together. The most common mistakes in this sound are when they make the schwa sound too strong (saying too-gether which sounds like / \mathfrak{u} /), or changing for another vowel (changing / \mathfrak{d} / for / \mathfrak{e} i / in around).

- / æ /, / Λ /, / a /: these are known as low vowels, since your tongue and lower jaw are in a lower position than the other vowels. These sounds are found in the vowels of lack / æ /, luck / Λ /, and lock / a /. Although they are similar sounds, these sounds are unique. And in many languages, there are not all these sounds. And the most common mistake is to pronounce fan and fun in the same way.
- / \mathbf{u} /, / \mathbf{v} /: the sound of these vowels is found in food / \mathbf{u} / and in Good / \mathbf{v} /. These sounds are very similar, for this reason it is very difficult to distinguish between these two. Usually, speakers say pool and pull in the same way, however they should sound different.
- / h /, / f /, / v /: These sounds have in common that to be pronounced involves blowing air out of the mouth without making the vocal cords vibrate or using the tongue. the sounds / f / and / v / have a similar pronunciation, as it involves joining the upper teeth with the lower lip for pronunciation. The most common mistakes in this type of sounds is when people omit the / h / (saying eat instead of heat), or pronounce the sounds / f / and / v / joining the lips instead of the teeth with the lower lip , causing very to sound like Berry.
- Th sounds / θ /, / δ /: the sound of th has two versions, one is found in the first sound of thing / θ /, which is known as voiceless (the vocal cords do not vibrate) and the Another sound also known as voiced (the vocal cords vibrate) is found in the / δ /. There are many errors with this sound. Usually people replace these sounds with / s / and / z / (saying sank you instead of thank you). There are people who have the habit of using / t / and / d / (saying dare instead of there).

Creators

The creator of ElsaSpeak app is ELSA corp, which is a company founded in 2015 in California, United States, however the first version of the app was available in mobile stores in 2016. ELSA corp has developed this app with the aim of making all people speak English correctly and confidently. With more than 5 million downloads until 2020 and with a rating of 4.8 out of 5 by its users, ELSA has become one of the most versatile platforms when it comes to learning English.

Advantages and disadvantages

Since ElsaSpeak App is a tool focused on education, it can be applied in various contexts inside and outside the classroom. However, these types of mobile applications have many advantages and disadvantages.

ElsaSpeak app is a virtual platform that offers its users a wide variety of benefits. First, it allows English language learners to develop their oral and cognitive skills, especially those related to the speaking skill. Since, correct pronunciation is directly related to accent and fluency in the language. These aspects cause motivation and confidence in the learners when communicating orally. In addition, this application indirectly favors the Development of the other 3 communicative skills, through the different activities that require students to recognize the words, reading or listening, which also allows the user to recognize the grammatical forms and the correct writing of words. Finally, this app does not contain advertising, which does not interrupt the learning of users.

However, there are certain disadvantages when it comes to activities or connection. Because this application works with internet connection, if there is bad connection, the use of the application could become stressful because the app does not have an offline mode. It is also necessary to create an account in order to use it, as well as to grant certain device permissions, which for some users can be annoying. Finally, the free version despite of offering very effective help to students, the activities are limited, and to access the pro version of the app, it is necessary to pay for its service.

ELSA is an application that has achieved many advances in the world of artificial intelligence for the practice of individual sounds. But, in order for to open new paths in the world of education and accent reduction, it must expand, so that suprasegmental aspects are included in its interface. Which, for many applied linguists, is considered an essential part of accent reduction, combined with small problems such as typographical errors, make this app lose credibility with the population of experts in the language, who are the most apt to evaluate and rate the app.

1.2.2 Dependent variable

1.2.2.1 Language Skills

Jabbarova (2020) states that there are several definitions that support the concept of language. According to Firmansyah (2018), language is defined as a system of vocal symbols that are operated by social groups. Rivers (2018) concludes that a language is a way to communicate thoughts, feelings and opinions. According to Bath (2018) a language is a human habit that aims to express thoughts and opinions. All of these definitions support the idea that language is used to communicate thoughts and feelings within a given social group.

Classification of language skills

There are 4 skills in the language that must be mastered for effective communication. These skills are established as speaking, reading, writing, and listening, which are divided into two sub-categories (BBC, n.d).

Receptive and productive skills

Receptive skills

Receptive skills are those skills that require the student to understand and receive the language without the need for production. In this sub category are listening and reading skills. These types of skills are also known as passive skills.

Productive Skills

These skills require the language learner to produce language, in this category are Writing and speaking skills. This category is also known as active skills.

Language skills are complementary to each other, without receptive skills the student would not be able to produce language due to lack of information, and without productive skills the student would not be able to communicate what was learned and understood. And if one of the 4 skills was not used, the communication skills would be insufficient and there would be learning problems. For this reason, the 4 language skills are considered reciprocal complements.

1.2.2.2 Speaking Skill

According to Baker (2003), speaking skill is considered one of the most important and essential skills for effective communication, which involves verbal and non-verbal communication, with the aim of sharing, building, and proposing knowledge in society. Council of Europe (2001) known as Common European Framework of Reference for Languages divides the speaking skill into 3 levels and 6 sub-levels of proficiency, in which they are described as beginner with levels A1 and A2, intermediate that is determined by levels B1 and B2, and advanced described through levels C1 and C2.

Kranjec (2020) argues that speaking skill is one of the most difficult skills to complete, since it requires the domination of subskills that is needed to acquire the language and make the listener understand efficiently. This author divides speaking into 4 sub skills:

Speaking Sub-skills

- Fluency shows how confident the speaker is when communicating their ideas orally. To have a good level of fluency it is necessary to connect the ideas clearly to make the listener understand what you are trying to say.
- Vocabulary is an important part when speaking, since if the speaker does not
 have the necessary words to say he want, he will not be able to express his
 ideas, for this reason it is essential to constantly increase lexicon through
 reading texts in English and the annotation of new words.
- Grammar is necessary since it helps to make fewer mistakes during speech, and thus maintain effective communication.
- Pronunciation is a complex area of any language, because it requires the study and practice of many sub skills. A person who mispronounces the words cannot be understood in any way. On the other hand, an expert speaker can make use of the sub skills to emphasize his pronunciation and make his speech impactful. These sub skills include: intonation, Word and sentence stress, rhythm, and the study of the phonetic sounds of language. The best way to improve your pronunciation is through listening to native speakers, to compare and copy their pronunciation.

1.2.2.3 Pronunciation

According to Rao & Chandra (2018), pronunciation is an essential part of communication skills, which include the correct intonation of words and the correct sound of language. Dalton (1994) determined pronunciation as the way in which people vocalize the sounds of language, following the basic units of this. Levis (2018) concludes that in terms of learning, pronunciation is an essential factor for optimal communication since it refers to the way a language is spoken. If a word is pronounced incorrectly, there may be misunderstandings or confusion when transmitting a message.

The advantages of a correct pronunciation are obvious, since it allows the speaker to learn the correct stress and intonation of words. In addition, it facilitates understanding between the subjects involved in communication. Also, it develops speaking skills, and implies that the speaker is dominant in the language.

Qin & Tremblay (2017), agree that there is no specific or universal teaching method to teach pronunciation. Some teachers use technology, while others prefer reality to get their students to pronounce correctly.

All these authors agree that the pronunciation includes a correct articulation and intonation of the words. And that this topic is essential in this research project since it is one of the variables that must be taken into account. The use of ElsaSpeak app within this subject of study is very useful, since it allows to considerably improve the skills of articulation, accent and intonation of words, thus being a beneficial tool for students and teachers.

1.2.2.4 Basic Units of Laguage

Alexiadou & Lohndal (2018) states that the communication process uses several basic units to encode the message. for this reason, any instance of speech has its own peculiarities with reference to language. To be able to realize a sentence with its own meaning and syntactic autonomy, it is necessary to organize these language units following the grammatical patterns, in order to produce communication. (Peters, 1983).

Hinkel (2018) stablishes that the basic units of language are classified as follows:

- Phonetics and phonology, also known as the level that studies Language sounds. phonetics distinguishes between the set of possible sounds that a person makes in language, while the area of phonology studies the sound system used in human language, and classifies these sounds and how this subset should be used in a particular language. for example, what are the distinctions of meaning that can be made on the basis of what sounds.
- Morphology is the science that studies the level of words and endings, that is, it is
 also known as grammar and, in conjunction with syntax, analyzes the minimum
 forms of language, which, composed of sounds, are used to construct words and
 groups of words that have grammatical and lexical functions.
- lexicology the meaning or lexicon of words, studied from a formal approach, and therefore directly related to (derivational) morphology.
- Syntax This is the level of sentences. It is concerned with the meanings of words
 in combination with each other to form phrases or sentences. In particular, it
 involves differences in meaning arrived at by changes in word order, the addition
 or subtraction of words from sentences or changes in the form of sentences. It
 furthermore deals with the relatedness of different sentence types and with the
 analysis of ambiguous sentences.
- The syntax is known as the level of sentences. This science studies the meaning of
 words and the combination of these to form sentences, phrases or writings. In
 addition, it involves the different meanings that a sentence can have, depending on
 the order of its words and the addition or subtraction of words. In addition, it deals
 with relating the different types of sentences with their ambiguous analysis.
- Semantics is the area of meaning. This science is related to the study of the meaning of each word, therefore, it must be studied independently of the other sciences to determine the level of people's language.
- Pragmatics is the study of language in context, this means that sentences vary
 depending on the situations in which they are found, which means that sentences
 have different meanings in an abstract way in the use of practice. This implies
 determining the notion depending on the proposition, the content of the sentence,
 and the intention or effect of a statement.

1.2.2.5. Factors that affect pronunciation.

Gilakjani & Ahmadi (2016) comment that Teaching and learning pronunciation has become a very controversial issue in the educational field. Some time ago, pronunciation was taught in a behavioral way, in which students had to train to reach a native accent (American, Canadian, British, Australian, etc). To be understood by the listener, it was necessary to master one of the native or established accents.

Today, the pronunciation is emphasized more on stress, tone, rhythm. In other words, more emphasis is placed on being more non-directive, that is, focusing less on the sounds that the student generates, and more on the understanding of what he means.

Gilakjani (2017) explains the most common factors that influence the pronunciation of students, these factors include;

Motivation and Language Ego For many students, it is difficult to do something when they do not care or do not care. a correct pronunciation tends to be affected by lack of motivation. If the student is not motivated, it is very possible that he will not find improvement in her performance. Usually this happens when the language learner reaches a certain level where he can be understood by listeners, causing them to lose interest in improving their pronunciation.

Fortunately, there are several strategies and methodologies that teachers can use to motivate their students to focus on developing their skills.

Age and Exposure: For students who learn languages after the age of 12, it is more difficult for them to perfect a native accent, that is, those students in an age range of 1 to 12 years have a greater chance of developing a native pronunciation. however, accuracy and fluency can be achieved by anyone, depending on how long they have been learning the language.

Native Language: The pronunciation in English has many phonetic sounds, for this reason, the more similar the mother tongue is with the foreign language, the easier it will be to learn the target language, for example, it is easier for a Spanish speaker than a Chinese to pronounce correctly in English.

It is necessary for the teacher to understand the sound system that his students have according to their language, in order to give feedback on pronunciation difficulties

Innate Ability: Finally, it is easy for some to comprehend this aspect, while for others it is irrelevant. But certainly, each student has different abilities to understand the sounds of a foreign language.

It is necessary to know the strengths and weaknesses of the students to determine the best strategies to improve pronunciation.

1.3 Objectives

1.3.1 General Objective

• To determine the importance of using "ElsaSpeak" App to develop the pronunciation.

1.3.2 Specific Objectives

- To identify the reasons that limit the English pronunciation.
- To analyse the effect of using ElsaSpeak App to develop the pronunciation
- To stablish the relationship between ElsaSpeak app and the improvement of the pronunciation.
- To know students' perceptions regarding the use of ElsaSpeak app.

CHAPTER II. METHODOLOGY

2.1 Resources

For this dissertation thesis, technological, digital, and human resources were needed, which are described below. The participation of the students of the second semester of the Pedagogía de los Idiomas Nacionales y Extranjeros program at Universidad Técnica de Ambato was fundamental to apply the study, being the only human resources necessary. Within the technological resources, the use of the computer was crucial to collect, tabulate, interpret and analyze the required information and thus complete the written work of this project, it was also necessary the use of the internet and smartphones to install the app. Finally, the digital resources necessary to complete this study were zoom platform, since due to the pandemic of 2020, face-to-face classes were impossible and this tool was required to be able to connect virtually between all the participants of this project, and ElsaSpeak app to be able to apply the research.

2.2 Methods

Basic Methods of Research

Richards & Rogers (2014) established that qualitative paradigm is centered on the human sciences and that it tries to seek a solution to social phenomena. This author also establishes that quantitative paradigm focuses on testing the research hypothesis through numerical data and statistical formulas, in order to find the cause of the problem. This research makes use of both qualitative and quantitative approaches. Quantitative approach since the data collected was tabulated and analyzed through statistical formulas to test the research hypothesis; A qualitative approach is also used, since the influence of the app on students, and their reaction to the use of it, will be determined.

2.3 Basic mode of investigation

2.3.1 Field Research

Field research is recognized as the data collection method and its objective is to notice and understand the study population in their natural environment (Malsch & Salterio, 2016). This is a field research, because although the researcher does not maintain direct contact with the study population (virtual contact), and does not attend neither to the place in real time, information is collected in real time and thus seeks to complete the objectives proposed at the beginning.

2.3.2 Bibliographic research

This research uses documentary bibliographic method in which several sources are compiled to support the theory of the study, such as: papers, scientific journals, online articles and journals, books and scientific articles. This research analyzes the information about scientific works similar to this, and that contain the benefits of mobile applications for students and their learning. The bibliographic research looks for written works and data on the reality of the problem related to mobile learning and pronunciation or oral skills in documents that analyze the problem (Richards & Rogers, 2014).

2.4 Level or type of investigation

2.4.1 Exploratory Research

Trespalacios (2015) established that exploratory research seeks to familiarize the investigator with the problem within the context, with the aim of identifying the variables to be studied and analyzing the actions to be carried out. This type of research provides information to give conclusions and recommendations about the topic of study in order to reach a possible solution to the problem. Therefore, exploratory research shows the reality of the students within the institutions and the educational context through various data collection tools such as: observation, questionnaires, surveys, interviews and the bibliographic review in order to agree with the authors. This research project is exploratory because it tries to find a solution to the problem faced by students in English pronunciation, through the use of a mobile app.

2.4.3 Experimental Research

Experimental research is known as a design that includes a hypothesis, a variable that can be manipulated, and a variable that can be measured, calculated and compared by the researcher. The researcher collects data to be tabulated and compared to whether to support or reject the study hypothesis. The objective of this type of research is to look for a relationship between the dependent and independent variables. This type of investigation is also known as deductive or hypothesis testing method of investigation (Babbie 2020). The design of this research is experimental, because it tries to demonstrate the hypothesis through data collection and the counting and measurement of these, in order to obtain a concrete and precise result of the study. To achieve the objectives of this research, a pre-test and a post-test was carried out with which the study population was measured and correlated, in order to measure the impact of the use of ElsaSpeak app on the development of English pronunciation. The experimental group is made up of second semester students of Pedagogía de los Idiomas Nacionales y Extranjeros program, who took a pre-test to define their pronunciation level measured by the app interface, to later be measured with the same program and verify if the experiment had the desired results.

2.5 Population and Sample

This study was carried out with 41 participants, of which 11 are men (25%) and 30 women (75%), students of the second semester of the "Pedagogía de los Idiomas Nacionales y Extranjeros" program at Universidad Técnica de Ambato. The age range of students is 18-21 years old.

Population	Experimental	Total	Percentage				
	Group						
Men	10	10	25%				
Women	30	30	75%				
TOTAL	40	40	100%				

Author: Pazos, A. (2020) **Source:** Student's check list. 2.6 Data Collection

First, a pre-test was applied, using the ElsaSpeak app interface, which measures the

level of intonation, fluency and pronunciation on the students of second semester of

"Pedagogía de los Idiomas Nacionales y Extraneros" program at Universidad Técnica

de Ambato. The rating range used by the app is from 1 to 100, and is the average of

the rating of each phonetic sound that exists in the English language, and that is taken

into account by the app after the test. Likewise, the program was presented to the

students to familiarize them with its use. Next, the students were asked to carry out the

activities assigned by ElsaSpeak app, which assigns an individual and personalized

class to each one depending on their weaknesses and their phonetic sounds that need

more reinforcement according to the criteria of the app. Students are asked to work

developing these activities and try to complete them within a month, requesting that

they must have a minimum grade of 70% in each exercise. Finally, after 4 weeks of

having used and completed the exercises, the students took the test again, in order to

verify if their score was higher, lower or equal to the beginning, and thus check

whether or not there was improvement in their English pronunciation with the use of

ElsaSpeak app in the students. Finally, after having obtained the results of the research,

a survey was applied to the students to know their perceptions and opinions about the

app.

2.7 Hypothesis

Alternative Hypothesis

ElsaSpeak App does improve Speaking skill of the students of second level of

"Pedagogía de los Idiomas Nacionales y Extranjeros" program at Universidad Técnica

de Ambato.

Null Hypothesis

ElsaSpeak App does not improve Speaking skill of the students of second level of

"Pedagogía de los Idiomas Nacionales y Extranjeros" program at Universidad Técnica

de Ambato.

2.8 Variable identification

Independent: ElsaSpeak app

Dependent: Pronunciation

35

CHAPTER III. RESULTS AND DISCUSSION

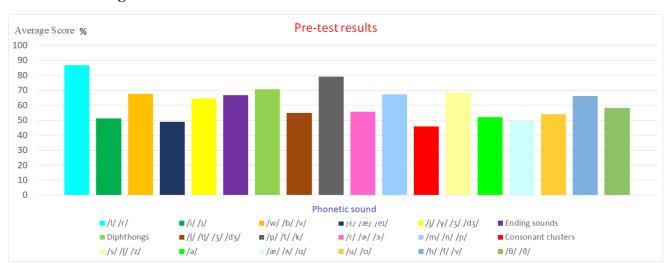
3.1 Pre-test results

Table 1 Pre-test results

Sound	/l/ /r/	/i/ /t/	/w/ /b/ /v/	/ɛ/ /æ/ /eɪ/	/3/	Ending sounds	Diphthongs	/3/	/p/ /t/ /k/	/t/ /ə-/ /s-/	/m/ /n/ /n/	Consonant	/s/ /ʃ/ /z/	/ə/	/ae/ /ʌ/ /ɑ/	/u/ /ʊ/	/h/ /f/ /v/	/θ/ /ð/	Total Average (%)
Average Score (%)	86,6	51,3	67,6	48,9	/d ₃ / 64,3	66,7	70,7	/d ₃ / 54,8	79,2	55,8	67,3	45,9	68,5	51,9	49,4	53,9	66,2	58,1	61,51

Author: Pazos, A. (2020) **Source:** Field Research

Figure 1 Pre-test results





Author: Pazos, A. (2020) **Source:** Field Research

Analysis and interpretation of results:

The ElsaSpeak test was applied to the 40 students of the second semester of the PINE program at Universidad Técnica de Ambato The score obtained was according to the parameters of the app interface that is based on artificial intelligence (AI), which, through a voice and pronunciation analysis system, compares the pronunciation, accent and fluency of the user with that of a native speaker, giving a final score out of 100% and breaking it down into 18 parameters, which will be explained later. Taking into account the score that the students obtained in the test, a total average of the results was made for each evaluation criterion (sound), and a general average for the total score obtained.

According to the results obtained and tabulated in table 1, it can be seen that there was a deficiency in the pronunciation of the consonant clusters, and the sounds / i /, / I /, ϵ /, / ϵ

The results show that there is an evident limitation in the English pronunciation of the students, this is due to the lack of materials and teaching methodologies to motivate them to improve and develop their skills. In those sounds that are more deficient, one of the reasons for the low rating is due to fossilized errors, which are presented to students because of their mother tongue, and for that reason it is difficult for them to understand and recognize the pronunciation of certain letters.

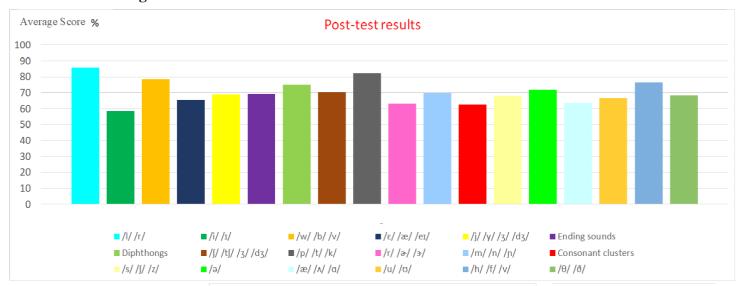
3.2 Post-test results

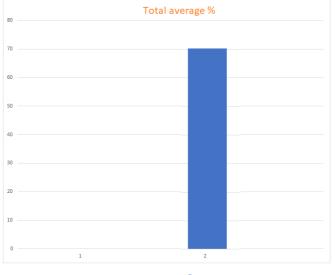
Table 2 Post-test results

Sound	/l/ /r/	/i/ /ɪ/	/w/ /b/ /v/	/ɛ/ /æ/ /eɪ/	/j/ /y/ /3/ /d3/	Ending sounds	Diphthongs	/ʃ/ /tʃ/ /ʒ/ /dʒ/	/p/ /t/ /k/	/r/ /ə-/ /3-/	/m/ /n/ /n/	Consonant	/s/ /ʃ/ /z/	/ə/	/æ/ /ʌ/ /ɑ/	/u/ /ʊ/	/h/ /f/ /v/	/θ/ /ð/	Total Average (%)
Average Score (%)	85,9	58,8	78,5	65,3	69,2	69,5	75,2	70,4	82,3	63,1	70,1	62,7	68,2	71,7	63,8	66,6	76,3	68,3	70,33

Author: Pazos, A. (2020) **Source:** Field Research

Figure 2 Post-test results





Post test

Author: Pazos, A. (2020) **Source:** Field Research

Analysis and interpretation of results:

The post-test procedure was similar to that of the pre-test, where the students were evaluated through the use of ElsaSpeak, in order to verify whether or not there was improvement in their pronunciation. The difference is that this process was carried out after 4 weeks of having used the app and having developed the activities assigned by the app according to the weaknesses and shortcomings of each student. In the same way, an average of each evaluation criterion was made, and also a general average of the students' grades.

According to the results obtained and tabulated in table 2, the average pronunciation of the sounds / l /, / r /, / w /, / v / and / b /, / v /, / f /, / h /, / p /, / t / and / k / and diphthongs is in a rating range that exceeds 75%, while the average pronunciation of sounds that are in a range of 65% at 75% were notified in / ϵ /, / ϵ /, / ϵ /, / ϵ /, / y /, / 3 /, / t /, / ϵ /, / ϵ /, / m /, / n /, / p /, / s /, / ϵ /, / v /, / f /, / h /, / δ /, / θ /, / ϵ / and ending sounds. The pronunciation of the sounds that still have deficiencies are sounds / i /, / I /, / ϵ /, / ϵ I /, / ϵ / and consonant clusters, which are less than 65% on average, but have presented a considerable and noticeable improvement. And finally, the overall average of all sounds is 70.33%.

The general average of the students, despite having risen significantly, still presents some deficiencies in the correct pronunciation of certain phonetic sounds, which can be improved with the continuous and constant use of the mobile application, the activities developed by the students helped them develop and recognize the phonetic sounds of each letter, which allowed them to obtain a higher score than the pre-test.

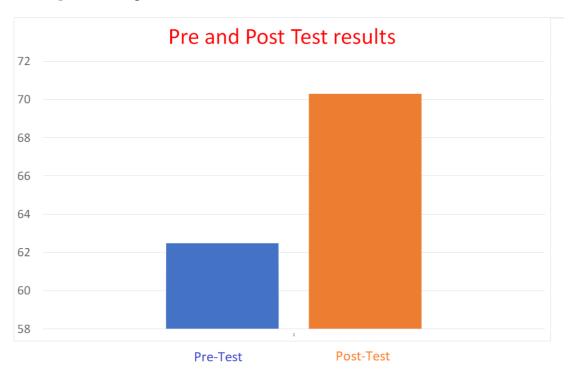
3.3 Comparative results

 Table 3 Comparative results

Criteria	Initial Average	Final Average
Pre-Test	61, 5%	Pre-Test
Post-Test	70,3%	Post-Test

Author: Pazos, A. (2020) Source: Field Research

Figure 3 Comparative results



Author: Pazos, A. (2020) **Source:** Field Research

Analysis and interpretation of results:

To verify if the use of the application obtained positive results in terms of improving English pronunciation, a comparison was made between the average of the pre-test scores, with the post-test average, which is observed in the table and figure 3.

As can be seen in Figure 3, the average of the students in the pre-test grade was 61.5%, while the average of the students' post-test grade was 70.3%. the difference between the pre-test and post-test average is 8.8%

The results show that after having used ElsaSpeak app in the students there was an increase in the development of the pronunciation of the students, which shows that the mobile application had a positive effect on the improvement of the oral skills in the students.

3.4 Students' Survey.

For this section, the most relevant statements of the survey addressed to the students have been considered, where 3 of 10 statements were tabulated, and graphed.

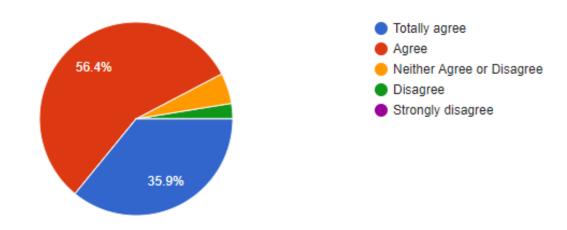
3.4.1. Statement 1. Using the ElsaSeak app would improve the development of my oral skills.

Table 4. Students oral skills.

Alternative	Frequency	Percentage
Totally agree	15	35.9%
Agree	22	56.4%
Neither Agree or	2	5,1%
Disagree		
Disagree	1	2,6%
Strongly disagree	0	0%
Total	40	100%

Author: Pazos, A. (2020) **Source:** Field Research

Figure 4. Students oral skills.



Author: Pazos, A. (2020) **Source:** Field Research

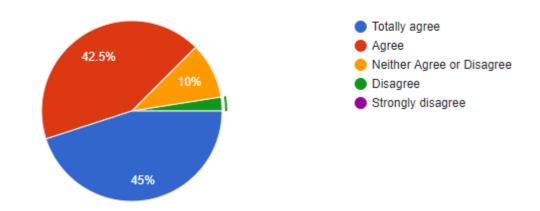
3.4.2. Statement 2. ElsaSpeak app would be a very useful tool in English Language learning.

Table 5. ElsaSpeak as learning tool.

Alternative	Frequency	Percentage
Totally agree	18	45%
Agree	17	42.5%
Neither Agree or	4	10%
Disagree		
Disagree	1	2,5%
Strongly disagree	0	0%
Total	40	100%

Author: Pazos, A. (2020) **Source:** Field Research

Figure 5. ElsaSpeak as learning tool.



Author: Pazos, A. (2020) **Source:** Field Research

The results show that 35 students, which is equivalent to 87.5% of the total population evaluated, agree that ElsaSpeak is a very useful application in learning English language, while 4 students, which is equivalent to 10%, do not consider that this application is useful in learning English. And finally, 1 student, equivalent to 2.5% of the population, considers that ElsaSpeak is not a tool that helps to learn English language.

Most students consider that ElsaSpeak is a tool that will help its users to learn English, since it does not only include pronunciation activities, but also many functions that will help students improve and increase their knowledge and skills necessary to improve their level.

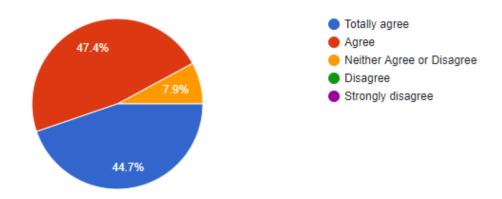
3.4.3. Statement 3. ElsaSpeak app is easy to use for any user who wants to improve his or her English pronunciation.

Table 6. Ease of use of ElsaSpeak app.

Alternative	Frequency	Percentage
Totally agree	17	44.7%
Agree	18	47.4%
Neither Agree or	3	7.9%
Disagree		
Disagree	0	2,9%
Strongly disagree	0	0%
Total	38	100%

Author: Pazos, A. (2020) **Source:** Field Research

Figure 6. Ease of use of ElsaSpeak app.



Author: Pazos, A. (2020) Source: Field Research

Analysis and interpretation of results:

Out of a total of 38 students, 35, which is 92.1% of the total, agree that ElsaSpeak is an easy-to-use application. While 3 students equivalent to 7.9% do not determine that the application is easy or difficult to use.

All the students surveyed, previously used ElsaSpeak to give their opinion on the use of the app, so they consider that it is an easy-to-use application, and easy to get started with it for any user who wants to learn to pronounce correctly.

3.5 Discussion of results

In this research project, it was evidenced that most of the second semester students of

the PINE program showed a low level of English pronunciation, these problems are found in almost all educational institutions in Ecuador, according to EF SET (2020), Ecuador is among the countries with the lowest level of English in the world, in a ranking of 100 countries, Ecuador was ranked 93, and in Latin America, it is in the last place in the ranking. This is because there is no motivation in students to learn a foreign language, and the teaching methodologies used focus on the traditional and boring, causing disinterest and low grades in the subject.

Kan & Ito (2020) establish that the difficulty when learning to pronounce correctly is due to the fact that they cannot recognize the second language even if they have knowledge of it. The errors are mainly due to the transfer of the native language or certain elements that do not exist in their mother tongue. Despite the importance of teaching and learning correct pronunciation, it is difficult for students to confront and correct pronunciation errors in class. Furthermore, the teachers who instruct the students are for the most part not native speakers, and the teacher's own pronunciation may cause confusion and their ability to correct mistakes may not be sufficient.

Due to the limitations of the students in the development of their pronunciation, this study seeked to find a solution to this problem, where it shows how through its eye-catching interface, it got the students' attention and motivated them to learn the pronunciation of each phonetic sound, which is essential to improve the pronunciation of the English language. Jabbarova, (2020) affirms that it is important to have some knowledge about phonology, since it is directly connected to the teaching of a second language, since it has to do with the correct pronunciation and sound of each word. And that, this can be synchronous or diachronic, for this reason it is essential that when teaching a foreign language, the teaching of phonetics and phonology should be included.

3.6 Hypothesis verification

Before verifying the hypothesis, it was necessary to review the normality test of the

data distribution. For this reason, the statistician Shapiro Wilk was taken, which tests the normality of distribution for a study group of less than 50 people. This analysis demonstrates the feasibility and reliability of the results of the research project.

 Table 7. Normality Test

	Sh	apiro-Wil	lk
	Statistic	df	Sig.
Average_pretest_result	,972	40	,428
Average_posttest_result	,954	40	,102

Sig> 0.05 =HI Sig<0.05= H0

Source: Normality test- IBM SPSS software

Developed by: Pazos, A. (2020)

The values in the Sig. column show the normality of the distribution. If the value exceeds 0.05 it means that the distribution is normal. On the other hand, if the value is less than 0.05 the distribution is not normal. In the case of this project, the values are greater than 0.05. which means that the results obtained have a normal distribution. Therefore, the results are reliable and their validity has been checked. Taking into account that the T-student method was used to verify the hypothesis.

Alternative Hypothesis

ElsaSpeak App does improve Speaking skill of the students of second level of "Pedagogía de los Idiomas Nacionales y Extranjeros" program at Universidad Técnica de Ambato.

Null Hypothesis

ElsaSpeak App does not improve Speaking skill of the students of second level of "Pedagogía de los Idiomas Nacionales y Extranjeros" program at Universidad Técnica de Ambato.

In order to verify the hypothesis proposed in this degree work, the statistical measure T-student was used, which compares the two independent samples, and establishes if there is a difference in the averages obtained in the pre-test and post-test

Table 8. Mean T- Student.

	Mean	N	Std. Deviation.	Std. Error
				Mean
Average_Pre_test_result	61,35	40	8,822	1,395
Average_Post_test_result	70,30	40	6,248	,988

Source: hypothesis verification - IBM SPSS software

Developed by: Pazos, A. (2020)

The data generated through the IBM SPSS software shows that there is a difference in the means. Where, in the pre-test a value of 61.35 is observed, while in the post-test average a value of 70.30 is noticed.

Table 9. T-Student test.

			Paired Differences					df	Sig. (2-
		Mean	Std.	Std.	95% C	onfidence			tailed)
			Deviat	Error	Interval of the				
			ion	mean	difference 1				
					Lower	Upper			
Par	Average_pretest_result - Average_posttest_result	-8,950	7,923	1,253	-11,484	-6,416	-7,145	39	,000,

Source: hypothesis verification - IBM SPSS software

Developed by: Pazos, A. (2020)

Similarly, it can be seen that there is a significant difference in the two groups, for this reason the p-value is equal to 0.000, which is less than the significance value of 0.05. Which means that if it is less than this value, the null hypothesis is rejected. Therefore, the alternative hypothesis is accepted and shows that ElsaSpeak App does improve Speaking skill of the students of second level of "Pedagogía de los Idiomas Nacionales y Extranjeros" program at Universidad Técnica de Ambato.

CHAPTER IV: CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

After the evaluation and data collection instruments were applied, the analyzed results have contributed with accurate information, which allowed the researcher to present the following conclusions and recommendations:

- The use of ElsaSpeak app in the development of the English pronunciation is of great importance, this is supported by the analysis of the results obtained in this research that demonstrate an improvement in the students' abilities, especially pronunciation. The use of this mobile application facilitates the teaching and learning process, since it provides useful resources and motivates independent learning through individual practices that also allows self-assessment.
- Through observation, and with theoretical support investigated in this research project, it is concluded that there are many factors that limit the English pronunciation. Among the most important is the influence of the mother tongue in the learning of a second language, the fossilized errors that occur in those students who find it difficult to correct these pronunciation mistakes, and finally, the limited use of methodologies and tools necessary for the development of pronunciation and learning of English, which causes lack of interest and motivation in Language learners.
- After the analysis of the results obtained in the pre-test and post-test, and the survey carried out on the students, it is concluded that ElsaSpeak app had a positive effect on the development of the students' pronunciation.
- There is a direct relationship between ElsaSpeak app and pronunciation improvement, since there was a change and a significant improvement in the level of pronunciation and recognition of sounds of the students. This could be observed through the data collected from the pre-test, where the average grade was 61.35 out of 100, while the post-test results show an average of 70.30 over 100.
- ElsaSpeak app and its benefits in pronunciation are supported through the
 perceptions that learners demonstrated with the use of this mobile app. In the
 results obtained in the survey directed to the learners, it can be determined that

students consider this software as a tool that not only improves their pronunciation, but also their oral skills, and this application helps a lot to people who want to increase their English level. In addition, it is concluded that the students found the ElsaSpeak app interface easy to use and eye-catching.

4.2 Recommendations

For those who want to improve the learning or teaching of pronunciation, the following recommendations are established:

- It is advisable to demonstrate the students the importance of using mobile applications within their cognitive development and learning of a new language. With the objective of motivating the educational community to use more frequently these tools that improve the language skills of users.
- It is highly recommended that teachers motivate students to learn a foreign language through the use of innovative methodologies and strategies that include tools that help develop pronunciation skills.
- It is suggested to motivate students, teachers, and the entire educational community to investigate scientific works that support the use of mobile applications within the development of pronunciation. In order to determine the advantages and disadvantages of using these tools in the classroom. This will change the perceptions of all who are part of the educational community to consider including mobile learning in the study framework.
- It is advisable to include ElsaSpeak app within the teaching-learning process in the classroom, to develop the pronunciation and therefore the communicative skills of the learners.
- It is recommendable to create a manual or guide for new users of ElsaSpeak app to familiarize them with the software interface. As a result, the process to develop pronunciation skills will be accelerated.

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Annex 1: Approval

Ambato, 05/10/2020

Doctor Marcelo Núñez
Presidente
Unidad de Titulación
Carrera de Pedagogía de los Idiomas Nacionales y Extranjeros
Facultad de Ciencias Humanas y de la Educación.

Mg. Sarah Iza en mi calidad de Coordinadora de sexto semestre paralelo "A"de la Carrera de la Pedagogía de los Idiomas Nacionales y Extranjeros, me permito poner en su conocimiento la aceptación y respaldo para el desarrollo del Trabajo de Titulación bajo el Tema: "ElsaSpeak and the speaking skill" propuesto por el estudiante Christian Andrés Pazos Lara portadora de la Cédula de Ciudadanía 050350148-8, estudiante de la Carrera de Pedagogía de los Idiomas Nacionales y Extranjeros. Facultad de Ciencias Humanas y de la Educación de la Universidad Técnica de Ambato.

A nombre de la Institución a la cual represento, me comprometo a apoyar en el desarrollo del proyecto.

Particular que comunico a usted para los fines pertinentes.

Atentamente.

SARAH
JACQUELINE
IZA PAZMINO

Mg. Sarah Iza Pazmiño 0501741060 0984060528 sj.iza@uta.edu.ec

Annex 2: Download Instructions

How to download ElsaSpeak app?

For Apple users:

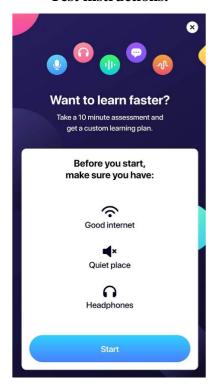
- Go to the App Store
- Search for: "ElsaSpeak App"
- Look for the developer ELSA corp.
- The mobile app is free to download
- The size is 267,5 MB

For Android users:

- Go to the Play Store
- Search for: "ElsaSpeak App"
- Look for the developer ELSA
- The mobile app is free to download
- The size is 29MB

Annex 3: ELSA test

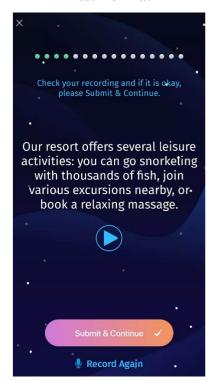
Test instructions.



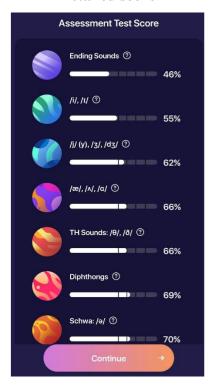
Test Results



Test Format



Detailed score

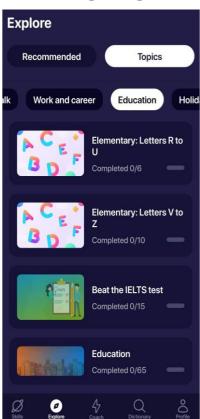


Annex 4: ELSA functions.

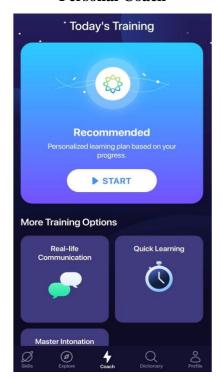
ELSA activities



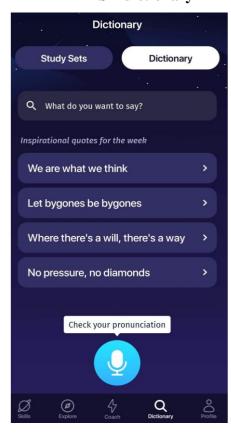
Different topics to practice



Personal Coach



ELSA dictionary



Annex 4: Student's Survey.





Universidad Técnica de Ambato Facultad de Ciencias Humanas y de la Educación Carrera de Pedagogía de los Idiomas Nacionales y Extranjeros

NOTICED USEFULNESS OF ELSASPEAK APP

(STUDENT'S SURVEY)

Objective:

To Analyze the different responses of the students according to the experience with ElsaSpeak app

Instructions:

For each of the following statements, mark the box that best represents your opinion about your experience with ElsaSpeak app and it usefulness.

	According scale							
Statement	Strongly disagree	Disagree	Neither Agree or Disagree	Agree	Totally agree			
The use of ElsaSpeak app has allowed me to perform tasks faster.								
The use of ElsaSpeak app within the classroom would increase my performance.								
Using the ElsaSeak app would improve the development of my oral skills.								
4. The use of ElsaSpeak app would help me to interact more easily in the classroom.								
5. ElsaSpeak app would be a very useful tool in EL glearning.								

Author: Pazos, A. (2020) **Source:** Field research.





Universidad Técnica de Ambato Facultad de Ciencias Humanas y de la Educación Carrera de Pedagogía de los Idiomas Nacionales y Extranjeros

EASE OF USE NOTICED OF ELSASPEAK APP

(STUDENT'S SURVEY)

Objective:

To Analyze the different responses of the students according to the experience with ElsaSpeak app.

Instructions:

For each of the following statements, mark the box that best represents your opinion about your experience with ElsaSpeak app and it usefulness.

	According scale							
Statement	Strongly disagree	Disagree	Neither Agree or Disagree	Agree	Totally agree			
6. Getting familiar with the mobile application was easy for me.								
7. ELsaSpeak app's interface is friendly and eye-catching.								
My interaction with ElsaSpeak app seemed understandable and accurate.								
I could become a skilled user of the mobile app effortlessly.								
10. ElsaSpeak app is easy to use for any user who wants to improve his or her English pronunciation.								

Author: Pazos, A. (2020) **Source:** Field Research.

Link of the survey:

https://forms.gle/6Hm1SMfJ9VWbp5fc6