

**UNIVERSIDAD INTERNACIONAL DE LAS
AMÉRICAS**

**SCHOOL OF EDUCATION AND FOREIGN
LANGUAGES**

GRADUATION SEMINAR

**THESIS SUBMITTED TO OBTAIN THE
BACHELOR WITH CONCENTRATION IN
TEACHING**

**“APPLIED PHONETICS TO IMPROVE
PRONUNCIATION IN NINTH GRADERS OF LICEO
SAN RAFAEL DE ALAJUELA IN THE THIRD
QUARTER OF 2021.”**

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December, 2021

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Abstract

In this study, the researcher focused on how applied phonetics can improve pronunciation in ninth grade students of Liceo San Rafael de Alajuela in the third quarter of 2021, through the technique of phonological awareness, working with the sounds /t/. /p/, /k/, /l/, /b/, /w/.

The purpose of this research was to demonstrate the effectiveness of phonological awareness through alliterations that were worked in tongue twisters to improve English pronunciation, where the investigator used different sounds as a reference to test the accuracy of this technique. In the process of the investigation, a pre-test was carried out first in order to obtain a more accurate location of the students' knowledge of the different consonants, then 2 different activities were applied in the post-test to measure the results that were obtained at the end with each student.

A statistical analysis of the data collected through the instruments mentioned above was carried out by the researcher in order to have an evaluation of the efficacy of the instruments with the applied phonetics.

Resumen

En este estudio, el investigador se enfocó en cómo la fonética aplicada puede mejorar la pronunciación en los estudiantes de noveno año del Liceo San Rafael de Alajuela, en el tercer trimestre del 2021, mediante la técnica de la conciencia fonológica, trabajando con los sonidos /t/, /p/, /k/, /l/, /b/, /w/.

El propósito de esta investigación fue demostrar la efectividad de la conciencia fonológica a través de las aliteraciones que se trabajaron en los trabalenguas para mejorar la pronunciación del inglés, donde el investigador utilizó diferentes sonidos como referencia para comprobar la precisión de esta técnica. En el proceso de la investigación, se realizó primero un pre-test para obtener una ubicación más precisa del conocimiento de los alumnos sobre las diferentes consonantes, luego se aplicaron 2 actividades diferentes en el post-test para medir los resultados que se obtuvieron al final de cada uno de los alumnos.

El investigador realizó un análisis estadístico de los datos recopilados a través de los instrumentos mencionados anteriormente, para tener una evaluación de la eficacia de los instrumentos con la fonética aplicada.

Chapter I

Introductory Framework

This chapter will develop the problem statement, the pronunciation and fluency that some students have in their speaking production. Then, the objectives of the investigation, general objective, and specific objectives will be presented as well. Chapter I also includes the justification of the study, the national and international antecedents, and finally, the scope.

1.1 Problem Statement

One of the problems that most of the students who study the English language present is mispronunciation. This happens because their native language sounds somewhat differently from English. So when they try to say a word, they pronounce it as if it sounded the same or similar to Spanish. In most cases, teachers do not correct them because they may not know how to handle this problem, so they continue making the same mistakes. This is developed on the same basis of the child's first language learning process. If their mother does not make any correction when the child mispronounces a word, for example: "cocholate" instead of "chocolate", they will continue committing the same mistake because they think that they are saying it in the right way. And then as the years go, these errors get fossilized.

Based on the reasons mentioned above, this research aims to improve the pronunciation of ninth-grade students through applied phonics strategies where students can listen and identify the different sounds.

In this thesis, the researcher focuses on analyzing the effects of applied phonetics on the ability to speak, improving oral production. In fact the problem statement of this project is: How can professors use applied phonetics to improve the oral production of ninth-graders at Liceo San Rafael de Alajuela 2021?

Objectives of the Investigation

1.1.1 General Objectives

To determine, through applied phonetics, the phonemes students are having difficulties, and how to improve them on ninth-graders at Liceo San Rafael de Alajuela in the third quarter of 2021.

1.2.1 Specific Objectives

1. To identify the basic problems that students have with pronunciation.
2. To apply Phonological awareness in students from 9-6 to identify their weakest areas.
3. To evaluate the students enhancement through Phonological awareness.

1.2 Justification of the Study

English is one of the most influential languages globally. It communicates with people from different nations or countries. In other words, it is considered the universal language. For this reason, many public and private institutions have introduced it as part of the study plan. The main reason why English is part of the training is to give students a tool to be more competitive in linguistics and language communication. Consequently, they will have a better performance in the professional and working

areas where they can opt for better salaries, promotions, and opportunities to study abroad.

In addition, having a second language develops cognitive skills that allow us to adapt to new challenges. Another advantage is that it permits you to travel abroad and enjoy more understanding about different cultures. Furthermore, to handle a second language makes your brain become familiar with new challenges. In fact, speaking is one of the four English skills used to communicate with native speakers or students of another culture.

The purpose of this research is to instruct students on how they can improve their oral skills. The idea is to observe different classes in sections 9-6, where the investigator can analyze their pronunciation and apply some phonemic awareness techniques that could be helpful for them. On the other hand, the main function of speech is to produce accurate sounds to have an effective conversation with the other person. For all these reasons, in this study, the researcher will focus on one of the most important areas of speech, which is phonetics, also known as Speech Sciences.

Moreover, the investigator will present a proposal on how teachers can work on oral English skills, such as oral expression, fluency, pronunciation, listening comprehension, and interaction in class. To sum up, this topic is very important because it seeks to benefit teachers with a more in-depth analysis of the importance of phonetics in oral production and, therefore, current and future students of the Liceo San Rafael de Alajuela through applied phonetics techniques since language is one of the skills that children have from their first years of life.

In fact, speech plays a very important role because it makes communication clearer so that the desired message is understood. In order to start with the study of English oral

production, it is necessary to mention that there are different sounds called phonemes are used in phonetics. Indeed, there are different sounds in Spanish and English, there are others that tend to be similar or seem to be similar, and this confuses Spanish speakers when learning a second language. Applied Phonetics helps students improve their English pronunciation leading them to achieve effective communication, and, at the same time, it shows them the characteristics of the sounds, which encourages them to improve their pronunciation.

This research will be conducted at the San Rafael de Alajuela High School, where "Phonemic awareness" techniques will be applied. This study is intended to be developed in the third quarter of 2021 so that the researcher will observe the techniques that the teacher uses in class in the area of pronunciation, where it is expected to identify the most problematic areas and improve them with feedback and the techniques mentioned above in the ninth-grade students.

1.3 Antecedents

Phonetics is the study of speech. Traditionally, phoneticians have relied on their ears and eyes and their awareness of their vocal organs to study pronunciation (Hayward, 2013, NY, p.1). Moreover, phonetics studies the oral organs and the importance of the phonatory apparatus, from the function of the teeth, the alveolar ridge, the pharynx, the larynx, the tongue, and each of its parts.

To continue, the concept of Phonetics tends to be confused with Phonics, which is a system of reading and writing English, which works with letters and sounds. Phonetics is concerned with the sounds teachers make in speech: how teachers produce them,

how they are transferred from the speaker to the hearer as sound waves, and how teachers hear and perceive them (Rogers, 2013, NY, p.1).

Related to the difficulty some students may have in differentiating between the phonemes of their native language and those of the new one, María del Rosario Garita. María Isabel González and Nathalia Solís, in their magazine *English*, mention the this issue in regards to vowel sounds:

Understanding the differences between the English and Spanish phonological system can help students and instructors foresee possible areas of difficulty that must be addressed in the language classroom. In terms of perception, Boomershine (2013, pp. 103-105) explains that the student's first language can work as a filter to adapt the input to their native language system. When this input differs greatly from their first language, students have to make an additional effort to incorporate the new pronunciation features. For instance, Spanish speakers must learn to identify the duration differences in the English vowels, an aspect that is not relevant for the perception of the Spanish vowels. This may cause complications in the way students perceive a sound inducing learners to associate the unknown sound to a single vowel in their native language (p.7, 2020).

Another problem affecting native Spanish speakers is that they translate everything they want to convey when studying a second language, such as English. Unfortunately, Spanish has a different grammatical structure that changes the order of words as it would be expected in English. Therefore, words that seem transparent have a different meaning, such as "actually," which means in reality. However, English speakers of the Spanish language often confuse it with "current", which is incorrect.

Another element that must be referred to is the use of the vocal organs. There are three different organs that are involved in the production of sounds: the breathing organs, which are the lungs, bronchi, trachea; the organs of phonation that are conformed by the vocal cords, larynx, resonators, and finally the organs of articulation in which the tongue, palate, lips, teeth, and glottis are placed. Besides this, students must emphasize on articulation. This latter comprises how the organs of the mouth, which are the lips, tongue, palate, soft palate, velum, teeth, and alveoli, are positioned at the moment of producing the sound.

Moreover, this study intends to examine the most frequent mistakes made by students when pronouncing English words and, at the same time, to apply the technique of reading aloud to record them and thus give them feedback. In the case of English as a foreign language, the student is expected to learn the intonation, stress, and rhythm that constitute the language sound system. To do this correctly, teachers use the lungs, vocal cords, and resonators.

Are there more ways to improve pronunciation. Katalina Perera Hernandez states that as part of the improvement in linguistic performance such as pronunciation, word construction, and intonation, it is essential to know the theory to put it into practice. Based on this idea, teachers can provide the following example: If teachers want to learn to drive, teachers must know the parts that conform to a car from a tire, lights, wheel, and functionalities. As well as, if teachers only listen to a speaker telling us about how to drive without knowing the physical object and its function, this will cause a delay in learning; nevertheless, if teachers can touch the tires, seats, among other parts, following the general explanation of our instructor will be easy as there will be a correlation of what is mentioned and the object. The same thing happens with

linguistics. Not only should it be put into practice, but there should be some information that teachers can touch and understand from the theory (Perera.K. 2009. UNED).

Katalina mentions that one of the most important areas of a theme is knowing how to do it and managing some information, just like using a new tool. Teachers will need the manual to know its correct function. The acquisition-learning distinction is perhaps the most fundamental of all the hypotheses presented here. It asserts that adults have two distinct and independent ways of developing competence in a second language (Krashen, 1982). The first way is language acquisition. As Krashen says, this is a process similar, if not identical, to the way children develop proficiency in their first language. Language acquisition is a subconscious process in which language acquirers polish the use of sounds. Those acquiring a language are usually not aware that they are acquiring it, but they are only aware that they are using it. They are using the language to communicate (1982).

To apply the rules of pronunciation, it is necessary to know first how humans learn their language. Acquisition and acquired skills are subconscious. In general, teachers are not generally aware of the rules of the languages teachers have acquired. Instead, teachers have a sense of correctness. Grammatical sentences sound "right," or feel "right," and errors feel "wrong," even though teachers may not consciously know which rules have been violated. The second way to develop proficiency in a second language is second language learning. It is common to use the term "learning". From now on, it will be used to refer to consciously knowing a second language, knowing the rules, being aware of them, and being able to talk about them. In non-technical terms, learning is "knowing about" a language, what most people know as "grammar" or "rules." Some

synonyms are formal knowledge of a language or explicit learning (Krashen, 1982).

(García. U, Castellon. I, Jarquín. J. ND, UNAN-Managua).

To learn about the production of sounds will help the researcher to learn also how to correct mispronunciation. To exemplify this fact, Zamora and Chaves (2013) investigated 16 students of IV level of the Bachelor's Degree in English Teaching at the Universidad Nacional, at the Omar Dengo campus in Heredia. Their objective was to improve their oral communication skills through the development of autonomous learning. Those who participated in this study were recorded while speaking in English on a particular topic; from that recording, they were given feedback and indicated which aspects needed improvement. Based on this assessment, the group created and developed an improvement plan. Each person selected practices and tasks that would help them achieve their personal goals. To create this plan, an instrument designed by Zamora and Chaves was used, which included a description of the problems, an analysis of the errors, the proposed activities, and the resources used. Those who participated in the study showed a significant improvement in their language skills—the instrument created by the researcher and the researcher to improve oral communication skills autonomously proved successful (Gomez, V.2018, UNED).

As a result of this analysis applied to 16 students, teachers could observe a positive response to improve oral communication skills. Therefore, this research intended to obtain beneficial samples for improvement in each of the students. The idea of this research was that speaking techniques might help students improve their oral weaknesses for better results. Through this, they would have better opportunities in the personal, professional, and work environment.

Undoubtedly, English has become the lingua franca in many countries worldwide in terms of international relations, science, business, tourism, and popular culture, including media. The use of English has taken this relevance at an international level due to the influence and acceptance of the language by non-native speakers such as Costa Ricans (Manajen,2008). Furthermore, according to Fernandez (2015), in recent years, some companies in the country have found it challenging to find professionals who fulfill the requirements that companies ask for and have the language proficiency level requested. Consequently, when many English as foreign language (EFL) learners finish their formal education, they must enroll in other institutions to improve their language knowledge (Cárdenas. C, García. Y, Gradiz.R, Solano. C, Ugalde. L .2017, UCR).

English is considered one of the universal languages. Some national and transnational institutions seek to find people with this bilingual profile to grow these companies. For this reason, students are looking for new options that let them increase their second language skills in private institutions.

Taking into account all the above reasons to continue improving oral skills in English learners, it is also essential to add the national investigation which Katalina Perera Hernandez consulted in Elements of Applied Linguistics in 2009 at UNED which proves that: Verbal reports are oral records of a participant's thought processes, provided by individuals when they are thinking aloud either during or immediately after completing a language learning or teaching task and the discourse analysis looks at how language is used in spoken and written communication. It uses authentic language produced spontaneously in naturally occurring events that were not elicited experimentally, specifically for research. The researcher should analyze this data with

few or no preconceived notions but allow the patterns of language use to emerge. Moreover, the specific objectives of this investigation are the following: (A) Analyze the different ways in which linguistic knowledge can be applied in real, everyday situations in and out of the class. (B) Understand the major concepts and inflections of English pronunciation, grammar, and vocabulary, and recognize its different uses and variations according to social and geographical factors. (C) Identify the features and differences in the first (native) and second (non-native) language acquisition processes. (D) Recognize and analyze the nature of the most common errors in writing. (E) Distinguish and analyze the most common problems of language processing and their effects. (F) Implementing research techniques for diagnosing and analyzing specific linguistic problems, the general one was: The main purpose of Elements of Applied Linguistics is to have students know and analyze and identify the different processes undergone while acquiring a foreign or second language.

Finally, the researcher would like to conclude that phonological awareness is a fundamental early literacy skill that helps children recognize and work with the sounds of spoken language. It is made up of a group of skills. For example, it can identify rhyming words, count the number of syllables in a name, recognize alliteration, segment a sentence into words, and identify the syllables in a word. The most sophisticated and last to develop is called phonemic awareness. It is also the ability to notice, think about, and work with the individual sounds (phonemes) in spoken words. Manipulation of sounds in words includes bending, stretching, or changing words. (Reading rockets. ND).

1.4 Scope

This research would focus on applied Phonics and the study of phonemic awareness techniques that can facilitate learning progress in ninth graders. This research is expected to achieve the following objectives at the end of the study:

- 1.To provide a theory to help teachers identify weaker learners in oral production, such as pronunciation, fluency, and intonation.
- 2.Implement some activities in which learners listen to an audition and record them, and finally give them feedback.
- 3.Read some paragraphs in which they have to perform aloud to evaluate the learners' performance.
- 4.Save the recordings to evaluate the final result after having previously performed the phonemic awareness techniques.

Chapter II

Theoretical Framework

In this chapter, the researcher will present all the theoretical terms of the research. First, the researcher explains what linguistics is and what role it plays in oral communication, then phonetics which is one of the branches of linguistics, and how sounds are emitted when transmitting a message using the phonological apparatus correctly, also the function of each of the organs both mobile and non-mobile. She will explain, among them, the correct use of the lungs, the vocal cords, the soft palate, the tongue, the lower jaw, the lips, the hard palate, the alveolar ridge, and the teeth. Besides the researcher will take into account phonology, which is part of one of the eight fields of linguistics, and how it studies sounds and their variants.

2.1 Linguistics

It is obviously relevant to start this chapter by defining what Linguistics is. Linguistics is a discipline that focuses on the study of communication in human beings. The main focus is on language or verbal communication and the transmission and interpretation of the message. It should be noted that linguistics can be divided into eight fields: phonetics, grammar, phonology, morphology, syntax, semantics, lexicography, and lexicology. However, in this study, the researcher will focus on phonetics and phonology, which will be developed later.

Ferdinand de Saussure, the father of modern linguistics, established that linguistics should be focused on language and not on speech because language is a general system. In

contrast, speech is each particular and individual action of the system. He also asserted that the object of linguistics, and the language, is a form, not a substance, related to the concept of value inside the system. He also explained that if all the speakers in a language agree, then there is no inconvenience in ceasing to call things by one name and calling them by another, as long as the oppositions that relate some units to each other are maintained. (Ocampo. C, 2013). Therefore, linguistics defines or explains the language employing phonology, phonetics, morphology, syntax, and semantics. Any variations due to the area where they live or the family can be interpreted without affecting the message to be transmitted.

Linguistics has been derived from the Latin word *lingua* (tongue) and *istics* (knowledge or science). Linguistics is, thus, the scientific study of language. Before going into detail about linguistics, teachers should know something about language. Language is the chief source of communication of ideas. There are also other ways, such as dance, music, physical gesture, and symbol, to communicate the ideas. In addition, language is a very common and easy source of communication. It is the basis of human civilization, which would have been impossible without it. Language does not come into being overnight: it evolves over a while (Prasad and Tarni,2019).

Moreover, it is important to mention that the word "meaning" is the idea that you want to share with the receiver through words or messages from the sender to communicate. However, the message is first thought and then transmitted through codes. On the other hand, meaning is the concept or idea that you want to convey. At the level of speech (a level of individual expression), a "cave" is a cave itself, a concrete, physical entity. At the level of language (which is a level of mental norms), a "cave" is the abstract,

mental concept of "underground cavity." This concept includes all the characteristics and judgments that the members of a linguistic community share regarding classifying what is considered a cave (J. Halvor Clegg, Willis C. Fails ,2017, p.12).

In linguistics, oral language is extremely relevant because it is generated between two or more people, and it is transmitted through speech, regardless of the language. Speech is transmitted through the sounds that are produced through the phonatory apparatus where the air comes from the lungs, then passes through the trachea, from there it goes to the vocal cords that are responsible for producing the vibration to form the sound waves, thanks to this the voice can be produced. This is represented in figure 1.

2.2 Phonetics

To introduce the topic of phonetics, it is necessary to know what it is, according to Villaplana (2019):

Phonetics describes sounds from a physiological approach. That is, it deals with the ways sounds are produced and perceived by speakers. Thus, Phonetics, for example, examines the positions and the movements of the speech organs involved in the production and perception of sounds. For instance, a sound such as [b] is produced with a complete closure of the lips, which blocks the outgoing airflow, with vocal fold vibration and a sudden air release (p.14).

Applied Phonetics

Phonetics is based on two essential aspects: the place of articulation, where an impediment does not allow the air to pass through in the organs' movement, and the manner of articulation, which determines how the air is produced. In other words, it is defined as the study of sounds. In addition, through it the sender knows how to articulate and pronounce each sound, and at the same time, the listener can interpret it. At the same time, it gives the ability to produce verbal sounds that have rhythm, intonation, pauses and stress that can be understood by another speaker of the same language.

Taking into account all these features, the researcher is aware of the necessity to point out all these elements to guide the students into the accurate production of sounds. In fact Glegg et al mention that : "The study of phonetics requires a vision of the place of this discipline within the human communicative process and an understanding of its role within linguistics in general" (J. Halvor Clegg, Willis C. Fails, 2017, p.1).

The emphasis given by the researcher to phonetics leads her to go deeper into the study of this field. In fact, Phonetics is one of the branches of linguistics. It has high importance because teachers have to pronounce it correctly in order to have good communication. Therefore, teachers are involved in the study of the IPA or International Phonetic Alphabet, which gives us a broader vision of how sounds are produced—taking into account the vowels, the monophthongs, the consonants, and afterward, the allophonic variants that provide us another perspective of why things happen. To conclude, phonetics is fundamental in learning or acquiring a language that is not our mother tongue. People who are starting in the study of a language do not have a solid basis.

When studying oral production, researchers cannot avoid dealing with the production of voice. The voice is produced by the coordinated action of almost the entire

body. The production of the vocalic sound is a complex phenomenon because different muscular structures are involved. This fact requires global knowledge of the phonatory apparatus, which is reached when the structures and the functioning of the anatomy and the principles and mechanisms governing the formation of sound are known (Villager. I, 2017).

In other words, phonetics studies the sounds emitted when transmitting the message through physical expressions. Phonetics has three branches which are acoustic phonetics; which is responsible for describing the sound waves that are produced when the sender sends a message to the receiver, perceptual phonetics, also known as acoustics, because it interprets or perceives the sounds that reach the ear, and articulatory phonetics, which is the area in which the phonatory apparatus is used. Therefore, the organs are involved and show how the incorrect position can vary the desired message. However, in this research, the researcher wants to focus on articulatory phonetics because it permits to know more in-depth the speech mechanism and which body organs are producing the sounds.

Investigating more about the voice, the researcher has found out that the human voice is produced voluntarily by the phonatory apparatus. This consists of the lungs as a source of energy in the form of airflow, the larynx, which contains the vocal cords, the pharynx, the oral (or buccal) and nasal cavities, and some articulatory nasal cavities and a series of articulatory elements: the lips, the teeth, the alveolus, the palate, the soft palate, and the tongue (Miyara, ND).

Furthermore, it is also important to mention that consonants are divided into oral and nasal sounds in producing sounds. Vocalized sounds are produced through the oral cavity (mouth), and nasal sounds are produced through the nose. All organs play a very

important role in transmitting a message because the air current modifies different sounds. It is important to mention that in the production of sound, teachers have mobile organs and immovable organs, which are divided as follows: mobile; lungs, vocal cords, soft palate, tongue, lower jaw and lips, and immovable; hard palate, alveolar ridge, and teeth.

As mentioned above, organs are classified into mobile and immobile. The lungs are mobile organs and the source of air and energy exchange for sound production. The vocal cords are two layers in the larynx that join together to produce the voice by vibrations. In addition, the vocal cords are the one that let identify if a sound is voice or voiceless by the vibration that is caused when a sound is emitted. The difference between voice and voiceless is that a voice sound is produced when the vocal cords emit a vibration. It is voiceless when they do not emit a vibration.

Informing a vocal sound, the vocal cords are adjusted to almost touch along their entire length. The result of air flowing through this constriction is a suction effect that draws the vocal cords together. Nevertheless, as soon as they are together, there is no flow. Consequently, no action pulls them together, so they come apart and release the pressure built up beneath them. Nevertheless, they are again subject to the suction caused by the outgoing air when they are apart. So the cycle repeats itself, producing the regular vibrations known as voice (Ladefoged. P,2019).

In addition, the soft palate is a very important muscle in the production of sounds. It is located at the end of the palate and in the middle of two masses called tonsils shaped like a bell. It can also be lowered to produce nasal sounds or raised for oral sounds. Another of the most relevant organs in the production of sounds is the tongue. Besides being one of the five senses, it helps speakers articulate sounds. It is a very flexible muscle and can be

split into four parts: tip, front, center, and back. The other mobile organ is the lower jaw, which is located outside the mouth and can move up and down. The last movable organ and not less important is the lips because it is one of the most important parts of the articulation. After all, they can take a different position and lock them when you need to hold the air.

The hard palate, also known as one of the immobile organs, is situated in the top part of the mouth and has an important role in the emission of sounds. There is also the alveolar ridge that is located behind the incisor teeth and the teeth that are tissues located in the mouth and are classified as incisors, canines, premolars, and molars since they determine the air coming out of the inside of the mouth, as well as the position of the tongue. Teeth are very important in phonetics because interdental, labiodental, and dental sounds can be produced. Without them, there is no correct pronunciation.

According to Gutierrez. E and Iglesias. P (2017) the teeth are hard bodies that, set in the jaws of the human being. They are largely covered to serve as a chewing organ or for oral production. The set of teeth, molars, and fangs that people have in their mouths constitute the dentition (p.84).

The teeth have an important role in producing sounds because they control air from the mouth and act as a support point. Also, the incisors are the teeth found in the upper and lower part of the mouth. They are the most noticeable when smiling. They play a very important role in producing sounds because they are like a door in the mouth. If they are open or if there are missing pieces, the air flows, and sounds are not accurately produced. Some sounds that usually happen when children's baby teeth fall out or adults with dental fall problems cannot be produced.

Right below, the researcher presents a drawing with the organs that are used in the production of sounds:

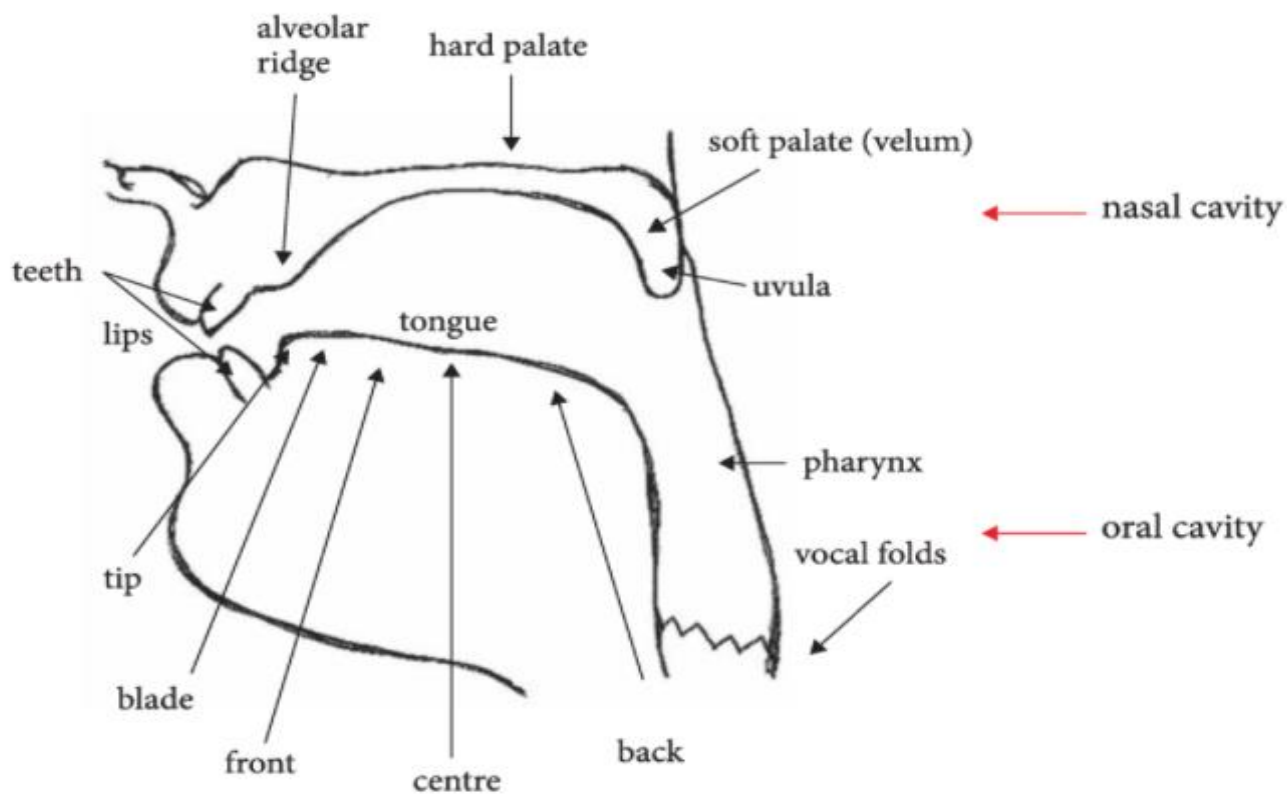


Figure 1. Schematisation of the speech organs in the oral cavity

Taken from: Villaplana, Estebas. (2019). *Teach yourself English Phonetics*, Page 21.

2.3 Phonology

Phonology is one of the eight fields of linguistics. It is responsible for studying both the system of sounds and their variants and how they are articulated correctly to be produced. In addition, it focuses on everything that has to do with language, as contrasted with phonetics, which emphasizes speech.

Phonology is the name given to a level of the sound structure of languages and the discipline devoted to studying sound structure. Phonology is not concerned with the physical nature of speech sounds but with the unconscious rules of sound patterns found in the mind/brain of the speaker of a particular language. These rules define how sounds are made in particular contexts, describe the sequence and distribution of sounds in the language, and characterize how the sound pattern reflects information from other grammatical components (morphology and syntax). The phonological rules refer to the language sounds are phonemes, units of analysis whose definition may be slightly different, depending on the theoretical aspect considered (Schwindt. L, 2017).

The study of phonology will allow you to learn more about language in general and in English specifically. Whether English is not your native language, this will help you improve your pronunciation and listening skills and help you learn a second or third language. Cedeño et al clarify about the necessity to be aware about the correct use of phonology:

“Moreover, phonology analyzes sounds as a linguistic phenomenon, that is, it deals with how sounds are used in a language to distinguish meanings, as well as the principles that govern their distribution and the relationships that exist between them”

(Cedeño. R, Colina. S, Travis. B, 2014, p.2).

Phonology is one of the most forgotten areas of linguistics in teaching since most public or private institutions focus more on grammar, vocabulary, and reading, which is

fine as long as the wayside does not leave the system of phonemes and sounds.

Understanding when learners are mispronouncing lead to perform better in any language.

2.3.1 Phonemes and allophones

Phonemes are basic sound units of a language that are used to express different meanings and are recognized by splitting the sounds. Meanwhile, allophones are variations of the phoneme and are listened to by the speakers as the same sound. It is important to mention that the phonemes are placed between slashes // and the allophones between square brackets []. To represent these sounds, teachers use the International Phonetic Alphabet (IPA) for phonemic transcription.

The International Phonetic Alphabet, AFI in Spanish or IPA in English, is very important in transcription, phonetics, and allophonic variants. It is derived from the Greek and Latin alphabets, and it is divided into consonants and vowels. The international phonetic alphabet plays a very important role because every symbol represents a sound. An interesting thing about the IPA is that it is like learning a key because you will learn the pronunciation of any word, regardless of the language, even if you do not know that it exists. Moreover, it is worthy to notice that the main function of the IPA is to be helpful to establish the correct phonetics by using universal symbols derived to represent any language.

On the other hand, it is important to mention that the international phonetic alphabet consists of 107 phonetic symbols, including consonants and vowels, 31 diacritical marks which are periods or signs that are added to a letter or character to indicate an accent,

and 19 suprasegmentals that have the function of indicating how a speech characteristic is affected in a phoneme such as duration, tone, rhythm, etc.

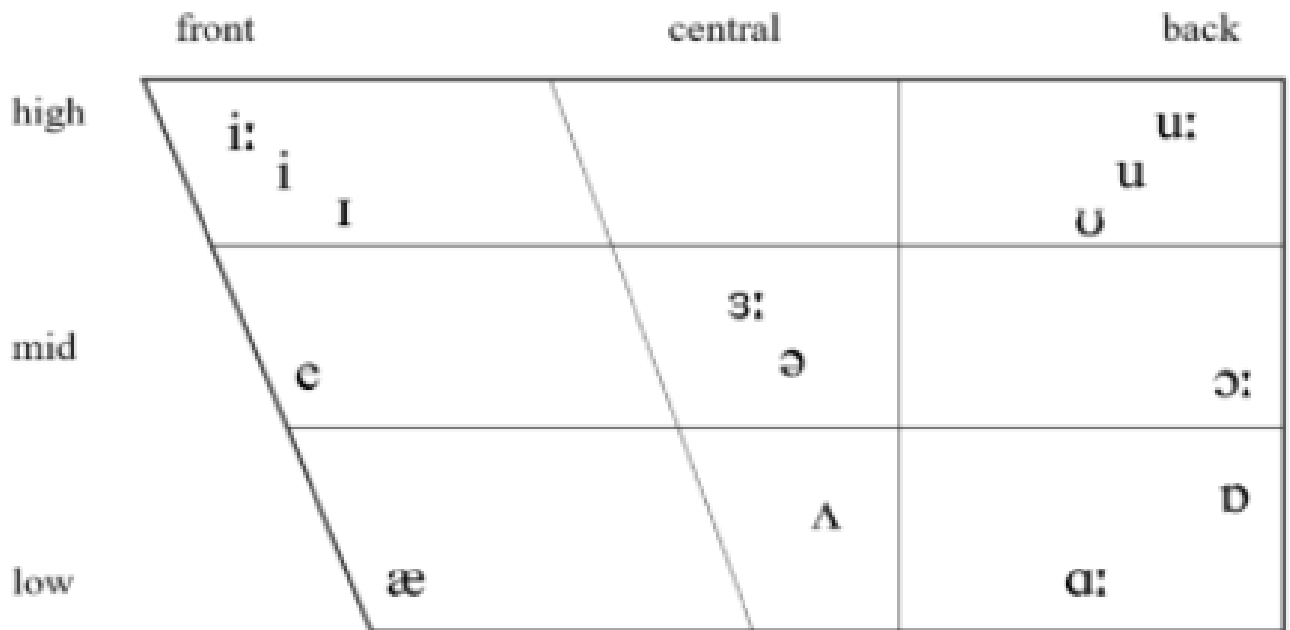


Figure 2. English Vowels

Taken from: *Szcześniak, K, Porzuczek, A (2019). Transcription Practice for the International Phonetic Alphabet: Exercises for Students of English, Page 2.*

The phoneme is an abstract unit belonging to the language, and it is realized in a speech employing concrete sounds. The different sounds that can be actualized in the same phoneme are phonemic variants that are called allophones. Thus, the phoneme has different variants of realization in speech, which depend on the contiguous sounds and the word's position (García. A, Gallardo Paúls. B,2005).

As previously mentioned, a phoneme is part of the articulation of sounds. A phoneme is a small unit that can be broken down into smaller ones and differentiated between words in a language. On the other hand, phonemes are classified into two groups, vowels, and consonants. However, each of them is produced according to different points of articulation and modes of articulation. In some cases, the sounds are usually sonorous due to the vibration of the vocal cords. However, they can also be voiceless when there is no vibration.

2.4 Pronunciation

Pronunciation is related to the origin of words in a language, and it is based on how words are expressed. Pronunciation is one of the fundamental factors for human beings because, by nature, humans need to relate to each other. One of the biggest pronunciation problems is not to articulate the words correctly, making the receiver not understand the message that the sender wants to convey. Dell Hymes clarifies this situation in the following citation (1972) :

“ The sender is not a simple coding element, but a real subject with interests, knowledge and beliefs, who not only decodes: he is the addressee and his relationship with the sender is absolutely relevant” (Cited in Calvo Fernandez, Vicente, Anaya Reig, Nuria ,2019, P.8).

According to the above, pronunciation has an important role in communication because a correct transmission allows the deciphering of the message that the sender would like to share with the receiver. Oral communication is the most relevant one in linguistics.

Considering the previous lines, the production of sounds is an important process in which second language learners must be careful because a single variable such as the duration, the position of the lips, or the rhythm can give a different meaning to a word. Therefore the message can be misunderstood.

The term "pronunciation," as referred to above, is used in a broad sense. It refers to the way the mouth is shaped during consonants and vowels and a system of stress, intonation, and general articulation habits. In fact, Bourdieu (1991) emphasized that while individual sounds are often studied in isolation and subsequently compared with equivalents in other people's speech, they are only a part of a larger pronunciation style in which all individual articulation features (consonants and vowels, but also intonation and general vocal track usage) should be studied as an "indivisible totality." Together, these form your pronunciation, and this skill thus entails a broad behavioral pattern (Smakman, D,2020).

On the other hand, it aims to recognize or overcome the difficulty of producing sounds in a way that helps both emitters and receivers to perform better in order to communicate efficiently. However, it can be challenging for students whose native language is not English because they generally tend to produce vowel sounds like /I/ in English as the same as /i/ in Spanish, but in English, that /I/ is a more relaxed and shorter sound. Although, it depends on the ability of each student to acquire a better perception of the sounds and how well they relate to native English speakers, which would make it easier for them to practice constantly.

According to Ken Xiao (2019), Many English words sound very similar that people think they are the same. Pronouncing the right words incorrectly can mean something

different. Even a small mispronunciation can spoil everything. That is why speakers have to train their ears to hear the small differences between similar words and our mouths to pronounce them right (p.4)

One of the most complicated areas for language learners is pronunciation because many words sound similar and confuse the speakers. After all, they do not know the difference, and they will think they are the same. A good strategy is to work on "Minimal pairs," which are pairs of words that are differentiated by one sound, for example, "Bit": ['bit] and "Beat": ['bit]. The two sounds sound very similar, but when you transcribe them, you realize that one has the short "i" and the other the long "I," which makes them different in pronunciation.

2.3.1 Stress

Stress is part of phonetics because it accentuates the sounds and syllables, making speakers differentiate the meaning of similar words. It also permits to identify articulations and how pitch changes are seen in isolation words or sentences. On the other hand, it is important to mention that in English, a word can have different pronunciations due to its grammatical categories, such as verbs, adjectives, or nouns, and this is caused by the initial stress derivation that results when the stress is transferred to the first syllable.

As mentioned above, initial stress derivation is a phonological process in English that moves the stress to the first syllable of verbs used as nouns or adjectives. This process can be found in the case of several dozen verb-noun and verb-adjective pairs and is gradually becoming standardized in some English dialects but is not present in all (Wikipedia contributors, 2021).

For a study like this one, to recognize the importance and use of stress is essential. All words have prosodic or phonetic stress. That is to say that the stress indicates the greater phonetic intensity or force of voice with which speakers pronounce a syllable in each word. The syllable on which this prosodic accent falls is the tonic syllable. The rest of the syllables of the word are unstressed syllables (Ciruelo Rando, P. 2015). It should be noted that English does not use accents. However, "word stress" emphasizes the pronunciation of words to provide a general perspective to correct words.

When a language has stress, every word has one syllable, which in some sense is more important or more prominent than any other syllable in the same word. This is also the crucial difference between tone and stress. There is no difference in prominence attached to the syllables that make up the word in a tone language. In contrast, stress is a culminating property: only one syllable can be the strongest (the prosodic head) within a constituent such as a word. Which syllable is the prosodic head of the word is often predictable (Goedemans.R, Heinz.J, and Van der Hulst.H , 2019).

2.3.2 Intonation

Intonation is one of the reasons why the receiver does not understand the message transmitted most of the times, because if the sender says the following expression "Give me the cell phone", and does it in a calm tone, speakers could interpret that he only wants the cell phone; however, if the interlocutor does it with a louder tone, teachers could understand that he did it angrily or annoyed; therefore, what the speaker says must be transmitted with appropriate intonation.

Pilar Prieto (2005) states that intonation is a complex linguistic phenomenon whose systematic treatment requires the combination of three complementary levels of

analysis: the physical axis (or the evolution of the physical parameter of fundamental frequency throughout the utterance), the phonological axis (the melodic units with significant importance in a language) and the semantic axis (the significant effects produced by these melodic variations). As in the segmental plane, listeners are presumably only aware of a restricted class of tonal movements that produce linguistic contrasts in a given language and not all the phonetic modifications of the melodic curve. The linguistic analysis of intonation aims to relate the physical and functional axes of intonation and "discover" the tonal units capable of generating distinctive oppositions or producing meaning differences (p.14).

As previously mentioned, intonation is based on three pillars. The first one focuses on the physical frequencies referred to the phonological pillar that has to do with the melodies that are emitted, and the semantic one that concentrates on the effects of the different melodic variations, and all the oppositions that are present in the linguistics in order to have a right intonation. The key is not the fluency of the message , but the correct intonation ,so that it is a quality message since it is often not what is said but how it is said.

According to Molina (2014), from **the Principle of Optimal Relevance**, intonation contributes to the relevant message because it conveys an amount of information. The listener gives priority over others (such as semantics) to decode the message easily. Therefore, intonation not only orients but also determines whether the listener interprets one intention or another (Bermúdez Sánchez, M.,2021).

As mentioned in the previous lines, a correct intonation helps us have a better semantic because you can decode the messages more simply. At the same time, it helps you

figure out the meaning in smaller parts, giving the listener a better interpretation of what is transmitted.

Melody is also one of the most relevant terms of intonation since it consists of the consecutive use of different tones at different pitches to deliver a message. According to Hidalgo (2019), the conceptual disparity between melody and intonation, the notion that concerns us from a linguistic point of view is that of intonation, since the concept of melody corresponds to the mere succession of tones along with a voice emission, interrupted by voiceless segments (occlusive consonants, e.g.), whether they are linguistically relevant elements or not (p.22).

“Voicing occurs when the air from the lungs pushes the closed vocal folds, causing them to vibrate. Sounds produced with vocal fold vibration are voiced . In contrast, voiceless sounds are those made without vibration of the vocal cords”—Wayland (2019, pp.5).

The voice is produced when the phonatory apparatus is triggered by the person who is speaking, first activating the respiratory apparatus, which is where the air is placed as the nose and lungs, then passing through the phonatory apparatus, which is the one that gets that air is transformed into sound as the vocal cords, and finally by the resonator apparatus which is where the sound acquires the tone that characterizes each person. In this process, the tone is produced depending on the force with which the air leaves the lungs, vibrating the vocal cords.

2.3.5 Fluency

Through fluency the speaker can express himself very easily in a foreign language, without any particular difficulty or using "klutches." On the other hand, one of the most common strategies used in fluency is tongue twisters which are words with similar phonemes or sounds and rhymes to improve speed and acquire vocabulary.

In regards to the importance of fluency, Van-der Hofstad establishes that if there is no fluency, the efficiency to communicate can be blocked,

"The verbal fluency is poor, resulting in choppy speech, with abundant disturbances in the same in the form of crutches and mainly excessive stretching of sounds at the beginning or end of words" Van-der Hofstadt (2005, p.46).

Fluency constitutes one of the most important areas for people who are learning a second language. As a result, hesitation and repetitions are unleashed, and therefore the message to be transmitted can be misunderstood.

Fry and Rasinski (2007) stated that to become fluent, students must also read at a smooth pace and with appropriate expression. Can expression be taught? Yes! Students can be taught to use structural and contextual evidence in writing as clues for how to read. Students can also be taught strategies for recognizing mood, purpose, emotion, and other interpretive skills that they can then use to enhance expression. The speaker has to target on the three major components of fluency: accuracy—a rate of reading and expression (p.6).

As mentioned above, fluency was divided into three main factors: reading speed, based on the number of words produced when reading and that is understandable; expression, which is one of the skills used to communicate and interact with other people successfully; and accuracy, related to how the message is conveyed in a way that does not produce mistakes and that coincides with the language being spoken.

The combination of reading accuracy and rate produce a student's oral reading fluency (ORF). It is to express words correctly per minute. It is essential to measure both accuracy and rate. For example, if you measure only accuracy, you will not know that it takes one student twice as long to read the same text as another student. Which student is fluent? Likewise, if you measure only rate, you would not know that one student, who could read a text much more quickly than another, makes significantly more mistakes (Blevins. W, 2001).

The accuracy and speed are important in fluency, both oral and reading, through them the speaker expresses himself more naturally and uninterruptedly. Accuracy focuses on using the appropriate grammar and vocabulary. In contrast, speed focuses on the velocity at which the person articulates the words or phrases. The message is conveyed in a way that corresponds to the implemented language.

2.5 Phonological awareness

Phonological awareness is a literacy ability that helps identify and work with the sounds that are orally produced and that are made up of various skills such as alliteration, listening, rhyming, syllabication, segmentation, and blending. On the other hand, speakers can recognize the different parts of words in phonological awareness because the most important parts of speech, such as compound words, emerge from phonological awareness.

As previously mentioned, phonological awareness is divided into six skills. One of them is alliteration, based on the repetition of letters and syllables in the same paragraph. For example, in a statement like “ Peter piper picked”, it can be observed that the letter "P" is repeated, producing alliteration. The second skill is listening, which promotes the ability to differentiate or recognize the sounds around them. A good strategy to work on listening is to give the student an exercise in which the student listens to the sound of a goat and then picks the card.

Rhyming is a phoneme substitution task. Phoneme substitution involves changing a particular phoneme in a word to make a new word. Rhyming is a complex skill that requires identification, segmentation, and blending. The child is given the word such as “gate” and asked to say the word, but instead of using a /g/ sound in the beginning, put an /l/ sound in the beginning (Groves. V, 2009).

The next point is rhyming, a consecutive word in which similar sounds are repeated, such as the final sounds of words, for example, "The cat sat on the mat." Moreover, syllabication is the division of a word into syllables, such as universal: uni-versal. The other aspect is segmentation, which is the ability to disassemble words into individual sounds.

For example, "Jet" into its component sounds: J-et. Finally, blending is the skill of listening to the individual sounds of a word, putting them together, and saying the word that has been formed. So, for example, if you tell a student these sounds: d, o, g, then he will say the word "Dog."

According to Groves. V (2009), segmentation is based on an individual's ability to separate the phonological structure of words. Children are asked to perform a series of tasks involving the separation of individual sounds or sound chunks in words. The segmentation skill most often taught is that of dividing words into syllables. Another segmentation activity involves dividing words into onset and rhyme. Onset is the first sound preceding the vowel, and tense is the vowel sound and the remaining part of the word. For example, the word “ look” would be divided into the /l/ and /ook/ parts (p.6).

Blending tasks require the subject to synthesize phonemes into words. The teacher commonly pronounces phonemes in isolation, and the child is asked to blend the phonemes into a word. Therefore, /c/ /a/ /t/ would be blended into the word cat. Another task used to teach blending asks the student to choose the picture corresponding to individual phonemes presented orally. For example, the student might be asked to choose the correct picture for the phonemes /d//u//k/ (Groves. V, 2009).

Phonological awareness is a multilevel skill of breaking down words into smaller units (Hoiem, Lundberg, Stanovich, & Bjaalid, 1995; Muter, Hulme, Snowling, & Taylor, 1997; Stahl & Murray, 1994; Treiman & Zukowsky, 1991). Just as a word can be described in its syllable structure, onset-rime structure, and segmental or phoneme structure, so too can phonological awareness be described in terms of syllable awareness, onset-rime awareness, and phoneme awareness (Gail T. Gillon,2018,p.4).

On the other hand, teaching phonological awareness and phonemic awareness tends to be confusing sometimes because the phonetic word has a relationship with sounds and phonemes. However, teachers use phonological awareness to analyze, divide, segment,

or search for a rhyme in words. For this reason, in this work, the researcher will use applied phonetics techniques to help the student population in oral production.

2.6 Method and Technique

Maite Ayala (2021) states that the difference between a method and a technique. It is that a method consists of a series of steps to achieve a general result or goal, such as the scientific method, Pomodoro method, Montessori method, weight loss method, or study method. Furthermore, a technique refers to a specific action or way of carrying out an activity. In the execution of a method several techniques can be used, that is why teachers speak of study techniques, or agricultural techniques. For example, within a study method, different techniques can be found; one to concentrate, another to read faster, another to summarize, etc. Considering the previous lines, it can be pointed out that the methods are carried out with the purpose of reaching an objective through different structures, nevertheless the techniques are applied following different steps with the purpose of framing a method throughout different instruments.

2.7 Phonemic awareness

Phonemic awareness focuses on the ability to handle and manipulate individual phonemes. It is part of a developmental pattern that ranges from simplicity to difficulty. Although it can be confused with phonetics, which represents sounds by phonetic symbols, it is frequently confused with phonemic awareness. On the other hand, it is important to mention that besides oral production, phonemic awareness is of great benefit for reading because it generates good results in students.

Phoneme (or phonemic) awareness is a third way to break down a word into smaller parts which is to use the individual sound or phoneme level. A "phoneme" is defined as the smallest unit of sound that influences the meaning of a word. For example, the word "tree" has three phonemes: /t/ /r/ /i/. If one of these phonemes is changed, a new word or non-word is created. Suppose the first phoneme is changed from /t/ to /f/, the word free will be heard. Suppose the last phoneme of the word "tree" is changed from /i/ to /a/, the word "tray" will be heard. Thus, each phoneme in a word can change the meaning of the word. Phonemes are abstract concepts. When words are pronounced, the reader does not hear the separate phonemes in words. Rather, the phonemes are blended into syllables within the sound stream (Gail T. Gillon, 2004).

Phonemic awareness focuses on highlighting the benefits of forming words by identifying each phoneme orally, and at the same time, demonstrating that changing one of the phonemes could give a different meaning to a word. For example: If I transcribe "Cat" by removing the first phoneme and replacing it with an "R," it creates a different word, which would be "rat."

Phonemic awareness activities help children learn to distinguish individual sounds, or phonemes, within words. This awareness is a prerequisite before children can learn to associate sounds with letters and manipulate sounds to blend words (during reading) or segment words (during spelling). Often children who have difficulties with phonemic instruction do so because they have not developed the prerequisite phonemic awareness skills that many children gain through years of exposure to rhymes, songs, and being read. Phonemic awareness training provides the foundation on which phonemic instruction is built (Blevins.W,1997).

Applied Phonetics

Phonemic awareness enables us to identify individual sounds heard in words because phonemic awareness is completely auditive. On the other hand, the English language has 44 phonemes. Something important to point out is that people always tend to believe that phonemic awareness is related to letters. However, phonemes are the sounds produced through speech. As mentioned above, early training or stimulation is very useful because it helps learner to become more sensitive to the different areas of phonemic awareness. It also promotes concentration, memory, rhyme, and phonic training, which lets the child feel more comfortable and adapt to the segmentation of phonemes in the target language.

Chapter III

Methodological Framework

This chapter will apply four different instruments through a checklist. The phonological awareness technique will be used to work with the sounds of some consonants, which will enable the researcher to collect data. The results will be demonstrated and evaluated in this section.

3.1 Research Approach

The methodology implemented in this work is qualitative. Thus, it is important to mention that this methodology aims to collect data and statistics. Hernandez, Fernández, and Baptista (2014), when detailing that the qualitative research approach is defined as, "Qualitative approach uses data collection and analysis to refine research questions or reveal new questions in the process of interpretation" (Pag.7). In particular, it focuses on the use of tables, interviews, and statistics. The objective of the phonemic awareness techniques is to show the productivity that they generate in the students. Moreover, the idea is to create comparative statistics from the whole process to obtain a before and after and, in turn, identify the weakest areas to continue working on them. In addition, to create interviews to find out how the students and teachers felt, the teachers take a very important role because they will identify the positive and negative results in the students.

3.2 Research Design

A succinct definition of action research appears in the workshop materials to study how to inquire in education. That definition states that action research is a disciplined process of inquiry conducted by and for those taking action. The primary reason for engaging in action research is to assist the "actor" in improving or refining his or her actions. Practitioners who engage in action research inevitably find it to be an empowering experience. Action research has this positive effect for many reasons. The most important is that action research is always relevant to the participants. Relevance is guaranteed because the focus of each research project is determined by the researchers, who are also the primary consumers of the findings (Sagor, R,2000).

The research design concerns a technique used to logically and coherently choose the different areas of the study so that the research problem and the data collection are being addressed correctly. Furthermore, it allows researchers to focus on research methods, and it provides them with tools to use.

On the other hand, other methods such as interviews can be used. As it is a conversational method, it leads to identify the weaknesses and skills of the respondent. If the interviewer is clear about the data she wants to obtain, she will obtain important data. Interviews can be conducted face-to-face, by telephone, or through digital platforms. If the interview is conducted in person, you can interpret the respondent's body language and obtain answers.

3.2.2 Descriptive Research

Descriptive research is an effective way to obtain information used in devising hypotheses and proposing associations. Descriptive research cannot test or verify. Analytical research is required to evaluate hypotheses or ascertain cause and effect. Important examples of descriptive investigations are descriptive epidemiologic research and qualitative research studies. Descriptive research often illustrates a relevant but non-quantified topic involving a well-focused research question (Elaine R. Monsen, Linda Van Horn , 2007).

Descriptive research is the one that describes the population that is being analyzed and focuses on answering the questions such as how, what, when, why, and where. However, the main purpose is to provide characteristics of the population and ask why the research is being carried out. For this, investigators use statistics, hypotheses, or surveys for the clarification of the different events.

3.3. Information Resource

Information resource management/database administration (IRM/DBA) embodies two separate functions: the first is managing an organization's data and information as a valuable, common resource or asset, available to all and manages to ensure against a loss, duplication, redundancy, or incompatibility. This portion is often called data administration. The second area is the physical and logical design and management of files and databases and the placement on storage devices (disk, tape, mass storage, etc.) ((Rabin. J,1987).

The information resources are the data and information that are gathered in an investigation. The collection of resources of information involves data of all kinds as

information managers. They are also related to collecting data in different areas such as human resources, sciences such as biology, and informatics.

3.3.2 Primary Resource

The primary or direct sources are those that have not been previously interpreted or, at least, that have not been interpreted in the sense that interests the focus of the thesis or with the desired depth. They are sources in the sense that no one has gathered such information before. A primary source may be a book that is analyzed, a manuscript that is interpreted, newly collected statistical data, surveys, an eyewitness account, or some kind of document that has not been previously analyzed. There are rules for considering their validity. They must be original or in their original language; they must also be complete. They must have the source in its most natural form. Thus, a translation cannot be considered a primary source, and neither can an anthology (Gallaud, E., 2015).

The primary data are obtained by the researchers, where he or she analyzes magazines, surveys, or questionnaires. They are collected with their instruments, which are based on their research.

3.3.3 Secondary Resource

The secondary or indirect sources include material that has already passed through the analysis of other experts. These are facts and materials known or transmitted by others. They are the critical books, and in general, the interpretations that have been made of a subject. In a study of Ruben Dario's poetry, his poems would be the primary source, and all the books that have been written about them, the secondary ones. These indirect sources

have greater or lesser validity depending on the author's level and his research method. They are also better or worse, depending on their validity. A magnificent analysis of a subject made at a historical moment can become anachronistic if new research techniques are developed (Gallaud, E., 2015).

The secondary resources are obtained through primary resources or resources already used by internal and external experts. They also provide greater stability to primary sources. On the other hand, the secondary resources are written accounts since they are not evidence but comments and discussions.

3.3.4 Tertiary Resource

The tertiary sources are a selection of primary and secondary sources, as may appear in bibliographies, catalogs, etc. This is not an overly important or useful distinction (Gallaud, E., 2015). The tertiary resources form a combination of primary and secondary resources. They can be physical or digital, such as bibliographies, surveys, or catalogs.

The tertiary resources can be misunderstood with the secondary ones because both materials do not come from original information but are collected from the primary ones. However, it should be noted that tertiary sources can contribute to investigating important information about the research problem.

3.4 Analysis Categories

The categories of analysis constitute an indispensable aspect important for conducting the investigation, considering three main areas of emphasis for this research: pronunciation, listening, speaking, and activities described in the following paragraphs.

3.4.2 Pronunciation

Pronunciation refers to the ability to emit sounds that a speaker transmits phonetically to facilitate or hinder the listener in the reception of the message. In order to achieve a good perception of the message, the sender must articulate the sounds correctly.

3.4.2 Listening

Listening is the capacity developed in learning a foreign language to hear and understand the transmitted message.

3.4.3 Speaking

Speaking refers to the oral communication that is developed through the process of speaking and listening.

3.5 Data Collection Instruments

The data collection instruments are very important because they are used to analyze different problems through different techniques to verify the problem. During this investigation, the researcher will carry it out in the 9-6 group of the Liceo San Rafael de Alajuela in subgroups A, B, and C in a presential way. The instruments to be used in this investigation are the following; pre-test alliteration or "Tongue Ticklers," The main objective is that students focus on one sound and repeat it constantly with different consonants. On the other hand, students will be tested with a brief introduction to vowels and some consonants at the beginning. Post-test rhyming and phoneme deletion will be two activities where the researcher will work on phonological awareness techniques. Students will apply the knowledge they obtained in the introductory class. In addition, the

investigator will establish a log in which she will register all the skills and weaknesses that the students suffered in the process of identifying the different sounds, as well as the percentage of students to whom it was easier, and finally, surveys to have better support of the information collected. All these instruments will be applied in six sessions with the three subgroups of 9-6.

3.5.1 Observation Checklist

According to Stobart, Gordon (2008), a checklist, also known as a control list, is an assessment tool that details the criteria that must be followed to effectively solve a given learning activity, and the indicators that make it possible to observe that these criteria have been met clearly. These criteria and achievement indicators are presented in the form of a list that, in a communicative conception of evaluation, is a list negotiated and shared by all participants in the teaching-learning process: teachers and students. Therefore, this list guides the student on the best way to solve a task, both while carrying out an activity and at the end of it. It is, therefore, a very powerful tool for the development of learner autonomy and self-regulation. The checklist's main function is to be one of the instruments, which will have as main objective to gather the process of each student during the pre-test, post-test, and surveys. This evaluation is expected to obtain successful and unsuccessful results in the phonemic awareness technique developed with different consonants. The students will practice with tongue twisters, rhymes, and phoneme deletion.

3.5.2 Pre-test

Based on e-masters (2020), a pre-test is an assessment administered to students before formal instruction to measure how much learners know about a topic, so they can go directly to the content they need without reviewing something they do already know. With this information, you can determine how much they know about the topic, what areas need to be reinforced, and if there are any gaps in information that need to be filled.

Based on the previous lines, a pre-test is carried out to apply it in an established population to have a better overview of the students' bases and with that information to reinforce the weak areas. On the other hand, the researcher will also apply a tongue twister where alliterations or repetitions of a similar consonant are produced in order to improve their hearing and at the same time develop their speaking and pronunciation skills.

The researcher will reinforce pronunciation efficiency through alliterations which are identified by the consecutive repetition of the same phonemes in the same sentence.

Example: I wish to wish the wish you wish to wish. In this example, teachers can identify that the phoneme /w/ is repeated several times, making it alliteration.

3.5.3 Post-test

"The post-test analysis is the substantial point of the research because it is framed to contrast the hypotheses for this research." Sanabria Marco, ND, (p.15). As previously mentioned, the post-test is based on measuring knowledge and verifying positive results obtained in academic training; therefore, in this type of evaluation, a group of students is

graded according to a topic- Later this same test is applied to the same students to observe their progress or improvement.

The post-test will be applied employing rhyming, It is expected that students can identify the sounds that rhyme when they are given auditory and visual cues accurately, Besides, phoneme deletion will be focused as a basis to eliminating the initial phoneme of a word and identifying the new word . This is done when they are given two options. These are two techniques of phonological awareness, where it is intended to obtain good results to develop the skills of pronunciation, speaking and at the same time listening. This is after having applied the materials through the sounds of some consonants and tongue twisters orally.

3.5.4 Surveys

To introduce the topic of surveys, it is necessary to know what it is according to Question Pro (2021):

Surveys are a method of research and data collection used to obtain information from people on various topics. Surveys have a variety of purposes and can be conducted in many ways depending on the methodology chosen and the objectives to be achieved. Data are usually obtained through standardized procedures so that each respondent answers the questions on an equal footing to avoid biased opinions that could influence the outcome of the research or study.

In addition to the previously applied instruments, the students will also be evaluated employing a survey where the investigator will obtain a statistic of the weakest and strongest areas. The survey results and the answers obtained from the pre-test and post-test

will be used to measure how effective the phonological awareness techniques were in improving pronunciation in the ninth-grade students of Liceo San Rafael de Alajuela.

3.6 Collection data process and data analysis

The data collection will provide an idea of how to gather and measure information on this investigation's specific outcomes, leading the researcher to provide answers to the relevant questions and evaluate the results. After these results, the investigator will analyze them one by one and identify the most important issues that need to be addressed.

The students will be working with different consonants / t, p, k, l, b, w/ in tongue twister, rhyming, and phoneme deletion, working the technique of phonological awareness. A pie chart will be made where the subgroups A, B, and C are compared, emphasizing the level they started with and the one they finished with after applying the different tools. The instruments will be worked on in the process of approximately 5 to 6 sessions.

The researcher will also evaluate the students through a checklist from the disposition, behavior, participation, and progress in the different activities to be performed. The researcher will also identify the weakest areas to reinforce them. There will also be a pre-test with a tongue twister to better understand the areas that she is going to work on.

Afterward, she will work on a post-test where she will work on three activities, among them rhyming, phoneme deletion, and finally with a survey, where the pre-test results and everything learned in class will be evaluated.

During the first rhyming activity, the students will work with two images in turn. The researcher will tell them how they are pronounced, and according to that, they have to identify if both have the same ending. If so, they will have to raise the green paddle, and if

Applied Phonetics

not, they will raise the red paddle. Later in the phoneme deletion activity, they will be given the word. They will have to identify what new word is formed if teachers eliminate one phoneme. To conclude, the students will have to survey the different activities done in class through the Likert scale.

CHAPTER IV

Data Analysis

This chapter will apply four different instruments through a checklist. The phonological awareness technique will be used to work with the sounds of some consonants, which will enable the researcher to collect data. The results will be demonstrated and evaluated in this section.

4.1 Analysis and Interpretation of the Results

This chapter of the research will analyze the results collected through the different instruments applied during the research. Therefore, all the data obtained by the instruments will support the conclusion of the overall research. The information presented in the previous chapters will be checked with pieces of evidence. However, the data collected by each instrument is now going to be discussed and analyzed. The results can be examined, drawing suitable conclusions can be made, and suggestions for changes could be made regarding possible improvements in future investigations.

4.1.1 Pre-test

In the Pre-test, the researcher analyzed the pronunciation of the 9-6 students in subgroups A, B, and C of the San Rafael de Alajuela High School through three consonants among them /f/, /w/, and /p/. The phonological awareness technique was used to work on alliteration in 3 different tongue twisters. The pre-test was applied to 19 students, including nine girls and ten boys from the different subgroups.

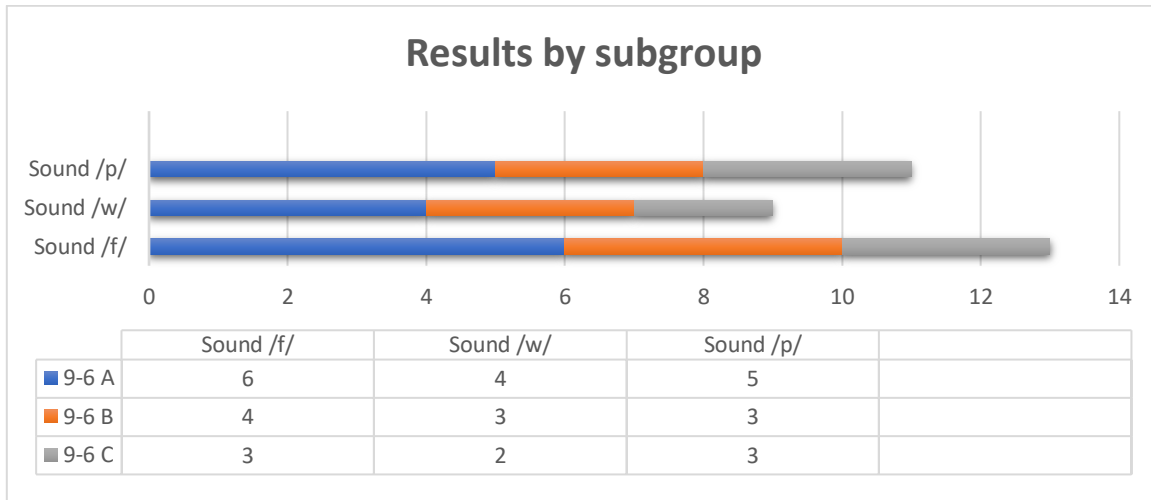
Applied Phonetics

Several students demonstrated a certain facility with the sounds mentioned above throughout the testing process, and some had difficulty with them. However, the students were willing to learn and to be improved. As a result, this generated a good overview for the following instruments. The teacher in charge told the researcher that he had been working with them on pronunciation, but that some students could not do it because they were embarrassed. Hence, the teacher had to innovate with more interactive and group techniques.

As mentioned in the research, the main objective of this technique is to be able to divide words and combine sounds to develop listening, speaking, and pronunciation skills. Consequently, this means that if the students develop these techniques more, they would have a greater facility in the auditory part because most of the time that people have difficulty when learning a foreign language, it is because it is difficult for them to organize and use the different sounds of a language that is not their native language. Graphics of the pre-test results are the results obtained by the students of Liceo San Rafael de Alajuela.

On this point, the researcher can present and analyze the first chart,

Graphic 1. Results of the students from the Pre-test by subgroup



Source: Maylid Murillo, Pre-test carried out from the activity applied on tongue twisters. (Sept. 2021)

Analysis of chart 1: An analysis was performed to understand better the predominance of the three subgroups of sections 9-6 in the pronunciation and alliteration skills. The results obtained were applied individually to each of the members of each subgroup, where 13 were able to perform the tongue twister with the phoneme /f/ correctly, and six were unable to do so. Likewise, nine were able to work with the phoneme /w/ correctly, and ten were not able to do it, and so with the phoneme /p/, since 11 were able to do it and eight were not, being the phoneme /w/ the one that presented the greatest difficulty.

Table 1. Results of the students from the Pre-test by a student list

NO	Student's Name	Student's code
1	Diana Polanco Duarte	S-1
2	Karina Gutierrez Carvajal	S-2
3	Daniel Martinez Mena	S-3
4	Tracy Mayorga Chinchilla	S-4
5	Ashley Sofia Herrera Segura	S-5
6	Brandy Muñoz Diaz	S-6
7	Manuel Gutierrez Rodriguez	S-7
8	Yojobeth Gonzalez Piedra	S-8
9	Henryork Luis Guzman	S-9
10	Juan David Herrera Lara	S-10
11	Keyner Lira	S-11
12	Michelle Fuentes Herrera	S-12
13	Alejandra Jimenez	S-13
14	Bryan Gonzalez	S-14
15	Sebastian Matias Henriquez Era	S-15
16	Anthony Mendez Obando	S-16
17	Stacy Guido Herrera	S-17
18	Nils Morgan Diaz	S-18
19	Gabriel Porras Salazar	S-19

Source: Maylid Murillo, name of the students with a code (Sept, 2021)

Analysis of table 1: In the previous table, the researcher gathered data from the population evaluated through a table with each student's name and last name and a code. The main purpose of the codes is to generate different statistics without writing each student's full name.

Table 2. The test result of the Pre-test can be seen in the table below:

Indicators	Total of Students			
	Yes	%	No	%
Fluency	10	52.63%	9	47.36%
Students demonstrate good sound perception	7	36.84%	12	63.15%
Sound omission	5	26.31%	14	26.31%
Sound /f/	13	68.42%	6	31.57%
Sound /w/	9	47.36%	10	52.63%
Sound /p/	8	42.10%	11	57.89%

Source: Maylid Murillo, Pre-test carried out from the activity applied on tongue twisters (Sept 2021)

Analysis of table 2: In the table above, the researcher analyzed fluency, whether the student demonstrates good sound perception, sound omission, and correct production of the phonemes /f/, /w/, and /p/ through a formula applied as shown below:

$$X = \frac{f}{n} \times 100\%$$

X = Percentage

Applied Phonetics

f = The sum of the score

n = The number of the students

$$x = 10 \div 19 \times 100\%$$

$$x = 52.63\%$$

4.1.2 Post-test

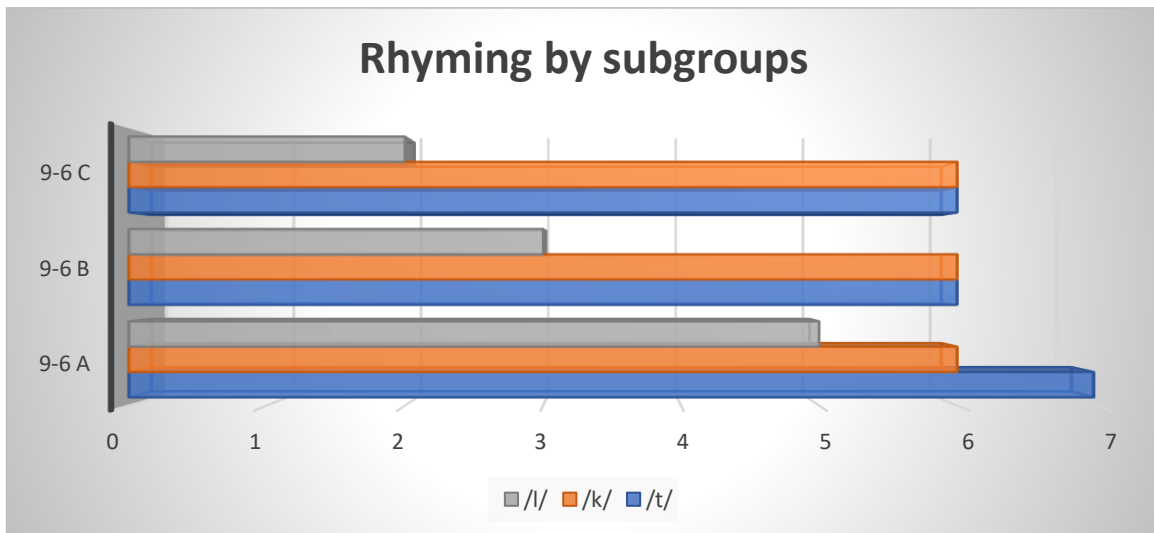
Therefore, it was necessary to apply two different post-tested exercises. The first was rhyming, and the second one was phoneme deletion to understand better what was learned in class with the ninth-grade students. Consequently, it was necessary to elaborate on two different exercises. The instruments were applied in 3 subgroups of the 9-6 section of the Liceo San Rafael de Alajuela, with 19 students. There were seven students in 9-6 A, in 9-6 B, there were six students, and a total of 6 students in 9-6 C. All of these tests were applied under the supervision of the teachers. All tests were applied under the phonological awareness technique.

The researcher was working with the students in 6 different sessions where the researcher first observed each subgroup. The next session introduced them to the phonatory apparatus and each of its parts and talked to them a little about the places and ways of articulation. Finally, during the same session, the researcher also applied the first instrument, which was applied through three different tongue twisters. In the last session, the investigator conducted three different instruments. The first one mentioned above was rhyming, which consisted of listening to two different words and identifying if both had the same final sound. The second one consisted of eliminating the initial phoneme of a word

and identifying the new word. Lastly, a survey was conducted, all to apply phonological awareness.

To evaluate the students' performance, the investigator-assessed them through a checklist. After conducting the six sessions with the students, the researcher collected the necessary data to know the strengths and weaknesses of the population. Next, the researcher will present the data collected through graphs and tables of the different subgroups:

Graphic 2. Results of the students from the Post-test by subgroups

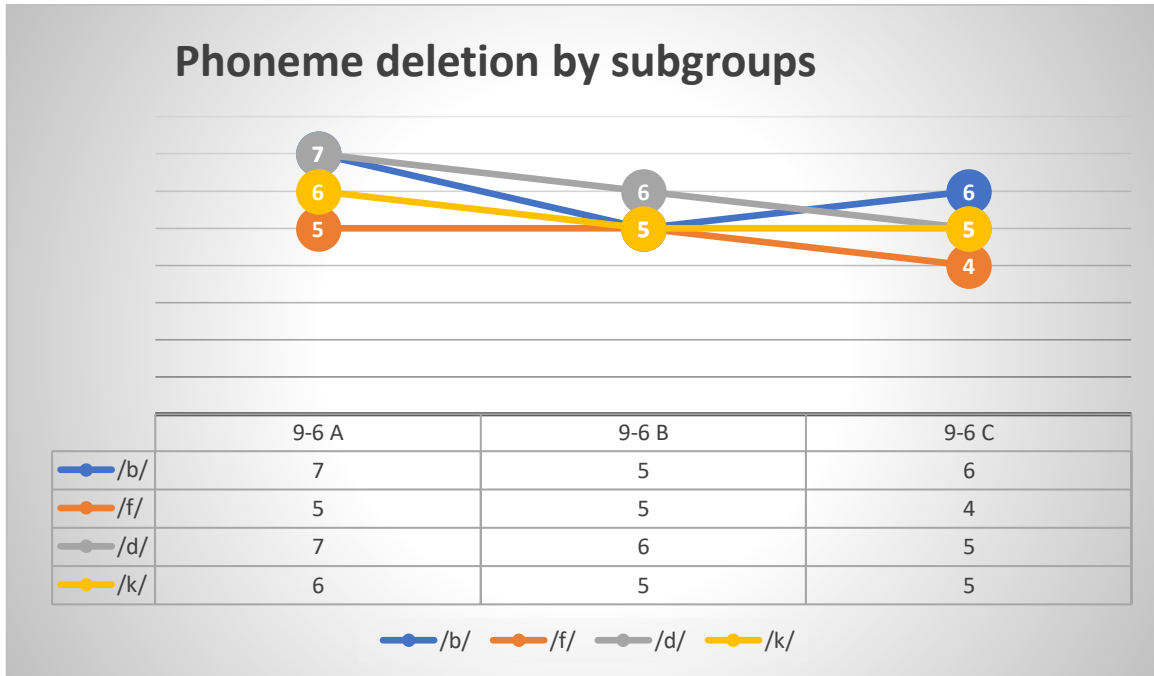


Source: Maylid Murillo, Post-test carried out from Rhyming by subgroups (Sept, 2021)

Analysis of chart 2: In the previous chart, the researcher analyzed through a rhythm exercise, using visual and auditory aids, providing two images in which the students had to analyze if the sounds had the same ending sound with the phonemes /l/, /k/ and /t/.

According to the analysis in the three subgroups, the most difficult sound was /l/, and the easiest was /t/.

Chart 3. Results of the students from the Post-test by subgroups



Source: Maylid Murillo, Post-test carried out from the activity Phoneme deletion by subgroups(Sept, 2021).

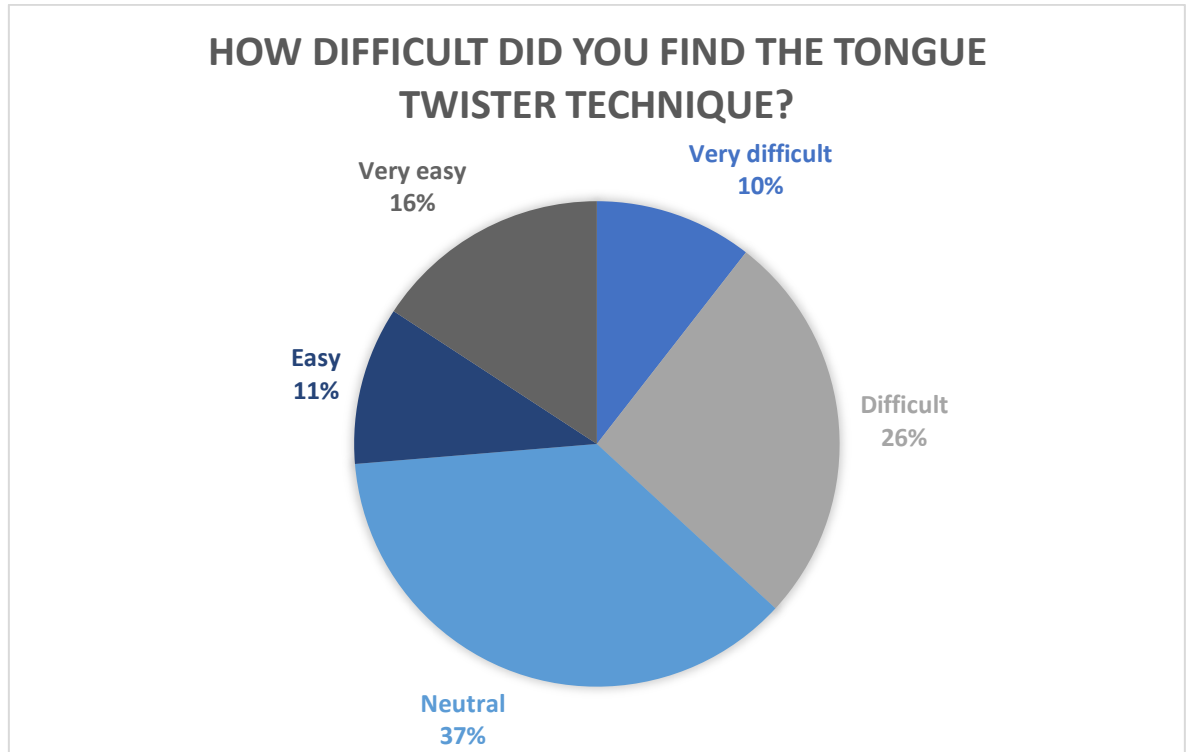
Analysis of Chart 3: The researcher analyzed through phoneme deletion, with a worksheet where they were provided with four different words with the phonemes /b/, /f/, /d/, and /k/, and the students had to delete the initial phoneme and write the new word that was formed. However, the 9-6 C students had the most difficulty with the exercise.

4.1.3 Survey

A survey application was chosen as a tool to examine the students' answers in the three subgroups of 9-6. The survey will be conducted in Spanish to optimize the data accuracy of the students regarding their English knowledge.

Through this survey, the researcher understood how important pronunciation is and how complicated the sounds studied were for 9-6 A, 9-6 B, and 9-6 C of Liceo San Rafael de Alajuela students. During the answers, the students were interested because they felt identified with what was done in class. In other words, the strategies used were useful. In the following, the researcher will analyze each one of the answers with their respective percentages.

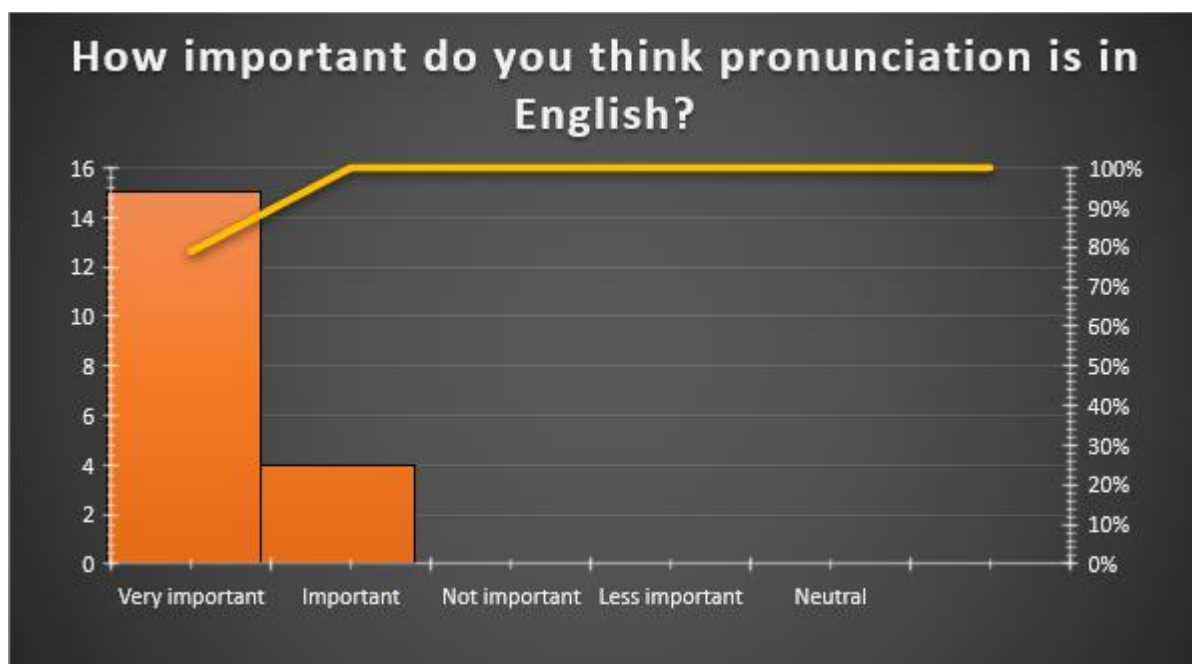
Chart 4. Results of the students from the survey



Source: Maylid Murillo, Post- test carried out from the survey (Sept, 2021)

Analysis of Chart 4: According to the survey applied to the three subgroups in 9-6, the students consider the tongue twister or alliteration technique in phonological awareness is neutral but difficult for some students.

Chart 5. Results of the students from the survey



Source: Maylid Murillo, Post -test carried out from the survey(Sept, 2021)

Analysis of Chart 5: According to the survey, 15 students among the 19 students believe that English pronunciation is highly important and should be a part of every English class.

Table 3. The results of the survey can be seen in the table below:

How useful was the material provided in class?	Number of Students	Percentage of Students
5 Extremely useful	11	57.89%
4 Very useful	7	36.84%
3 Somewhat useful	1	5.26%
2 Not so useful	0	0.00%
1 Not at all useful	0	0.00%
Total	19	99.99%

Source: Maylid Murillo, Post-test carried out from the survey(Sept, 2021)

Applied Phonetics

Analysis of table 3: In the previous table, the researcher analyzed through percentages how useful the material provided in class was to use the phonological awareness technique, according to which 57.89% considered it extremely useful. The response, the number of students, and their percentage can be seen in the formula as follows:

$$X = \frac{f}{n} \times 100\%$$

X = Percentage

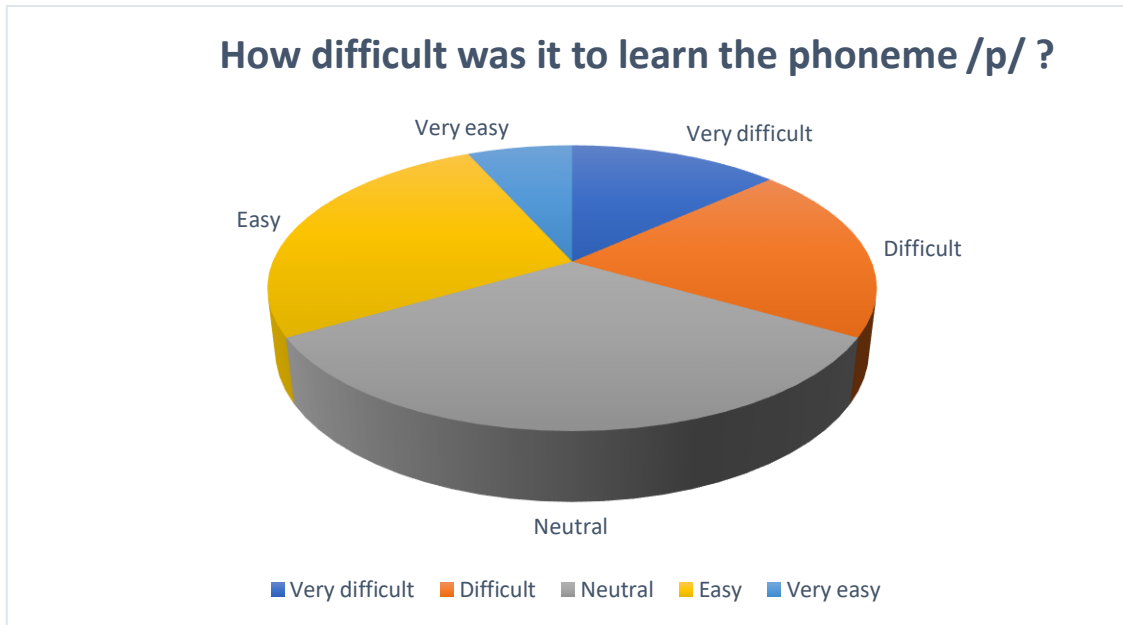
f = The sum of the score

n = The number of the students

$$x = 7 \div 19 \times 100\%$$

$$x = 36.84\%$$

Chart 6. Results of the students from the survey



Source: Maylid Murillo, Post-test carried out from the survey(Sept, 2021)

Analysis of chart 6: In the survey analysis, 33% considered that learning the phoneme /p/ was neutral and 27% easy. However, some had some difficulty with identifying it.

Table 4. The results of the survey can be seen in the table below:

Do you consider that the visual aids in the exercises were useful?	Number of Students	Percentage of Students
5 Extremely useful	11	57.89%
4 Very useful	8	42.10%
3 Somewhat useful	0	0.00%
2 Not so useful	0	0.00%
1 Not at all useful	0	0.00%
Total	19	99.99%

Source: Maylid Murillo, Post-test carried out from the survey(Sept, 2021)

Applied Phonetics

Analysis of table 4: According to the table above, 57.89% considered that the visual aids in phonological awareness techniques are very useful because they allow them to identify with the word to be formed. The percentage and the data of several students can be seen in the following formula:

$$X = f \times 100\%.$$

n

X = Percentage

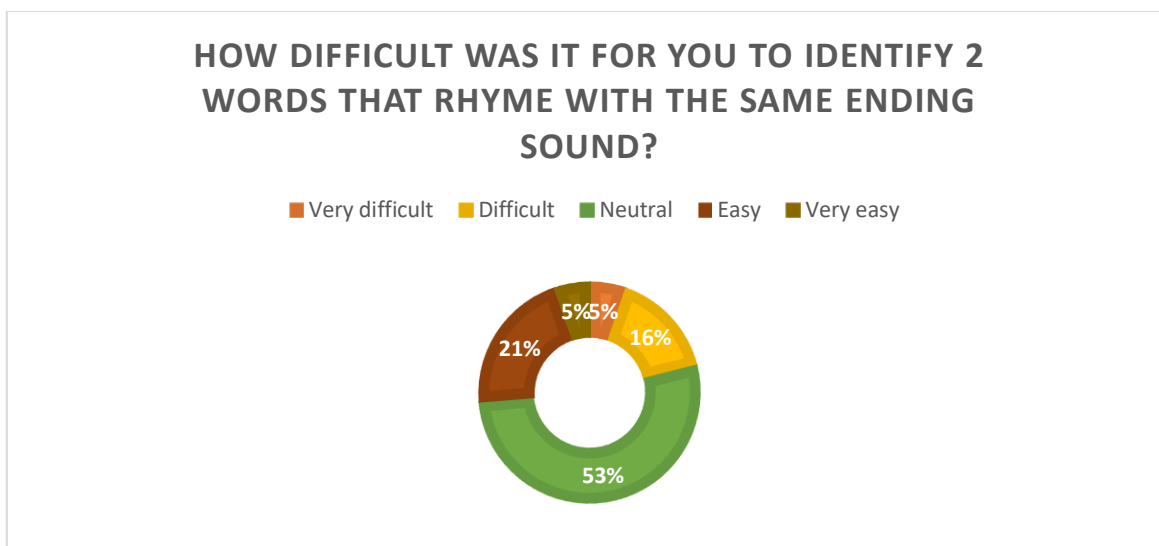
f = The sum of the score

n = The number of students

$$x = 11 \div 19 \times 100\%.$$

$$x = 57.89\%$$

Chart 6. Results of the students from the survey



Source: Maylid Murillo, Post-test carried out from the survey(Sept, 2021).

Analysis of Graph 6: 53% of the 9-6 students agree it is neutral to identify two words that rhyme with the same ending sound, but 21% consider it very difficult.

Table 5. The results of the survey can be seen in the table below:

How difficult was it for you to identify the phoneme /t/?	Number of Students	Percentage of Students
5 Very difficult	3	15.78%
4 Difficult	3	15.78%
3 Neutral	5	26.31%
2 Easy	2	10.52%
1 Very easy	2	10.52%
Total	19	78.91%

Source: Maylid Murillo, Post-test carried out from the survey(Sept, 2021).

Applied Phonetics

Analysis of table 5: According to the analysis of the table above, the researcher found out that 26.31% of the students to be neutral in identifying the phoneme /t/, and their percentage can be seen in the following formula

$$X = \frac{f}{n} \times 100\%.$$

n

X = Percentage

f = The sum of the score

n = The number of students

$$x = \frac{2}{19} \times 100\%.$$

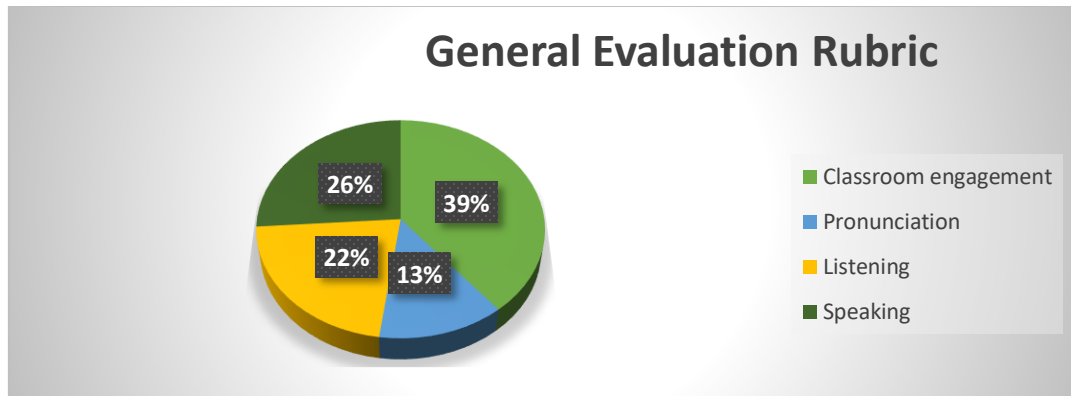
$$x = 10.52\%$$

4.1.4 Evaluation Rubric

In the following section, a checklist will be used to evaluate each student individually in the following areas: pronunciation, listening, and speaking.

In addition, there will be a group evaluation where teachers will analyze if they followed the researcher's instructions, participation, and interest in the topic, on a scale of 1 to 5 where five would be the highest and one the lowest. Then the researcher will analyze each area and assign a percentage to each of the students.

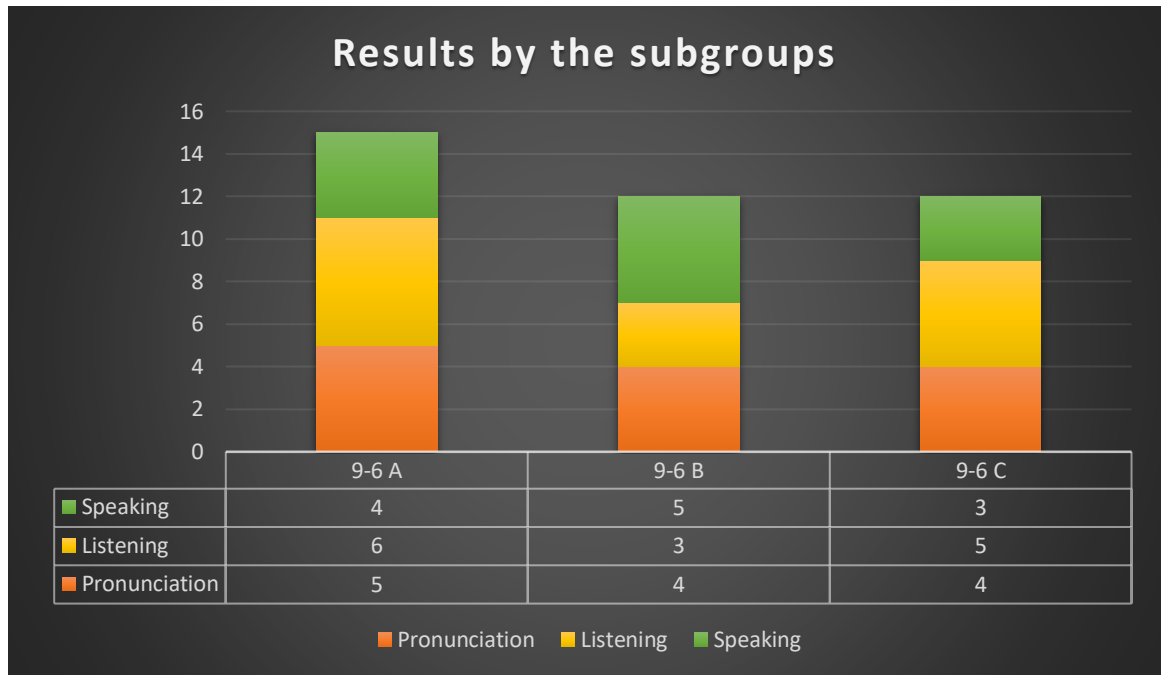
Chart 7. Results of the students from the General Evaluation Rubric



Source: Maylid Murillo, Checklistt carried out from the General Evaluation Rubric(Sept, 2021).

Analysis of Chart 7: In the previous chart, the researcher performed a group analysis in the different areas of the classroom. The commitment had a high percentage because the students were always willing to learn. Therefore, they participated and followed the instructions, they also performed speaking activities, and although their oral level is very low, it was very helpful.

Chart 8. Results of the students from the Evaluation Rubric



Source: Maylid Murillo, Checklist carried out from the results by subgroups(Sept, 2021).

Analysis of Chart 8: In chart #8, it can be seen that a group analysis was made but by sections, in which the 9-6 A was the most outstanding because some of the students in that group belonged to the bilingual sector of The Liceo San Rafael.

Table 6. The results of the checklist can be seen in the table below:

NO	Score	Percentage	Student's code	Category
1	5	50%	S-1	Good
2	4	40%	S-2	Acceptable
3	5	50%	S-3	Good
4	7	70%	S-4	Excellent
5	4	40%	S-5	Acceptable
6	7	70%	S-6	Excellent
7	7	70%	S-7	Excellent
8	5	50%	S-8	Good
9	6	60%	S-9	Very good
10	5	50%	S-10	Good
11	6	60%	S-11	Very good
12	6	60%	S-12	Very good
13	6	60%	S-13	Very good
14	5	50%	S-14	Good
15	7	70%	S-15	Excellent
16	5	50%	S-16	Good
17	6	60%	S-17	Very good
18	6	60%	S-18	Very good
19	7	70%	S-19	Excellent

Source: Maylid Murillo, Checklist carried out from the results(Sept, 2021).

Applied Phonetics

Analysis of table 5: According to the analysis of the table above, the researcher evaluated the students with the highest score of 7 and the lowest score of 3 in the categories of excellent, very good, good, acceptable, acceptable, and needs improvement according to the activities performed.

Ministerio de Educación Pública

High school: Liceo San Rafael de Alajuela

Level: 9th Grade

Teacher: Elter Flores Umaña

Researcher: Maylid Murillo Santamaria



PRE-TEST

Student's name:

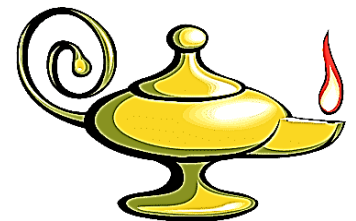
Target Content: Applied Phonetics (Tongue Twisters)



Fuzzy Wuzzy was a bear,
Fuzzy Wuzzy had no hair,
Fuzzy Wuzzy wasn't really fuzzy,
Was he?



I wish to wish the wish you wish to wish, but if
you wish the witch wishes, I won't wish the wish
you wish to wish.





Peter Piper picked a peck of pickled peppers
A peck of pickled peppers Peter Piper picked.
If Peter Piper picked a peck of pickled peppers
Where's the peck of pickled peppers Peter Piper picked?

Ministerio de Educación Pública

High school: Liceo San Rafael de Alajuela

Level: 9th Grade

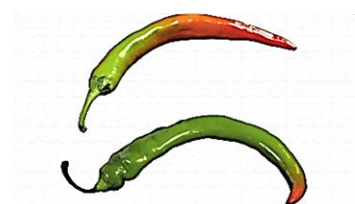
Teacher: Elter Flores Umaña

Researcher: Maylid Murillo Santamaria



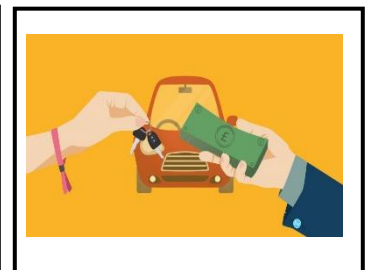
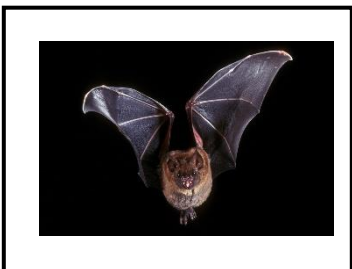
POST-TEST #1



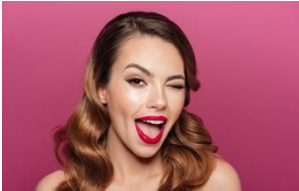



Student's name:	
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Target Content: Applied Phonetics

Instructions: In the following task you will identify if 2 words rhyme when given auditory and visual cues. (En la siguiente tarea identificarás si 2 palabras riman cuando se te dan pistas auditivas y visuales).



   **High School**  **#2**  
ou

Name: Liceo San Rafael de Alajuela
Level: 9th
Teacher: Elter Flores Umaña
Researcher: Maylid Murillo Santamaria

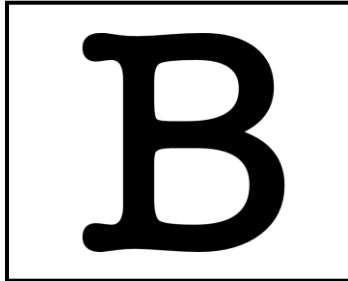
Student's name:	
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Target Content: Applied Phonetics

Instructions: In the following task you will delete the initial phoneme of a word and identify the new word when given 2 choices. (En la siguiente tarea deberá eliminar el fonema inicial de una palabra e identificar la nueva palabra cuando se le den 2 opciones).



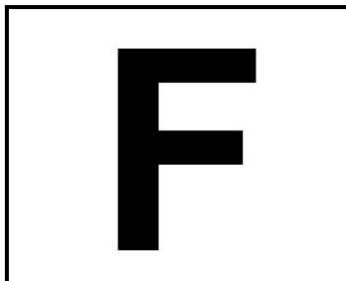
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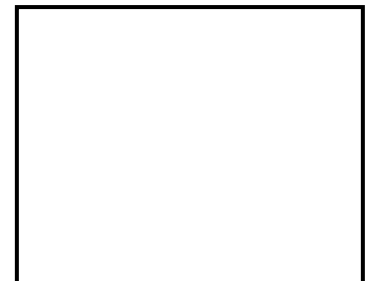
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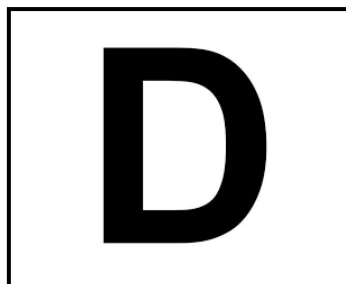
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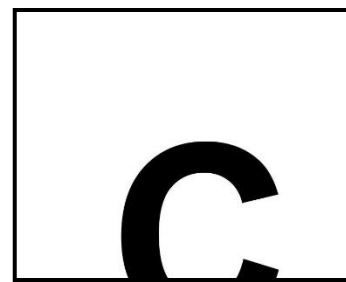
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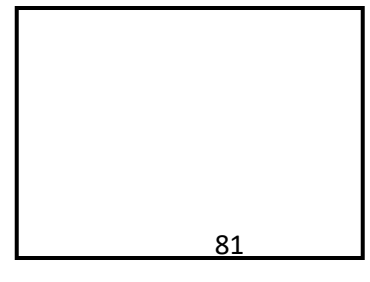
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SURVEY



School Name: Liceo San Rafael de Alajuela

Level: 9th

Teacher: Elter Flores Umaña

Researcher: Maylid Murillo Santamaria

Student's name:

Por favor a continuación indique el grado de dificultad en una escala del 1 al 5 siendo el 1 la expresión mínima y 5 la máxima.

1) Que tan difícil le pareció la técnica de los trabalenguas?

- 1 Muy difícil
- 2 Difícil
- 3 Neutral
- 4 Fácil
- 5 Muy fácil

2) Que tan importante consideras la pronunciación en el inglés?

- 1 No es importante
- 2 Poco importante
- 3 Neutral
- 4 Importante
- 5 Muy importante

3) Que tan útil fue el material proporcionado en la clase?

- 1 Extremadamente útil
- 2 Muy útil
- 3 Algo útil
- 4 No tan útil
- 5 No es nada útil

4) Que tan dificil fue aprender el fonema /p/ ?

- 1 Muy dificil
- 2 Dificil
- 3 Neutral
- 4 Facil
- 5 Muy facil

5) Consideras que la ayuda visual en los ejercicios fue de utilidad?

- 1 Extremadamente útil
- 2 Muy útil
- 3 Algo útil
- 4 No tan útil
- 5 No es nada útil

6) Que tan dificil fue para ti identificar 2 palabras que rimen con el mismo sonido final?

- 1 Muy dificil
- 2 Dificil
- 3 Neutral
- 4 Facil
- 5 Muy facil

7) Que tan dificil fue para ti identificar el fonema /t/?

- 1 Muy dificil
- 2 Dificil
- 3 Neutral
- 4 Facil
- 5 Muy facil

Checklist

Teacher: Elter Flores Umaña

Researcher: Maylid Murillo Santamaria

High School: Liceo San Rafael de Alajuela

Student's Name: _____

Criteria	Excellent 5 points	Very good 4 points	Good 3 points	Acceptable 2 points	Needs Improvement 1 point
Classroom engagement					
Students follow the teacher's indications.					
Students are engaged to participate.					
Students' interest in phonemes is demonstrated.					
Comments					
Pronunciation					
Rhythm					
Fluency					
Self-confident and laid-back					
Sounds /p, b, k, t/					
Sounds /l/ - /w/					
Comments					
Listening					
Students demonstrate good sound perception.					

Applied Phonetics

Students can distinguish the ending from the same ending sound.					
Comments					
Speaking					
Sound omission					
Intonation					
Students can produce the sounds mentioned above.					
Comments					

CHAPTER V

Conclusions and Recommendations

5.1 Purpose of the Conclusion

To conclude the investigation, there are some specific aspects to be drawn. According to Soriano, Bauer, and Turco (2011), the conclusions in scientific research are theoretical constructs that expose those confirmatory data or final limitations of the research, i.e., they are the closing ideas of the research executed to collaborate with the academic heritage. According to the RAE or Royal Spanish Academy, a conclusion is an action and effect of concluding. It is the conclusion reached after collecting various data. It also generates certain recommendations in order to be useful for future research. This indicates that the researcher will prove and demonstrate the positive and negative results by employing graphs and tables with the conclusions.

5.2 Conclusions

As mentioned above, the researcher will highlight the most relevant data, the objectives through tables and charts. Therefore, the collected results can be examined in a better way. Finally, after the different instruments have been applied, the following conclusions can be drawn.

5.2.1 Identify the basic problems that students have with pronunciation

In this investigation, the researcher was able to verify the theory of communication and its different areas. It was possible to prove that the main objective of oral production is to transmit the correct message and hence, pronunciation, fluency, intonation, etc. However, some deficiencies in these areas produce a wrong interpretation of the message for the receiver. In the analysis, the researcher was able to identify some articulation and intonation problems which made it difficult for them to transmit the desired message. As a result of these deficiencies, the researcher worked with the students on all the parts of the phonatory apparatus and the places and manners of articulation, explaining to them how an incorrect articulation can produce a different sound or simply pronounce it in the wrong way. All of these elements led me to evaluate the students through the previously established technique.

5.2.2 Apply a technique in students from 9-6 to identify their weakest areas.

As a result of this objective, the researcher used the technique of phonological awareness to identify the weakest areas of the students in a group, and in an individual form, including alliteration through tongue twisters that are used in order to generate greater fluency, diction and speed, and also serve to improve phonological experience. Through this activity, it was possible to identify that students tend to have deficiencies when applying this technique many times because, in the production of some consonants and vowels, the lips and tongue are similar. Hence, it generates a greater degree of difficulty. This happens when teachers do not have previous knowledge of the articulation to be performed with each of the sounds. Finally, the researcher came to the conclusion that

the technique used permitted to identify the weaknesses of the students in the production because in the development of the technique, it was also identified the omission of sounds that is given by the accuracy that is performed. This obtained with the results collected in the activity. In addition, the students enjoyed the technique and were very motivated with the activity, which made them feel more confident.

5.2.3 Evaluate the students' enhancement due to the technique.

After applying the technique of phonological awareness to the ninth-grade students, the students are willing to learn. However, they need to work with different learning methods where visual and auditory help is the priority. The analysis of the different instruments evaluated helped positively, since it is reflected in each student. At the beginning, it was difficult for them. However, they were able to improve as they progressed. The important thing to highlight in this analysis is that the researcher had to be aware of the type of population to be evaluated. If they have any previous knowledge of the subject or similar activities, the researcher could adapt the techniques and everything that would be used with each group and individually.

5.3 Restatement of the Research Question

In this investigation, the investigator's problem was how applied phonetics could improve pronunciation through the technique of phonological awareness in the three subgroups of sections 9-6 of Liceo San Rafael de Alajuela, Costa Rica. Therefore, after all the research and the help of the different instruments applied for the collection of data to improve their pronunciation, the researcher needed to take into account all the information regarding the subject, including the areas of linguistics and the whole phonatory apparatus, in order to involve the students in the different activities to participate and have a better

overview of the deficiencies and skills to apply it. In this case, it was a young student population in which the technique was effective since it allowed them to develop more interactively.

5.4 Unexpected Results (If any)

In the research process, many results were obtained through working with the student population, mainly the ninth-grade students, specifically the three subgroups of sections 9-6 of the Liceo San Rafael de Alajuela, Costa Rica. All of these were of great benefit because they were able to confirm that the research objectives could be helpful for future generations and produce demand in the teachers of this institution to encourage students to have better pronunciation. The following are some of the most important results.

First of all, among the results obtained, it is necessary to emphasize that the students were very willing and eager to learn. However, they were a little embarrassed because it is not their native language, and most of them had a low level, except for those who belonged to the bilingual sector. However, in the process of the different activities and methodologies applied in the class, the students were more motivated because they found it interesting and fun while learning to have a correct articulation.

Finally, the students from Liceo San Rafael demonstrated a greater effort with the developed topic because of the positive level they obtained with the interaction of different techniques to which they are used to. The most introverted students lost their fear of participating because they realized that although it was difficult, the only way to achieve it was by practicing and repeating aloud. This indicates to the researcher that with the right

methodology, students who were afraid of performing would succeed with patience and dedication.

5.5 Recommendations

To conclude, after applying the different instruments, the researcher considered that more activities could be implemented involving phonological awareness. Besides, this could also be possible through the standardization of this technique as part of the evaluation to motivate students. The teacher has to provide them feedback to promote both group and individual education. Moreover, phonological awareness can work on activities such as segmentation, syllable blending, phoneme blending, phoneme identification, phoneme addition, and phoneme manipulation. all of them help the students develop better speaking skills and help them work on all the vowels and consonants.

Therefore, creating a conversational class may take a little more time, but at the same time, it generates many benefits concerning oral production. The teacher in charge must work with more methods in order to have a better academic performance. In this research, the researcher worked with phonological awareness. However, new methods can be included, especially in this era of virtuality, where students are more exposed to being distracted by the noise or by the family.

The profesor could use different techniques that are related to the Audio-lingual method. In fact, the student may be given a paragraph for him to read it line by line, and the teacher evaluates the pronunciation. At the same time, the profesor provides them with feedback, This type of exercise involves the students more to participate and work on the pronunciation. In addition, the development of the researched topic, professors or people

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who want to carry out this technique in their classrooms could take in consideration the Reading technique in order to improve their pronunciation.

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