

**UNIVERSIDAD INTERNACIONAL DE LAS AMÉRICAS
VICERRECTORIA ACADÉMICA**

SCHOOL OF EDUCATION AND FOREIGN LANGUAGES

**Contrastive Phonology for Enhancing Ninth Graders Production of
Vowels /ə/, /æ/, /ɑ/ and /a/ at Instituto de Desarrollo de Inteligencia
during the First Quarter of 2020**

Theses Submitted to Obtain the Bachelor in English with Concentration in Teaching

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APRIL, 2020

Acknowledgements

First of all, I want to thank God, because He guided me through this process, and provided me the strength to complete it. Second, I want to thank my parents because they stayed with me since the first moment, and were supportive and patient. Third, I want to thank my boss, friends and students who motivated me and helped me all the time. Finally, I want to thank my professors, who prepared me and also supported me during all this time. All above inspired me, and they were the reason why I did not give up.

Dedication

I want to dedicate this project to my parents who were my biggest support during this road. They taught me to always give the best of me in everything, and they are the main reason why I became the person I am now.

I also want to dedicate this investigation to my grandparents who have always been my inspiration.

Abstract

The current investigation studies how contrastive phonology exercises enhance vowel production in ninth graders at Instituto de Desarrollo de Inteligencia. The participants were ninth grade students from a private high school with an intermediate English level. They were tested with different tests, scales and activities in order to prove if contrastive phonology exercises help students to improve the production of vowel sounds /ə/, /æ/, /ɑ/ and /a/. This investigation uses the qualitative method due to the researcher studies the population in its natural setting and works along students' personal experiences. Moreover, it uses a descriptive design because the researcher describes, records, and analyze the results in order to get an appropriate interpretation. In the same way, it uses a case study design because the researcher collects the data based on students' experiences. The investigator first applied two interviews, a Likert scale and a pre-test to identify students' deficiencies in the production of vowel sounds. Then, she put into practice a series of contrastive exercises for students to learn how sounds are produced. Finally, another Likert scale and a post-test were applied to prove the efficiency of the exercises. The researcher found that students consider speaking as a difficult subject because they feel anxious and nervous when talking. Also, a big part of the group had difficulties with sound /ə/. Additionally, fluency and sound omission were difficult for them. At the end of the investigation, the results improved after the application of the contrastive phonology exercises and students were able to produce the target sounds appropriately.

Resumen

La presente investigación estudia como los ejercicios de fonología contrastante mejoran la producción de vocales en los estudiantes de noveno grado del Instituto de Desarrollo de Inteligencia. Los participantes fueron estudiantes de noveno grado de un colegio privado con un nivel de inglés intermedio. Ellos fueron examinados con diferentes exámenes, escalas y actividades para comprobar si los ejercicios de fonología contrastante ayudan a los estudiantes a mejorar la producción de los sonidos de las vocales /ə/, /æ/, /ɑ/ and /a/. Esta investigación utiliza el método cualitativo ya que, el investigador estudia la población en un escenario natural y trabaja junto con las experiencias personales de los estudiantes. También, utiliza un diseño descriptivo porque el investigador describe, graba y analiza los resultados para obtener una interpretación apropiada. De la misma manera, utiliza un diseño llamado caso de estudio porque el investigador colecta la información basado en las experiencias de los estudiantes. El investigador primero aplicó dos entrevistas una escala de Likert y un pre examen para identificar deficiencias en la producción de los sonidos vocales. Luego, ella puso en práctica una serie de ejercicios de fonología contrastante para que los estudiantes aprendieran como producir los sonidos. Finalmente, otra escala de Likert y un pos examen fueron aplicados para probar la eficiencia de los ejercicios. El investigador encontró que los estudiantes consideran “speaking” como una materia difícil porque ellos se sienten ansiosos y nerviosos cuando hablan. Además, una gran parte del grupo tuvo dificultades con el sonido /ə/. Adicionalmente, la fluidez y omisión de sonidos fueron difíciles para ellos. Al final de la investigación, los resultados mejoraron después de la aplicación de los ejercicios de fonología contrastante y los estudiantes fueron capaces de producir los sonidos meta apropiadamente.

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CHAPTER I

Introductory Framework

The first chapter of this study will show the introductory framework. Skillin (1974) states that “An introduction deals with the subject of the book, supplementing and introducing the text and indicating a point of view to be adopted by the reader” (p. 91). Based on this, it is an essential as part of a research due to it shows basic information about the investigation and also will help the reader to get the context and understand what the project is about. For example, this research deals with pronunciation, which is a branch of the speaking skill that has not been deeply investigated, as well as other skills; consequently, teachers and students are not aware of the importance that it has when learning English as second language.

In this research, the introductory framework will explain the objectives of the investigation, as well as its purpose and previous investigations done about the importance of pronunciation, pronunciation techniques, elements that can affect pronunciation, and techniques to improve the pronunciation.

1.1 Problem Statement

Holmes (2006) states that the problem statement in a research is the part in which the researcher can show the importance of investigating the problem and the creation of a research question or hypothesis. He also says that it should include the definition of the problem, and the relevance of answering the formulated question (p.3).

Pronunciation takes an important role inside the English learning process; however, teachers do not give it the relevance it deserves when teaching. Many students show strengths when learning grammar, listening, writing, and vocabulary. Nevertheless, pronunciation becomes

one of their weaknesses, as it is not practiced enough time. Each area of the language helps to improve other aspect of this same language; reason why, pronunciation should be included within the lesson plans. Using the adequate pronunciation techniques and methods, English teachers can increase the students' communicative capacity and provide them with advantages in their professional path. Therefore, the question for this research is: How does contrastive phonology exercises enhance vowel production in ninth graders at Instituto de Desarrollo de Inteligencia during the first quarter of 2020?

1.2 Objectives of Investigation

According to Cambridge dictionary (2017), the objectives of an investigation are defined as a goal or something that is wanted to be achieved.

1.2.1 General Objective

- To investigate the contrastive phonology exercises efficiency as ninth graders vowel production enhancer at Instituto de Desarrollo de Inteligencia during the First Quarter of 2020

1.2.2 Specific Objectives

- To identify ninth graders vowel production deficiencies.
- To apply contrastive phonology exercises in ninth graders for improving vowel production.
- To evaluate the effectiveness of implementing contrastive phonology exercises in ninth graders vowel production.

1.3 Justification of the Study

The purpose of this project is to investigate how contrastive phonology exercises can improve students' vowel production when learning English as a secondary language. It is known that vocabulary and grammar rules are essential for people to communicate; however, pronunciation, as a branch of the speaking skill, represents an important part of an efficient communication; reason why, it is crucial for English learners to identify and fix their mistakes while speaking to avoid any misunderstanding when transmitting a message. According to Pourhosein Gilakjani (2012), "Understandable pronunciation is one of the basic requirements of learners' competence and it is also one of the most important features of language instruction. Good pronunciation leads to learning, while bad pronunciation promotes great difficulties in language learning" (p. 96). Based on the previous statement, learning the appropriate pronunciation rules is mandatory for English learners to increase their communicative competences.

The information and results collected through this project can be used to make English learners aware of the importance of pronunciation and how improving it can be beneficial for their academic, economic, and social level. The investigation and application of the contrastive phonology exercises can be also used as part of a pronunciation training, in which sounds, and mouth movements or articulation will be corrected to obtain the target sounds. Thus, students will develop spontaneity, increase their self-confidence, and feel more comfortable with the new language.

1.4 Antecedents

The antecedents refer to previous works or investigations related to the topic, which have been done by different authors, experts, or historians. This investigation will show five

antecedents done at different universities that describe similar investigations related to pronunciation techniques, issues, and ways students improve their pronunciation.

1.4.1 National Antecedents

The first national thesis consulted was done by Gomez (2014). Its title *The Promotion of the Autonomous Learning in English Students from Centro de Idiomas from UNED* for Universidad Nacional de Educación a Distancia for the master's degree. The general objective of this investigation was to analyze the way in which the use of the TIC can extend the English learning process out of the classroom to promote an autonomous practice, which favors the development of linguistics competences in students at the Centro de Idiomas from UNED.

The conclusions that were obtained are presented as follows. It is necessary to improve the English pronunciation of this student population. Students consider that improving their pronunciation is important, and that they need tools to complete what they learn inside the classroom. The strategies students use the most are social and metacognitive strategies. They both can be used in the solution proposal in order to facilitate their application. Professors influence the learning extension out of the classroom.

The people who participated in the focus group demonstrated a passive attitude against learning and communicated the necessity for teachers to be involved in the practices out of the classroom. This passivity is related to the lack of students' autonomy. The student population does not have enough time to practice English out of the classroom. The solution proposal should not require a lot of time from the people who study; on the contrary, it should not be accepted or could be abandoned quickly.

The second national thesis consulted was done by Fallas (2017). Its title *Anxiety as a Factor Affecting the Pronunciation of the English Vowels / æ, a, ɔ, ʌ / on EFL Adult Learners of 7-3 at Liceo Nocturno de Desamparados during the First Quarter of 2017*. The general objective of this investigation was to analyze the effect of anxiety on EFL adult learners' pronunciation of the English vowels / æ, a, ɔ, ʌ / at Liceo Nocturno de Desamparados of 7-3. She states that pronunciation can be easily affected by feelings like nervousness or anxiety, and it gets worse when students have to speak in public. She investigated some techniques for students to overcome anxiety when speaking, and also to improve their pronunciation. She applied instruments such as questionnaires and a pre-test in order to collect the information.

The following conclusions were obtained. The first specific objective of this research consisted on identifying the major causes of anxiety when speaking English in public through the first instrument, a questionnaire. The questionnaire was designed to determine what caused speaking anxiety on EFL adult learners. The major causes found in this research were panic, fear, nervousness, confusion, and not being prepared to speak English. Moreover, the effects of anxiety on the students' pronunciation were analyzed through a pre-test, which consisted on a pronunciation oral test. Every student was tested and graded with a rubric. The students had to read a text aloud in front of the class, and the teacher took notes and graded them with the rubric. They were scored from 1 to 4 in fluency, communication, pronunciation, and anxiety.

Anxiety has different causes such as nervousness and fear to speak in public in a foreign language. In addition, the effects these factors had over pronunciation were important because without fluency it is difficult to understand, and communication is interrupted. All these immediately affect the students' pronunciation and feeling anxious just makes things worse. In

other words, the pronunciation of vowels / æ, ɑ, ɔ, ʌ / was affected because of anxiety and all its consequences.

1.4.2 International Antecedents

The first international thesis consulted was done by Wildan (2016) with the title; *English Pronunciation Problems Encountered by Indonesian Advanced Students, for the University of Malang*, for obtaining the bachelor's degree. The general objective was to find out how the segmental features of English sounds containing consonants and vowels mispronounced by the BSI students during the presentation of the research proposal.

In order to develop his investigation, Wildan used methods such as observing, listening, and recording for him to identify the pronunciation issues students were dealing with. Once the results were obtained, he analyzed the data by grouping all the mispronounced sounds based on their segmental phonological characteristic, using the Oxford Advanced Learners' Dictionary, and theory of English phonetics and phonology proposed by Peter Roach, Daniel Jones, and George Yule. Therefore, Wildan was able to convey the accuracy of the analysis.

When the analysis was completed, the following conclusions were obtained. During the presentation of the-thesis proposal, the researcher stated that pronunciation problems appeared on a number of consonants, vowels, and diphthongs. There were two consonant pronunciation problems encountered by the research subjects. First, they substituted some consonant sounds with consonants sounding similar to target sounds when they occurred in consonant clusters. In accordance to consonant sound substitutions , they were in the form of the replacement of sound [v] with [f]; the replacement of sound [ð] with [d] and [θ]; the replacement of sound [θ] with [t] and [s]; the replacement of sound [tʃ] with [dʒ]; the replacement of sound [ʒ] with [ʃ]; the replacement of sound [ʃ] with [s]; and the replacement of sound [z] with [s]. In accordance with

consonant sound deletion, they deleted the consonant sounds [k], [g], [t] when they occurred in consonant clusters. There were three vowel pronunciation problems encountered by the researcher. First, they substituted some vowel sounds with consonants. Second, they inserted a consonant sound between two consonant sounds. Third, they diphthongized a pure vowel sound.

The second international thesis consulted was done by Varasarin (2007) with title *An Action Research Study of Pronunciation Training, Language Learning Strategies and Speaking Confidence for The University of the Thai Chamber of Commerce* for the degree of Doctor in Education. The general objective was to investigate pronunciation training and language learning strategies and establish how and to what extent those approaches increase confidence and improve the communicative competence of learners.

She confirmed that Thai students tend to use Thai speech patterns when speaking English, reason why she decided to focus her investigation in pronunciation and language learning strategies to increase confidence and help learners to become intelligible speakers. She trialed a course of pronunciation training and gained useful data on the ability of other teachers to deliver the program, as well as data on the improvement of the process of delivery. The English Pronunciation Training was conducted using materials from Dauer, Celce-Murcia, and Goodwin.

Once the training was provided, the following conclusions were obtained. As language teachers, we need to teach students from their own understanding of language learning and, at the same time, to help them to gain more competence. When teaching, we may not just recite the word 'game' by teaching them the phoneme / eɪ /. Instead, we will try to use "Kate plays eight games" to help the students practice it, and as a result, the students will master several ways of pronouncing the phoneme / eɪ / in the correct way. Teachers should focus on students' needs and types of discourse features to be taught, which Burns (2001, p. 125) sees as relevant tools that can

“underpin communicative language teaching.” Teachers should provide an opportunity for their students to employ self-evaluation and self-correction, which proved to be the best to predict the success in learning English (Setiyadi, Holliday & Lewis, 1999).

1.4.3 Historical Antecedents

The first thesis consulted was done by Acuña (2016), with the title *Teaching Phonetics’ Basic Theory Strategies to Improve Pronunciation of Third Cycle Students in Saint Patrick School during the First Quarter of 2016*. The general objective was to analyze the effect of the implementation of images, a glossary, and a constant comparison and contrast with Spanish as strategies on phonetics’ basic theory teaching to improve pronunciation of third cycle students at Saint Patrick School during the first quarter of 2016. She used different instruments to start with the investigation. The first one was a checklist, where she evaluated the sounds under study. She listened to the students and evaluated them from excellent to deficient. She also applied practices, quizzes, and tests to assess the progress of the participants.

The following conclusions were obtained after the instruments were applied. In order to identify the weaknesses that the participants of the study presented in the pronunciation of the sounds, the investigator used several instruments. The first one was a questionnaire that each participant answered individually and that was fully explained in Chapter IV. Such instrument allowed the author to comprehend the level of instruction students had regarding the production of certain sounds of the English language and the theory necessary to do so. The three strategies mentioned in the objective were selected by the investigator to be applied as a manner to overcome the weaknesses identified in the previous objective. Several charts and graphics were created with the purpose of measuring the evolution of the participants during this study. Such tools showed that the improvement of the participants varied from one observation to another.

During the first observation, when the strategies still had not been applied, students were classified in an average-low level considering their background knowledge and study of the English subject.

1.5 Scope

The scope refers to the list of the expected achievements as a result of the investigation process. In other words, the scope is the part of the investigation that shows the proposed goals considering the topic, the answer to the research question, the objectives, and the design of the investigation. In this investigation, ninth grade students, as participants of the research, will be studied. It is known that pronunciation is always an issue for students when learning English, reason why contrastive phonology has been selected to be implemented, so students can improve the production of the English vowels /ə/, /æ/ and /ɑ/ in contrast with the Spanish vowel /a/. Sounds and places of articulation will be investigated.

What is expected at first instance is to identify and determine what are the deficiencies ninth graders have regarding sound articulation of the vowels /ə/, /æ/, /ɑ/ and /a/. Through interviews, the researcher can start identifying deficiencies in speaking, how they feel and what are their strengths and weaknesses. Once this is completed, the investigator can apply a Likert scale to evaluate the production of sounds /ə/, /æ/, /ɑ/.

Once the errors are identified, contrastive phonology exercises can be put into practice, so students will be able to notice the efficient way to produce these specific sounds. That consists on explaining to each student how to produce the vowels /ə/, /æ/, /ɑ/ and /a/ in a correct way. Students will understand the places of articulation, so that they can get the target sounds. After applying these exercises, students will be evaluated to find out the

effectiveness of the implementation of -contrastive phonology through a post test, which will be divided into three different stages, as students will have to read aloud words, sentences and a paragraph.

CHAPTER II

Theoretical Framework

There are many languages around the world. All the countries have their language; some languages are spoken by millions and other by only a few thousands. In the case of English, it has become one of the most popular languages worldwide. Therefore, there are many countries in the world where English is learned as a second language, due to it provides advantages and more growth opportunities inside those countries. This is the reason why, the effective development of the listening, reading, writing and speaking skills is relevant, so professors, when teaching this language, should give the same importance to each of them.

Howlader (2011) says that it is not expected from non-native speakers to achieve a native English speaker level. Rather, they are expected to communicate appropriately and producing comprehensible sounds (p.126). This means learners are expected to achieve the speaking sub-skills, which enable them to communicate effectively, so at least others can easily understand what they are trying to say. Communication is the process in which humans can interact among them in order to express ideas, feelings, thoughts, or information about any topic. Fernandez (2013) defines communication as the way people are in contact to each other through messages, where the transmitter expects a response from the receiver (p.33) Poor communication skills, on the other hand, can sour relationships from business to personal, and make life significantly harder.

Communication brings people together and closer to each other; reason why, it is very important to be able to communicate in the best way for others to understand the necessities a person has. Through communication, people can solve problems, learn, develop good relationships, and share information. Furthermore, good communication begins with

pronunciation, one of the most important branches of speaking, which refers to how people make the sound of the words. Pronunciation is actually the first aspect people notice when English language is spoken. If the sounds are not produced in the correct way, the message will not be well-transmitted, and the communication process will be negatively affected. As it is known, communication is part of people's daily routines; meaning that, if it is disturbed by incorrect pronunciation, this could influence not only academically, but also socially and professionally.

This chapter will show some theories and previous studies done related to how contrastive phonology exercises can improve English learners' vowel production and the importance pronunciation has in the learning process. Moreover, this section of the investigation shows the definition of pronunciation, its importance, the representation of vowel and consonant sounds, how to teach pronunciation, why it is important to have correct pronunciation, corrective phonetics, contrastive phonology, and how to assess pronunciation when teaching it.

2.1 Literature Review

The review of the literature is made through different theories, which different authors have developed on the definition of pronunciation, why it is important to have correct pronunciation, how to teach pronunciation, the representation of vowel and consonant sounds, corrective phonology, contrastive phonology, and how to assess pronunciation when teaching it. These theories influence the current investigation project, as they provide a complete solid ground to the topic being developed. There are many authors such as Load, Dalton, Bowen, Murphy, and Rogerson, among others, that provide their points of view regarding the mentioned topics.

2.1.1 Language Acquisition

Language is the means humans use to communicate. There are no other species with the ability to communicate infinite ideas, sentences, speech sounds, and words. Language acquisition starts when a child, in his first years of childhood, starts to learn his native language. By the time the child first utters a single meaningful word, he or she has already spent many months playing around with the sounds and intonations of the language and connecting words with meanings. As it is known, children acquire language at different stages, and they reach these stages at different times. The first sounds a baby makes are the sounds of crying. Then, around six weeks of age, the baby begins making vowel sounds, such as “aahh” and “eeh.” At about six months of age, the baby starts producing strings of consonant-vowel pairs, such as “boo.” In this stage, the child plays around with the sounds of speech and sorts out the sounds that are important for making words in his language, and those sounds that are not.

Skinner (1957), as one of the pioneers of Behaviorism, states that language development comes by means of environmental influence. He argues that children learn language based on behaviorist reinforcement principles by associating words with their meanings. For example, when the child says “milk,” the mother gives her some as a result, so the child will find this rewarding, enhancing in this way, the child’s language development. In other words, Skinner establishes that when children are learning to talk, if the correct production of the language is positively reinforced, the child will realize the communicative value of words and phrases, which will allow him to express the message in an appropriate way.

On the other hand, Chomsky (1965) criticized Skinner’s theory; consequently, he created the theory of Universal Grammar, which is an idea of innate, biological grammatical categories, such as noun category and verb category that facilitate the entire language development for

children. For example, children instinctively know how to combine a noun and a verb to create a meaningful sentence. Moreover, Chomsky's theory contains all the grammatical information needed to combine these categories: noun and verb into phrases. This shows the grammar rules to be followed in order to create complete ideas that can be understood by others.

As well as Skinner's theory, Chomsky's theory was questioned, and some contemporary researches done by some psycholinguists argue that children learn their native language through the repetition of sounds. This is a gradual development process, where it is suggested that children are aware of patterns in language, which enables the acquisition process. This means that when children hear a sufficient number of instances of a linguistic construction, they will be able to detect patterns across what they hear. By doing this, they can understand all the grammar rules, so at the end, they will be able to create complete sentences.

2.1.2 Communicative Language Teaching

The Communicative Language Teaching (CLT), also known as "Communicative Approach," is based on the idea that learning a language implies the successful communication of real meanings. When learners are involved in real communication scenarios, their natural skills and strategies show up; consequently, this allows them to use the language. For example, in a classroom, the teacher can ask the students to find out personal information about their colleagues. This exercise lets the students to use meaningful communication. The role of the teacher is to be a facilitator to his students' learning. He is the manager of classroom activities. The teacher is in charge of establishing situations where students can practice real communication. The students are communicators. They learn to communicate by communicating. In CLT, learning activities are selected according to the interests of the learner.

Wilkins (1972) contributes with an investigation of a communicative definition of language that could serve as a basis for developing communicative syllabuses for language teaching. Wilkins's proposal analyses the communicative meanings that a language learner needs to understand and express himself (p. 6). Wilkins describes language through the communicative skills a learner should have rather than doing it through the traditional concepts of grammar and vocabulary.

Experts such as Brumfit and Johnson (1979) discuss the learning theory, which is based on the Communicative Language Teaching by using activities that involve real communication; in other words, activities in which the language is used for carrying out meaningful tasks, and activities that include a language that is meaningful to the learner. Moreover, the use of the Communicative Language Teaching prioritizes scenarios where real and meaningful communication is put into practice, since this kind of activities promote and support the learning process. For example, students can create a role play to be presented in front of the class. They can work in pairs or trios and create a ten-minute conversation. After that, they present it in front of the class. While the students perform the role play, the teacher can correct their pronunciation mistakes, so students will understand how to produce the sounds to better communicate the message. Role plays allow the students to practice the target language, and thus, meaningful communication can put into practice.

Another example could be a talk show interview. This activity also includes a scenario where real communication is used. Students can work in pairs, so one of them can be the host, who needs to prepare some questions to ask, and the others can be the guests who will answer-the questions. This can take from 10 to 15 minutes to be performed. The teacher can walk around the class to make sure that students are creating the questions correctly. For the benefit of the class,

the teacher can help the students with their pronunciation mistakes and let the students know how words should be pronounced, instead.

2.1.2.1 Communicative Competence

The communicative competence refers to the knowledge someone has regarding a language and the ability this person has to use it effectively when communicating in a social and school environment. Canale and Swain (1980) define it as composing competence in four areas: words and rules, appropriacy, cohesion and coherence, use of communication strategies. The communicative competence goes beyond repetition and memorization of grammatical patterns; it involves the development of language proficiency through interactions in meaningful contexts. This competence is relevant during the teaching-learning process due to it is known that a big part of a person's success depends on his communicative competence. This happens because not all the things that can be said and done are equally competent.

In addition, Hymes (1972) makes reference to the communicative competence as what the speaker needs to know in order to be communicatively competent in a speech community (p. 145). Moreover, Hymes's point of view establishes that a person who acquires communicative competence acquires both, knowledge and the ability to use the language. The communicative competence not only implies the knowledge people have regarding grammar rules, but also the knowledge they have regarding when to speak, when not to speak, what to talk about, with whom, when, where, and in what manner. In other words, this competence integrates attitudes, values, and motivations concerning language, and its features. This competence also includes the ability to use grammatical structures in different situations to convey and interpret messages and to negotiate meanings.

2.1.3 Cooperative Language Learning

The cooperative language learning is an approach that works under the use of cooperative activities, which include pairs and small groups in the classroom. Olsen and Kagan (1992) state Cooperative Learning has antecedents in proposals for peer-tutoring and peer-monitoring that go back hundreds of years and longer (p. 8). This approach believes that teaching should not be teacher-fronted and that strong and weak students should not be educated separately. Instead, students should learn in a cooperative group work, which can help them to increase their language level in class.

Cooperative language learning works under the idea that second language learning can occur in groups, where all the students work together in a collaboratively and cooperatively way to complete one common goal. It goes against the idea that students have to work competitively against others. This approach helps students to exchange information among them. In addition, not only the learner learns, but also, he is motivated to increase the learning of others. Furthermore, in the cooperative learning, the students' role consists on assigning to each group member a specific aspect of the complete assignment in order to work cooperatively to finish the task. Each student must depend upon themselves, as well as their group. The teachers' role is important, as he must serve as the facilitator, observer, and evaluator to make cooperative learning successful. The teacher has to arrange the seating, select the groups' size, assign each student to a group, provide materials, state expectations, monitor every action, clear doubts, and evaluate the results.

One activity that can demonstrate how this approach works is a "Treasure Hunt." Students can work in groups of 4 or 5 depending on the size of the group. Each group is provided with a list of items they have to find. To succeed, students have to talk to each other, decide what is the

best way to accomplish the task (and agree on that method), cooperate, and share information.

While the groups are doing this, the teacher observes and corrects them if they pronounce a word incorrectly. At the end, the groups can explain in front of the class where to find all the items and how they worked to find them all.

2.1.4 Definition of Pronunciation

Pronunciation is one of the subskills of speaking, along with fluency, vocabulary, and grammar. All these sub-skills represent an important component for students when learning how to speak in English. Any deficiency in the acquisition of these sub-skills could cause negative effects in the teaching-learning process. Pronunciation, which is the one of the most difficult sub-skills to acquire, refers to the efficient production of ~~the~~ words, in a way that, the receptor can clearly understand the message without any interruption. According to Lado (1964), pronunciation is defined as the use of a sound system when speaking and listening. Different from other authors, Lado does not emphasize how the sounds are produced; for him, pronunciation refers to the act that happens when someone is speaking or articulating (p.70).

More precisely, Dalton and Seidlhofer (1995) state the following:

[...] The production of significant sound in two senses. First, sound is significant because it is used as part of a code of a particular language. In this sense, we can talk about pronunciation as the production and reception of sounds of speech. Second, a sound is significant because it is used to achieve meaning in contexts of use. In this sense, we can talk about pronunciation with references to act of speaking... (p.3).

Authors state their different points of view on how they define pronunciation, and based on the previous statements, there are many ways and aspects to consider in order to define it.

However, all these definitions lead to one single conclusion, which is that pronunciation is basically the production of sounds, which can be completely understood by the audience. It is important to mention that the definition of pronunciation is not limited only to the way in which the sounds are articulated, but it goes further to incorporate other articulatory aspects, namely stress and intonation patterns. Pennington and Richards (1986) define pronunciation as the articulation of individual sounds considering stress and intonation patterns of the target language (p.206).

To better understand the concept of pronunciation, it is relevant to consider two disciplines: phonetics and phonology, as they are also part of the definition of pronunciation. According to Kelly (2000), the study of pronunciation is divided into two fields: Phonetics, which studies the speech sounds, and phonology that studies how people interpret the sounds. Kelly also mentions that phonetics covers more than one area, for example the anatomical, neurological, and physiological bases of speech, as well as the actions and movements of the speech organs. On the other hand, Kelly confirms that English phonology deals with vowels, consonants, and suprasegmental features of the language: intonation and stress (p. 17). To show sequence, both disciplines: phonetics and phonology should be deeply investigated as they represent a significant part of the project due to these definitions are related to how an English learner produces and transmits the sounds.

2.1.4.1 Phonetics

The term phonetics is related to the study of sounds when a person speaks. The minimal linguistic unit of phonetics is the phoneme. Akmajian (1995) explains that phonetics refers to the complete study of the articulatory and acoustic characteristics of sounds when speaking (p.16) Phonetics is about the production and reception of sounds in a conversation, and the description

and classification of the speech sounds. It is relevant to mention that phonetics is more about how sounds are produced than their function in a particular language. Ogden (2009) is another author that provides his point of view, and he says that phonetics can be seen as a physical manifestation for the production of sounds (p.1).

Phonetics provides a helpful way to open the ears and understand aspects of the English language that learners usually understand in their written form rather than in the spoken one. This branch of linguistics studies how the different movements affect the properties of the resulting sound. As it was previously explained, phonetics deals with two aspects of human speech, which are the way humans make the sound, and the way they perceive the message.

2.1.4.2 Phonology

The term phonology is related to the way sounds are transmitted. Lass (1984) indicates that phonology provides the explanation of the function and behavior of sounds inside a language (p.10) In other words, phonology is more about the function that the sounds develop in a particular language, as it is the task of phonology to analyze which differences in sounds are related to differences in meaning. That is, phonology includes an inventory of sounds, their features, and rules on how sounds interact with each other.

Phonology is divided into two main temporal dimensions: diachronic phonology and synchronic phonology. The diachronic phonology is historical, which means that it analyzes theories about changes that have occurred in speech sounds and sound systems in specific periods. Moreover, it describes any work that maps any fracture or mutation of language over the centuries. In other words, this type of phonology refers to the study of the language through different periods in history. It traces the development of English starting from the Old English period up to date. For example, the words “see” and “sea” were once pronounced with different

vowels sounds, as indicated by the spelling; however, now they are pronounced alike. It is crucial to mention that all these phonological changes do not occur gradually in every single dimension, as some changes can occur abruptly. According to Myers (2000), when a change occurs gradually, it involves a continuous shift along one or more dimensions in phonetic space. On the other hand, when a change occurs abruptly, it involves the substitution of one discrete phonological category for another (p.17).

The synchronic phonology is descriptive. It is known as descriptive phonology or general phonology. That means that it analyzes the sounds in a single stage to discover sound patterns that can occur. Different from the diachronic phonology, this one focuses on a specific period. Analyzing the word order in a sentence in Old English is an example of a synchronic study. Moreover, Donnelly (1994) writes that a synchronic study is a comparison of languages or dialects used within some defined special region and during the same period. For example, depending on the region in the United States, people currently say “pop” rather than “soda” (p.23). The synchronic phonology is not only focused on a specific period, but also in a specific region in a country. It does not concentrate on how the words or phrases have changed through time. Furthermore, this type of phonology can examine properties of sounds, words, phrases, and extract recurrent patterns. It can describe how parts of the language combine to form words and phrases and how proper syntax gives a sentence meaning.

2.1.5 Phonemes

The phoneme is considered the smallest sound unit in a language. It represents the different sounds within a language. In other words, phonemes refer to the representation of the sounds. When teaching English pronunciation, learners, at their beginning, stage can be taught the individual sounds of each letter of the alphabet and then learners can start putting these sounds

together to make short words. This is the reason why phonemes are called the smallest unit of sound. In English, there exist 46 phonemes: 21 representing the consonants and 25 representing the vowels. Below there is a chart that shows all the 46 English phonemes.

Chart 1. English Phonemes

		MONOPHTHONGS					DIPHTHONGS			
VOWELS		ɪ	i	e	ɛ	æ	eɪ	aɪ	ɔɪ	aʊ
		ʌ	ə	ɜ	ʌ	ɜ	oʊ	ɪə	ɛə	ɔə
		u	ʊ	o	ɔ	ɑ	ʊə			
CONSONANTS		p	t	k	b	d	g	f		
		v	θ	ð	s	z	ʃ	ʒ		
		m	n	ŋ	l	r	j	w		

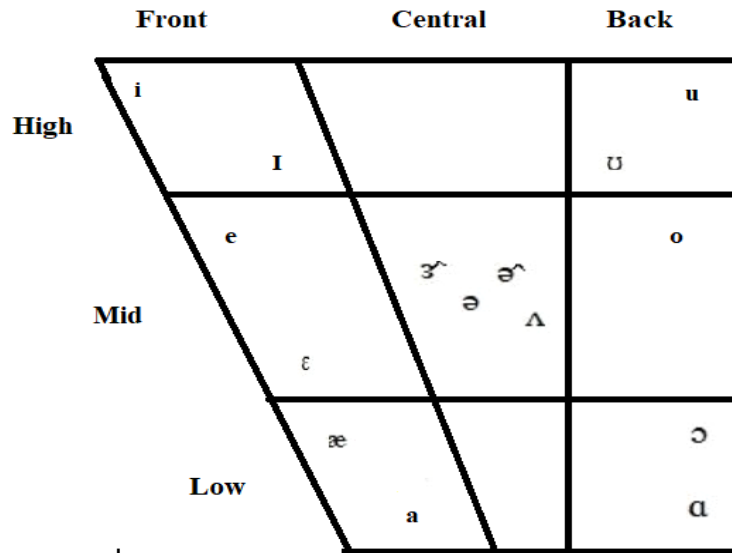
Source: Phonetics I

2.1.5.1 English Vowels

In English, there are 25 vowels, which are divided in monophthongs and diphthongs. When a person speaks the air comes out from the mouth. Vowels make the sounds that come when the air, leaving the mouth, is not blocked by any organ like the tongue or teeth. These sounds can be made by moving the lips in different shapes. The classification of the vowels is different from the classification of consonants, as for vowel only one aspect is considered, which is the place of articulation. Brinton (2000) states that such criterion does not consider the same aspects that the classification of consonants does. Place of articulation, in vowels' classification, refers to the place where the tongue is located at the moment of the sound production. This does not mean that when producing a vowel sound the most important organ of speech is the tongue,

but the position will determine the classification or division to which each vowel belongs to (p. 35). The chart below may explain how vowels are classified in English language.

Chart 3. Classification of Vowels.



Source: Phonetics I

This project will be focused on English vowels /ə/, /æ/, /ɑ/ in contrast with the Spanish vowel /a/. Since the focal point is on these sounds, it is relevant to mention the phonological characteristics of each sound.

In the production of sound /ə/, the air goes out freely through the mouth. It is produced in the central part of the mouth when the central part of the tongue is raised towards the mid palate. The tongue is in a mid-position. The muscles of the lips, mouth and tongue are relaxed. The jaw is between half-closed and half-open. It is a short sound and the lips are in neutral position (Pérez, N.D.). Some examples are petition /pə'tɪʃn/, afraid /ə'freɪd/, upon /ə'pʌn/.

In the production of sound /æ/, the air goes freely through the mouth. It is produced in the front part of the mouth when the front part of the tongue is raised towards the hard palate. The

tongue is in a low position. The muscles of the lips, mouth and tongue are tense. The jaw is in a half-open position. It is a long sound and the lips are fully spread and somewhat open (Pérez,N.D.). Some examples are back /bæk/, cat /kæt/, pack /pæk/, bad /bæd/, magic /'mædʒɪk/, fat /fæt/.

In the production of sound /ɑ/, the air goes out freely through the mouth. It is produced in the front part of the mouth when the front part of the tongue is raised towards the hard palate. The tongue is in a low position. The muscles of the lips, mouth and tongue are tense. The jaw is in an open position. It is a long sound and the lips are fully open. (Pérez, N.D.). Some examples are balm /bɑ:m/

In the production of sound /a/, the air goes out freely through the mouth. It is produced in the central part of the mouth when the central part of the tongue is raised towards the mid palate. The tongue is in a low position. The muscles of the tongue, lips and mouth are tense. The jaw is open. It is a long sound and the lips are unrounded (Pérez, N.D.).

2.1.5.1.1 Monophthongs

The monophthongs are the most basic vowel sound, and they refer to those syllables where there is one vocalic element different from diphthongs where there are two vocalic elements. The Webster's New World College Dictionary (2014) defines it as a simple vowel sound during the utterance of which the vocal organs remain in relatively unchanging position. Also, it is defined as a single vowel articulated without change in quality throughout the course of a syllable as the vowel of English word "bed." Every single vowel is considered a monophthong such as the /ɪ / or /o/. These are also called short vowels and in American English there are 15 monophthongs, which are /ɪ /, /i/, /ε /, /æ /, /ə /, /ɜ/, /ʌ/, /ɜ/, /u/, /ʊ/, /ɔ/, and /ɑ/

2.1.5.1.2 Diphthongs

Diphthongs refer to the combination of two vocalic elements forming one sound. According to Nordquist (2017), a diphthong is a vowel in which there is a sound change within the same syllable (p.1) The term diphthong comes from Greek and means two voices or two sounds. Diphthongs appear whenever a vowel makes a new and different sound, usually because it is working along with another vowel. In different words, diphthongs come into play when the speaker jumps from one vowel sound to another, in the same word. For example, in the word “oil,” two vowels create a different sound from when they are isolated. In American English, there are 10 diphthong sounds, which are: /eɪ /, / aɪ /, / ɔɪ /, /aʊ/, /oʊ/, /ju/, /ɪə/, /εə/, /ɔə/, and /ʊə/.

2.1.5.2 English Consonants

A consonant sound is produced when the air-stream that comes from the lungs, after passing through the larynx, with or without vibrations of the vocal cords, suffers some obstruction in the supra-glottal cavities, that is, in the pharynx, oral cavity, or nasal passage (Pérez, N.D.). There are different factors for classifying and describing the consonants. For example, the place of articulation, manner of articulation, presence or absence of voice, position of the soft palate and force of articulation.

However, Greenwood and Coleman (1993) classify consonants by the place of articulation as bilabial, labiodental, dental, alveolar, palatal, palato-alveolar, velar, and glottal. These same authors also classify the consonants by their manner of articulation also known as plosives which include / p - b /, / t - d /, / k - g /. Fricatives that include sounds such as / f - v /, /s - z /, / θ - ð /, / ʃ - ʒ /. The sounds / tʃ / and / dʒ / are affricates. Moreover, / m /, / n /, and / ŋ / are nasal. The lateral sound is / l / and the retroflex is / r /. Lastly, there are two glides or

semivowels/semiconsonants, that are / w / and / j /. (p.26-27). Below there is a chart that summarizes the consonant’s classification.

Chart 2. Classification of Consonants

Place	Manner						
	Plosives	Fricatives	Affricates	Nasal	Lateral	Glides	Retroflex
Bilabial	p - b			m		w	
Labiodental		v - f					
Dental		ð	θ				
Alveolar	d - t	z - s		n	l		r
Palatal						j	
Palato-Alveolar		ʒ - ʃ	tʃ - dʒ				
Velar				ŋ			
Glottal							

Source: Phonetics I

2.1.6 Teaching Pronunciation

Teaching pronunciation, as part of the speaking skill, is one of the biggest challenges that professors face, due to the difficulty of the subject. Nonetheless, it is as important as any other skill as learners need to understand that in English words are not pronounced as they are written. As Tritch (2016) investigates, English teachers tend to cover a lot of topics during a class, including grammar, vocabulary, listening, reading and writing; however, they do not give the same importance to pronunciation due to, as per their confirmation, there is not enough time to teach it, causing, in this way, a disinterest from students’ side. Pronunciation is important, since even if students’ reading and listening skills are strong, if their pronunciation is not clear, the communication process will fail (p.1).

The inefficiencies in pronunciation are one of the main reasons for breakdown in communication, which will eventually produce consequences over the students' personal and professional life. The more help students receive regarding pronunciation the most comfortable they feel when speaking the language. Teaching pronunciation entails been concerned about the necessity of students to learn how to successfully communicate with other English speakers, not only teaching what is written in a book, but also, what is essential to efficiently express themselves. Additionally, when teaching English pronunciation, it is important to establish the sound differences between English and students' native language. Doing this, students may notice they cannot pronounce the words as they do in their native language.

It is obvious that pronunciation is not an important part of the lesson when professors are teaching English as a second language. Murphy (2013) suggests teachers are hesitant when it comes to teaching pronunciation due to inexperience, lack of tools, lack of well-developed educational programs, lack of time, and, in some cases, lack of institutional support (p.205). With Murphy's suggestion, it can be confirmed that teaching pronunciation depends not only on teachers and students, but also on the institutions and the resources and support they provide.

Besides the previous studies, Rogerson (2011) states the relevance that pronunciation has inside the teaching process and confirms that pronunciation is the greatest single barrier to successful communication (p.5). Additionally, Bowen (1972) provides three goals teachers should accomplished when teaching pronunciation; the first one he mentions is the ability to communicate efficiently; the second one is the ability to produce the sounds of the target language sounds system; and the third one, is the ability to understand the speech when native speakers produce it. He also explains that the most important aspect of teaching pronunciation is the learners' motivation (p. 93). Based on the previous arguments, it is noticeable that these

authors agree with the idea that pronunciation should not be pushed to the end of the list of topics to teach in class, as it is essential for students to know how to pronounce when learning English. It is known that not all of the students learn in the same way. Some students need additional material to learn how to pronounce specific sounds.

Pronunciation is, according to many professors, a laborious subject. There are many reasons why teaching pronunciation represents a challenge for professors. For example, for some English learners the differences between their native language and English are more complicated than for others. In addition, learners are not always exposed to the language; meaning that they are not continuously practicing the pronunciation rules. Other is that the expectations and requirements students have from the English lessons are all different. Besides this, some educational institutions do not have access to the adequate tools to teach pronunciation, so students may feel lack of motivation because they do not have the necessary material, and finally, accent can prevent students from making the correct sounds.

Additionally, professors do not like to teach pronunciation because of the pre-work that means to teach this subject. Before students start to learn pronunciation, teachers should include in their lesson aspects like the function and description of consonants, vowels, diphthongs, syllables, and stress. In the class, they should review one by one in order to learn the pronunciation of each sound. Even though, it is a problem for teachers to be focused on pronunciation, a little space should be reserved to put into practice this sub-skill; however, getting to the target pronunciation is not only a teachers' task but also of students, as well. To achieve a competitive pronunciation level, it is also important to take into account the techniques that are better to be applied. Teachers may know that, sometimes, students need more than one method or technique in order to improve their pronunciation, so it is important to implement different ways

of teaching the subject. Nevertheless, there are many other techniques that students can apply when they are not at school; for example, they can listen to music and repeat the words, read aloud, and pay attention to the sounds when other people speak, among others.

When teaching pronunciation, it is relevant to highlight the phonological awareness. Phonological awareness lets kids to recognize and work with the sounds of spoken language. Children are able to pick out rhyming words and count the number of syllables in a name. Phonological awareness moves from noticing to doing. Once they can identify the number of syllables in a word, they begin to break words apart into syllables or single sounds by listening rather than clapping (Gillon & McNeill, 2007). For example, they can recognize words with the same initial sounds such as “money” and “mother.”

Phonological awareness is a skill that includes identifying and manipulating units of oral language such as words and syllables. (Paulson, 2004). It is important for students to develop strong competencies in phonological awareness, as being aware of the fact that sounds in words and syllables is critical to hearing, and segmenting the words students want to spell and blending together the sounds in words. As a child develops phonological awareness, he not only comes to understand that words are made up of small sound units, but he also learns that words can be segmented into larger sound “chunks,” known as syllables.

2.1.6.1 Importance of Correcting Pronunciation Mistakes

In the classrooms, there are always students who have difficulties to produce some sounds. To help them with these difficulties, it is important for the teacher to let them know the phonetic rules, how to use them, and when to apply them. With corrective phonetics, teachers can help students to control their breathing, articulate the sounds by positioning the organs in the correct way, and to make the necessary pauses when they are speaking. The role teachers play

when teaching pronunciation is essential, due to it is based on providing feedback to the students when they mispronounce a word, so in this way students will be able of transmitting the message effectively.

Corrective phonetics helps to enrich and improve students' communicative skills when speaking English. To do so, corrective phonetics focuses on attacking the most relevant phonetic deficiencies students have by performing conversational practices such as conferences, role plays, and speeches, among others (Delahunty and Garvey,2010). Here, students learn to distinguish the phonetic symbols that represent the standard pronunciation of English. In addition, they learn to identify the phonetic symbols of vowels, consonants, and diphthongs, and how to produce individual sounds, syllables, and words. Additionally, they understand how to produce sentences and complete texts according to intonation, rhythm, and tone presented in the standard English models. It is important to mention that correction should be made at the moment and not days after the mistake. Doing this, it would be easier for the student to identify the error, understand how to correct it and remember the correction in case the mistake is made again.

Many studies have been performed and all of them have proved that the application of corrective phonetics is useful for students to improve their pronunciation. For example, Karami, M. &Darani, L. H. (2018) proved the effectiveness of corrective phonetics on teaching /θ/ and /ð/ sounds, which are absent in Persian to Iranian EFL learners. This experimental study employed a pretest-posttest treatment design. The findings emerging from the study substantiated that recast is an effective method in teaching both sounds to Iranian EFL learners (p.27-29). Moreover, these studies show the method that is used the most to make corrections in pronunciation is the recast where the teacher, without directly indicating that the student's utterance was incorrect, implicitly reformulates the student's error or provides the correction. It was supported by Lyster and Ranta

(1997) that recasts involve the teacher's reformulation of all or part of a student's utterance, minus the error (p.2). For example, if the student says "I forgot my bag /bæk/ at home" the teacher can reformulate and say "my bag /bæg/ or my back /bæk/?" so the student can choose the option with the correct answer. In this case it would be "I forgot my bag /bæg/ at home"

2.1.6.2 Contrastive Phonology

The field of contrastive phonology has developed over the past few decades and aims at minimizing the detrimental effect of one's native language on a second one learned later. Contrastive phonology works under two important terms: transfer and interference (Gracheva, 2013). Transfer refers to the fact that speakers of a language "A" are likely to transfer structural features of their native language when learning a second language "B." This transfer can affect the learning process positively or negatively. Transfer is positive when the structure or structure element from one language to another is still understandable. On the other hand, transfer is negative when the transfer from one language to another is ungrammatical. Moreover, when transfer is negative, it is called interference due to when the learner is speaking the mispronunciation of words interfere with the communication process (Mailhammer, 2013). When Spanish speakers transfer the intonation patterns of their mother tongue into English, which is a stress-timed language, the result may sometimes be barely comprehensible to native English speakers. This is because the meaning or information usually conveyed in English by the combination of stress, pitch, and rhythm in a sentence is flattened or evened out by the Spanish learner.

Contrastive phonology compares languages usually with the aim of assisting language learning by identifying important differences between the learner's native and the target language (Fisiak, 1980). There are a number of English words that learners mispronounced because

Spanish sounds are transferred. For example, people say cat /kat/ instead of /kæt/. Also, Spanish speakers have problems distinguishing sheep /ʃip/ and ship /ʃɪp/. Spanish speaker use /i/ for both words. It is important to take into account that there are language inconsistencies. For example, when the same letter or letter combination refers to different sounds, when the same sounds can have different letters or letter combination, and when different languages pronounce the same word differently. Teachers must be careful with these inconsistencies due to they can affect the learners' pronunciation, as they will mispronounce sounds when speaking.

Spanish has 5 pure vowels and 5 diphthongs. The length of the vowel is not significant in distinguishing among words. This contrasts with English, which has 12 pure vowel sounds and 8 diphthongs (Smith, 1987). The length of the vowel sound plays an important role. It is not surprising, therefore, that Spanish learners may have great difficulty in producing or even perceiving the various English vowel sounds. Specific problems include the failure to distinguish the sounds in words such as taught /tɔt/ fool /full or cart/cat/cut. As a relevant fact, contrastive phonology does not happen only between two different languages. It also appears within the same language, but with two different sounds that are produced similarly (Smith, 1987). It is said that sounds can be contrastive if by interchanging these sounds, it is changed the meaning of the word. For example, /kæp/ "cap" and /kæb/ "cab.

2.1.7 Oral Assessment

The term assessment is the process to measure the students' knowledge about a topic; how they use their skills to prove that they understood what it was taught. Poehner (2007) states the assessment is the process of documenting, in a measurable way, the knowledge, skills, behavior, and attitudes of the learner (p. 6) In the same way, Bachman (2004) explains that the assessment process implies gathering information from different sources and variables of interest that show

what the learners can do regarding a topic (p.25). In other words, pronunciation assessment is the evaluation of oral language proficiency and performance. It is important to mention that assessment is valid when it allows students to fully demonstrate their knowledge, skills, and values in relation to the subject, so teachers should be careful when deciding how students will be evaluated.

There are two ways of assessment according to Capraro (2011), which are the formative and summative forms. The first one is the assessment professors use during the scholar year to understand students' needs and accomplishments. This form of assessment includes, besides students' skills, the cognitive field such as their motivation, how they feel with the learning process, their attitudes, and experiences. According to Stiggins and Chappuis (2006), formative assessment is for learning (p.12). Based on the previous descriptions, this form of assessment can make students feel closer to teachers, so that teachers can understand in a better way how students have progressed in a specific period.

On the other hand, summative assessment refers to the score students get at the end of the scholar year. This score determines if the students have what it takes to go to the next academic level. In this form of assessment, there are tests that evaluate students' knowledge in all the subjects. These tests enable the professor to document the students' progress at the end of the year. According to Stiggins and Chappuis (2006), the summative assessment is of learning (p.12).

All the skills: listening, reading, writing and speaking, have their own ways to be assessed. In speaking, the oral assessment includes any evaluation of student learning that is conducted by words of mouth. That is, at least part of the assessment, and part of what counts towards students' mark or grade, depends on what students communicate by the spoken word. One of the advantages of oral assessment is that it can often be marked quickly on the spot. To

support this, the use of a marking guide or rubric of some sort is usually essential (Joughin, 2010). The rubric can include general criteria such as eye contact, body language, fluency, vocabulary, voice tone, and pronunciation. It is relevant to consider that, in speaking, more specific evaluations can be done. For example, if the teacher thinks that students have problems with pronunciation, he or she can evaluate pronunciation only, and create the proper assessment to do so.

Pronunciation, as branch of speaking, can be assessed taking into account different criteria. Pronunciation assessment is useful for the professor to determine the strengths and weaknesses English learners have regarding pronunciation. In this way, teachers can apply specific techniques to make improvements and corrections if needed. It can also help to confirm if the pronunciation techniques that have been applied worked or not. When assessing pronunciation, the evaluator can consider different aspects such as grammatical endings, word stress, emphatic stress, rhythm, intonation, pauses, and loudness. Rating scales can be used to evaluate the previous points. For example, the teacher can ask the students to read aloud a paragraph or short story related to a topic studied in class. The teacher can evaluate the aspects above by using a rubric, which specifies the score for each one of these aspects. The scale can go from “Excellent” to “Needs Improvement.” Moreover, in the rubric, notes can be taken, so the feedback can be provided to the students.

If the evaluation goes for more specific fields such as vowel sounds or consonant sounds, the teacher can create a rubric and needs to decide what is going to be evaluated: vowel sounds, consonant sounds. For example, if the teacher thinks that students have problems with two similar vowel sounds such as /ɔ/ and /ɑ/, the teacher can provide a short tongue twister, including these sounds and ask the student to read them aloud. The teacher can use a rubric to evaluate the correct

differentiation between similar sounds, identification of words according to their sounds, and position of the organs of speech (tongue, lips, teeth), and the scale can go from excellent to low.

CHAPTER III

Methodological Framework

In this chapter, the researcher will provide the explanation, description and definition of different topics. First, the method that will be used in order to carry out the investigation will be presented, along with the plan and strategies to gather the information to help solving the problem. Besides the previous, the information sources will be explained, as well as the analysis categories. In addition, the instruments, which are also part of the investigation, will be explained and described in this section, together with the description of the process of investigation, where the researcher will illustrate how the data will be collected and how the analysis will be done.

3.1 Research Approach

There are three different research approaches, which are qualitative, quantitative, and mixed. In the current investigation, the qualitative will be the focus due to this is the method to be used. Denzin and Lincoln (2000) state that the qualitative method involves a naturalistic approach as through this method the researcher investigates and studies things in their natural settings in order to interpret the meaning of their behaviors. (p. 3).

The advantages of doing qualitative research on leadership include (Conger, 1998; Bryman et al, 1988; Alvesson, 1996): Flexibility to follow unexpected ideas during research and explore processes effectively; sensitivity to contextual factors, ability to study symbolic dimensions and social meaning, increased opportunities.

Based on the above statements, this investigation works under this method due to it will require the researcher's immersion in terms of direct contact with the population and physical involvement in the setting. In other words, this approach is not based on numerical

measurements, but on people interactions and behaviors, meaning that the qualitative method interprets the reality being observed.

The reason why using the qualitative is because it works along the human being experiences. In addition, the researcher has to interact with the students, observe them in their English educational environment, evaluate their pronunciation knowledge during the class, and describe the results of the observations before and after the application of the phono-articulatory technique. As part of the instruments, the researcher will use interviews in order to identify deficiencies students have regarding speaking. The interviews include questions related to how they feel when they speak and how they think they do it.

3.2 Research Design

The research design is the plan or strategies to follow to obtain the desired information in order to solve the problem of the investigation. Kothari (2004) defines research methods or techniques as “All those methods which are used by the researcher during the course of studying his research.” Moreover, Polit and Hungler (1999) describe the research design as an outline for conducting the investigation in a way that the researcher has control over every aspect or detail that could interfere with the validity of the results (p.155).

There is a large number of research designs that can be chosen when doing an investigation. Choosing the method will require the researcher to understand the features of the research problem. Thus, the descriptive method is almost self-explanatory as it refers to describe situations or events, data, and population, among others. Manuel and Medel (1976) state the following: “Descriptive research describes what is. It involves the description, recording, analysis, and interpretation of the present nature, composition or processes of phenomena” (p.25). The descriptive method is the one that provides characteristics of the population or the problem

being studied. It can be done not only through observation, but also through case studies and surveys. Doing so, the researcher can collect the data that will allow the description of the situation accurately and completely.

Differently the case study design is used to analyze a phenomenon to generate hypotheses and validate a method. This design can be defined as an empirical research design used to investigate contemporary phenomenon, focusing on the dynamics of the case, within its real-life context. Yin (2014) focuses on the scope, process, and methodological characteristics of case study research, emphasizing the nature of inquiry as being empirical, and the importance of context to the case (p.97). In addition, Stake (1995) states that case study research is the study of the particularity and complexity of a single case, coming to understand its activity within important circumstances" (p. xi). In other words, a case study is the study of a particular situation or issue rather than using statistics to analyze it.

The case study design has been used in many disciplines, such as social, education, business, law, and health, as it helps to address a wide range of research questions, since it provides the observant with the opportunity of collecting data using different techniques, such as a survey, interview, and experiments, among others. The case of study could be conducted with various goals, such as to describe the phenomenon, test a theory, or generate a theory.

The current research uses both designs: descriptive and a case study. The descriptive design appears when the investigator, through observation, describes the students, their age, their English level, and their behavior during the English class. Furthermore, in order to identify the deficiencies in students' oral production, two interviews will be conducted. The results obtained from this instrument will be described. On the other hand, the case study design is part of the

investigation because data will be collected in an empirical way, that is by using observation and students' and teacher experiences, which the researcher will get through an interview.

3.3 Information Sources

The information sources refer to anything that can inform people about specific topics. They include observations, people, books, investigations, dictionaries, newspapers, and pictures, among others. They are divided into different groups; in this section the primary, secondary and tertiary will be explained and defined. The primary sources can be defined as the information about a topic that has been investigated, explained or defined by people who have a direct connection with it. These topics have been investigated without using any interpretation or commentary. It is the information shown for the first time. These sources include books and anthologies. From the primary sources different books were used as references. For example, *How to Teach Pronunciation* by Gerald Kelly, *Phonology: An Introduction to basic concepts* by Roger Lass and *Teaching Speaking: A Holistic Approach* by John Murphy.

The secondary sources represent the information that has been investigated, explained, or defined by using primary sources. Here, quoting and paraphrasing are commonly used to complete the research, as they try to describe and analyze the primary sources. These sources include investigations, theses, articles, magazines, newspapers, and speeches, among others. From the secondary sources, different theses were used such as *The Promotion of the Autonomous Learning in English Students at Centro de Idiomas from UNED* by Veronica Gómez Atencio and *Anxiety as a Factor Affecting the Pronunciation of the English Vowels / æ, ɑ, ɔ, ʌ / on EFL Adult Learners of 7-3 at Liceo Nocturno de Desamparados during the First Quarter of 2017* by Maria Paula Fallas Dávila.

Finally, the tertiary sources represent the information that has been investigated, explained, or defined by using primary and secondary sources. These sources, which are usually not credited to a particular author, will compile and interpret other people's investigations, books, and materials. The tertiary sources include dictionaries, glossaries, and encyclopedias. From the tertiary sources, a dictionary was used: Merriam-Webster Dictionary.

3.4 Analysis Categories

The analysis categories are derived from each specific objective. In this segment, four categories will be explained, which are teaching pronunciation, ninth graders group, contrastive phonology, and vowel production.

Pronunciation is the sub-skill of speaking that involves features such as fluency, intonation, rhythm, stress, and volume. When learning a language, the pronunciation process includes not only the ability to recognize significant sounds, but also the ability to produce them with accuracy. To better understand the concept, it is important to know the tripod of pronunciation, the sounds (vowels and consonants), rhythm (word and sentence stress) and intonation (falling, rising, sustained) of a language.

Intonation is the tune of what a person says. More specifically, it is a combination of musical tones, as a person pronounces the syllables that make up the speech. Then, stress is the degree of prominence of one syllable in relation to the surrounding ones. Finally, rhythm refers to the patterns of recurrence of stress. It is characterized by the regular recurrence of stressed syllables at relatively uniform intervals of time.

Based on the previous statements, when teaching pronunciation it is important to let students know how essential is to understand what people are saying when they speak, and to

make them understood when they speak to others due to learners should never forget that “language is communication.” That is why, when students do their listening and oral practice, it is relevant for them to hear and produce the consonant and vowel sounds within the appropriate intonation and rhythm units.

Before teaching pronunciation, teachers should consider different levels where students are at (Beare, 2001). The first level is where the learners are not able to transmit a message due to the wrong usage of sounds when producing the English words, what they say is completely not understandable, and the grammar and vocabulary skills are not well-developed. Then, the second level is where learners transmit an understandable message, but the pronunciation is not acceptable due to accent issues. Finally, the third level is where students can transmit the message and their pronunciation is acceptable to listen to. Teaching pronunciation is divided into two groups: phonetics, which refers to the sounds, and phonology which refers to the classification of sounds within the system of a language.

The students under investigation are from a ninth-grade group, so they are currently between 14 and 15 years old. This group attends a private school named Instituto de Desarrollo de Inteligencia. This group is constituted by 18 students with an intermediate English level as most of them have received English classes since they were 4 years old. Because of this, they have developed their reading, listening, writing, and speaking skills in an appropriate manner. There are 2 students that have family issues and that influences the students’ academic performance. Even though, their English level is efficient.

Contrastive phonology refers to the analysis and comparison of L1 and L2 phonemes. This comparison is done because similar sounds of two languages can have different functional statuses. Contrastive phonology also deals with differences between two dialects of a same

language. Spanish speakers, for example, tend to identify Spanish vowel /a/ with the English vowels /ɑ/, /æ/, and /ə/. The Spanish /a/ is not exactly the same as any of those English vowels, although they share some features. Benedito (2001) claims that the vowel /æ/ is halfway between the Spanish vowels /a/ and /e/. The /æ/ is closer than the /a/ and it needs slightly spread lips instead of neutral lips like the vowel /a/. Regarding the vowel /ɑ:/, it is much more different from the Spanish /a/, since it is a front vowel and the /ɑ:/ is a back one and requires a wider opening of the jaws. Moreover, the English /ɑ:/ is much longer than the Spanish /a/ (p.36). The schwa /ə/ is a very special vowel in English and it is quite complex for Spanish speakers ~~Spaniards~~. It is a central vowel like the Spanish /a/, but it is closer.

The last analysis category is vowel production. As it is known, all vowel sounds are produced without any obstruction of the airstream; therefore, they are voiced sounds. The parts of the vocal tract involved in the process of producing the vowel sounds are the tongue and the lips. When producing a vowel sound, it is important to know that each of them has specific properties that can help the learner to distinguish one vowel sound from another. For example, the position of the tongue, which can be raised or lowered and the shape of the lips, which can be rounded or unrounded.

3.5 Data Collection Instruments

Instruments are the tools the researcher can use in order to get the necessary information to solve the problem. Seaman (1991) states that the data collection instruments are devices such as observations, questionnaires, interviews, tests, and checklists, among others, that are used to collect data. It is important to understand the research approach, which in this case is mixed and the research designs, which in this case are descriptive and case study. This is because, based on

these two aspects the instruments can be chosen to provide the expected results for the researcher to solve the problem.

Four instruments will be used during this research, which are, interviews, a Likert scale, a pre-test, and a post-test. First of all, the researcher will start with two interviews: one for the teacher and the other to the students. This is to start identifying the deficiencies students have in the production of vowels /ə/, /æ/, /ɑ/ in contrast with the Spanish vowel /a/. After that, the investigator will continue the first Likert scale. This scale will let the researcher know deficiencies students have specifically with sounds /ə/, /æ/, /ɑ/ in contrast with the Spanish vowel /a/. Then, the researcher will continue with the pre-test as part of the application of contrastive phonology exercises. This test will have three stages: pre-speaking, while-speaking, and post-speaking. Finally, the post-test will be applied, which in the same line as the pre-test has three stages: pre-speaking, while-speaking, and post-speaking. This test is to confirm whether the application of the contrastive phonology exercises enhanced the students' production of vowels /ə/, /æ/, /ɑ/, and /a/

The interview consists of a series of questions asked to someone related to different topics. Boyce and Neale (2006) state that the interview is a qualitative research method, in which the interviewer can explore respondents' ideas, perspective, and opinions on a specific situation (p.13). The interview was chosen as part of the instruments of this investigation due to through it, the researcher will be able to ask relevant questions to both, professor and students. The interviews will provide the researcher deficiencies students have regarding speaking, how they feel when they speak in public and what are their strengths and weaknesses. Two interviews will be performed, so the researcher can have the teacher's and student's points of view.

The Likert scale is the one used to measure the attitude directly. That is, people know their attitude is being studied. The Likert scale allows the individual to express how much they agree or disagree with a particular statement. In addition, it works to measure other variations such as frequency, quality, importance, and likelihood. The Likert scale was chosen as part of the instruments because through it, the investigator will know the specific deficiencies students have when producing English vowel sounds /ə/, /æ/, /ɑ/ in comparison with Spanish vowel sound /a/.

The pre-test, as per its definition, is the tool used by investigators to figure out the baseline knowledge students have related to a particular topic. This method can help the researcher to find mistakes or aspects to be improved. According to Caspar, Peytcheva, and Yan (2006), pretesting represents a relevant role in research due to it reduces the measurement error that can affect the final results of the investigation (p.1). The pre-test was chosen as part of the instruments of this investigation due to the researcher can proceed to apply contrastive phonology exercises, so students can be able to improve the production of vowels /ə/, /æ/, /ɑ/, and /a/.

The post-test is the tool used in order to confirm that the completion of a program or segment was accurate. This method can help the researcher to make sure that the deficiencies found in the pre-test were corrected or not. The post-test was chosen as part of the instruments of this investigation, due to the researcher can evaluate if participants improved the production of vowels /ə/, /æ/, /ɑ/, and /a/ after applying contrastive phonology exercises.

3.6 Collection Data Process and Data Analysis

In this section, the process of data analysis, will be explained. According to Shamo (2003), the data analysis is a way of drawing the results obtained in an investigation after doing the necessary evaluations (p.16). Based on this, the data analysis is the way in which the results obtained can be presented in graphics, tables, and others. The first step will be the two interviews,

which will help the researcher to identify students' weaknesses and strengths regarding speaking. Also, through the interview, the researcher will identify affective factors that interfere with students' language learning process. The researcher will have both points of view and based on that can start working by using contrastive phonology exercises. The first one will be done to the professor in order to understand and identify the strengths and weaknesses the students have regarding the productions of vowels /ə/, /æ/, /ɑ/, and /a/. The interview consists of 4 questions and it will take from 5 to 10 minutes to be completed. The researcher will ask these questions and the teacher will answer according to her personal experiences towards the language.

The second interview will be done to the students to understand how they feel when speaking English and what are the strengths and weaknesses, they think they have when communicating a message. This interview will also show if they have deficiencies when producing the vowels /ə/, /æ/, /ɑ/, and /a/. The interview consists of 5 questions. With the first four questions, the researcher will know the strengths and weaknesses students have when speaking. The last question will allow the investigator to identify if students, instead of producing the English vowels /ə/, /æ/, /ɑ/, produce the Spanish vowel /a/. The interview will take from 5 to 10 minutes to be completed. The researcher will ask these questions and the students will have to answer them individually. They receive three English lessons, so 6 students will be interviewed per lesson. The results from both interviews will be described, and the investigator will be aware of the deficiencies students have.

Before applying the pre-test and after applying the post-test, the investigator will proceed with a short Likert scale containing the words: magic, party, afraid, back, glass, and machine. All these words represent the English vowel sounds /ə/, /æ/, /ɑ/. The scale goes from excellent to needs improvement. Students will read each word aloud, so this will allow the investigator to

state how they are producing the sounds and if they are confusing the English sounds with the Spanish sound /a/. This will take from 5 to 10 minutes.

Once the results from the interviews and the Likert scale are obtained, the pre-test can be applied. The pre-test will be a short exercise dealing with minimal pairs, which students have to read aloud. After this, the same words will be included in sentences, which students will read aloud, as well. Finally, these same words will be included in short paragraphs, and students will read them aloud, too. Students will work in pairs or trios, so this will allow students to put into practice the peer correction technique. The activity will be divided into three stages: pre speaking, while speaking, and post speaking.

In the pre-speaking stage, students will read aloud words using the activity “Minimal Pairs.” 10 pairs of words, including the sounds /ə/, /æ/, /ɑ/ will be provided, which are: hat-hot, cat-cot, sack-sock, cap-cop, ran-Ron, bat-but, ant-aunt, shack-shock, pot-pat, and calf-cough. Students will read them aloud and the mistakes will be corrected by the researcher by letting the students know the mouth position for each sound to reach the accurate vowel production. This stage will take from 6-8 minutes.

In the while speaking stage, students will read aloud the same words, but this time they will be included in the following sentences: 1) I need a hat for this hot weather, 2) My cat likes to sleep in the baby’s cot, 3) I found a sock in the big sack, 4) The cop is wearing a red cap, 5) Ron ran yesterday in the morning, 6) I saw a bat, but it was sleeping. 7) There is an ant near my aunt, 8) My sister will shock when she sees the new shack, 9) She will pat him on the back once he gets the pot, 10) The calf is very sick as its cough got worse. Once they read the sentences, mistakes can be corrected by letting the students know the mouth position for each sound to reach the accurate vowel production. This activity will take from 10-15 minutes.

In the post speaking stage, the students will read aloud a paragraph containing the same words. The paragraph is: Once upon a time, there was a kid named Ron. Ron lived with his parents, and her aunt in a beautiful shack surrounded by grass, flowers and trees. He loved to wear a red cap, white t-shirts, colorful socks and blue jeans. He was an animal lover, and his best friends were an ant, a calf and a cat. He was always smiling, until the day his cat ran away from his parents' shack. He looked for his cat everywhere; however, he didn't find it. Hours later, he saw a cop with a blue hat and a pot on his hands. He explained the situation to the officer and asked for help, but the officer could not assist because of his cough. While students are reading the previous paragraph, the investigator will evaluate them by using a rubric. This activity will take from 15-20 minutes. The results obtained from this instrument will be graphed, so this can allow the researcher to compare results and identify improvements at the end of the investigation.

After the post-test, the researcher can start with the contrastive exercises where students will understand how to produce each sound. The first exercise will be a role play. Students will be provided with the words alone, family, protect, backpack, man, car, gas station, party, afraid, and better. Using these words, they will have to create a role play, which they will present in front of the class. The activity will take 20 minutes and students are allowed to work in pairs or trios. Then, the second activity can be applied, which is the classification of words. The investigator divides the board into three spaces named /ə/, /æ/ and /ɑ/, and the group is divided into two groups: A and B. The teacher produces the sounds /ə/, /æ/ and /ɑ/ for the students to differentiate them. Then, they are provided with a list of words such as hand, black, across, rabbits, sensible, petition, half, charge, bath, heart, fat, happen, animal, band, accuse, police and common. Each group can choose a person per turn to read a word aloud and classify it depending on the sound. After this, the researcher can proceed with the third activity, which is the sentence maker. The

group is divided into trios or groups of four. Students are provided with a list of words containing the sounds /ə/, /æ/ and /ɑ/ such as jacket, natural, action, father, farm, problem. In a piece of paper, each group have to create sentences with the provided words. During the brainstorming, students must speak in English. After that, the groups read their sentences in front of the class. Each member of the group must read at least one sentence.

At the end, the post-test can be applied. The post-test will be a short exercise starting with minimal pairs, which they have to read aloud. After this, the same words will be included in sentences, which students will read aloud. Finally, these same words will be included in short paragraphs, and students will read them aloud, too. Students will work in pairs or trios, so this will allow students to put into practice the peer correction technique. The activity will be divided into three stages: pre speaking, while speaking and post speaking.

In the pre speaking stage, students will be reading aloud words using the activity “Minimal Pairs.” 10 pairs of words, including the sounds /ə/, /æ/, /ɑ/, will be provided, which are: hat-hot, cat-cot, sack-sock, cap-cop, ran-Ron, bat-but, ant-aunt, shack-shock, pot-pat, and calf-cough.

Students will read them aloud and if there are still mistakes, they will be corrected by the researcher by letting the students know the mouth position for each sound to reach the accurate vowel production. This stage will take from 6-8 minutes.

In the while speaking stage, students will read aloud the same words, but this time they will be included in the following sentences: 1) It is a hot day, so I need a big hat, 2) The cat left his toys in my nephew’s cot, 3) My mom has a sack full of socks, 4) I called a cop because someone stole my cap, 5) I ran with Ron 5 kilometers last week, 6) The bat was in trouble, but

she could not help him, 7) My aunt found an ant in his car, 8) There was a shock accident inside the shack, 9) My parents pat me when I clean the pot, 10) I cannot touch the calf because my cough scares him. Once they read the sentences, mistakes can be corrected by letting the students know the mouth position for each sound to reach the accurate vowel production. This activity will take from 10-15 minutes.

In the post speaking stage, the students will read aloud a paragraph containing the same words. The paragraph is: It is a hot and beautiful day outside; the grass is green, and the air is fresh. This weather makes me feel happy, so I will wear my favorite hat and lucky socks, which my aunt gave me. I think that today is the best day to complete my to-do list. First of all, I want to visit my best friend Ron. His father is a cop who always wears a cap. Last week, he told me that he was very happy because while his father was working, he found a cat in the street, and he took it home, so now I want to meet this beautiful animal and pat Ron's shoulder because of his new friend. Then, I need to buy a pot and food to feed that calf that lives in my parents' property. By the way, this property is huge. In there, there is a big shack; however, I don't like it that much because it is full of ants. In addition to the food, I have to buy a sack of potatoes because my mom will cook the dinner at night. Finally, I need to buy cough syrup to my little brother who is sick because he ran while it was raining.

While students are reading the previous paragraph, the investigator will evaluate them by using a rubric.

By analyzing the results obtained in the post test, the investigator will confirm if, in fact, the contrastive phonology exercises helped students to improve the production of vowel sounds /ə/, /æ/, /ɑ/, and /a/. The results will be also graphed as they will be compared to the results obtained in the pre-test.

As it was previously explained, the current investigation is being worked under the qualitative approach. Also, it has the descriptive and case study designs as it is empiric, which means that the investigator will witness all the events when collecting data and this data will be collected through descriptions and interviews. In addition, there are four essential analysis categories, which are teaching pronunciation, ninth graders group, contrastive phonology, and vowel production. Besides this, the sources to support the investigation are books, articles, and theses. Furthermore, four instruments will be used, which are observation, interview, pre-test, and post-test. With the final results, the researcher will be able to get conclusions and confirm if the contrastive phonology exercises can be applied to improve the production of vowels /ə/, /æ/, /ɑ/, and /a/.

CHAPTER IV

Data Analysis

The current chapter is dedicated to the analysis of the information gathered during the investigation process. Data analysis refers to the way in which the data will be interpreted in order to discover useful information that can help in the decision-making process. LeCompte and Schensul (1999) state that data analysis is the process used by researchers for reducing data to a story and interpreting it to derive insights. (p.13). The analysis and explanation of the collected results from the interviews will be described through tables, and the results from the Likert scale, the pre-test and post-test will be presented in graphs for better interpretation. The analysis will be performed through a mixed approach, meaning that it includes both methods: qualitative and quantitative. This analysis of information is important because as a result of this interpretation, the researcher can get conclusions.

4.1 Analysis and Interpretation of the Results

In this section the analysis of the results obtained from the instruments is made. The instruments were applied to all participants, and they will be described and compared for better understanding.

4.1.1 Interview to the Teacher

The interview for the teacher had 5 questions. All of them are represented on the following figures with their respective tables per question. This interview was chosen as part of the instruments in order to better understand and identify the deficiencies students have regarding speaking from the teacher's point of view.

The researcher asked these questions to the teacher and she answered based on their personal experience with the group. The following table shows the answers to the 5 questions.

4.1.1.1 Question 1: Which of the following difficulties do you think students have when they speak English?

Difficulties	Answer
Grammar mistakes	
Lack of subject knowledge	
Lack of vocabulary	x
Pronunciation mistakes	x
Unnecessary repetitions	

Table 1 represents the difficulties students have when they speak English.

Table 1 shows the difficulties students have when they speak English. According to the teacher, students' difficulties when speaking English are mostly lack of vocabulary and pronunciation mistakes. She does not consider grammar mistakes, lack of subject knowledge and unnecessary repetitions are a difficulty to her students because, according to her, this is what is practiced the most during her lessons. On the other hand, pronunciation and vocabulary are not the focus in her class.

4.1.1.2 Question 2: Which of the following affective factors interfere students when speaking in front of the class?

Affective Factors	Answer
Anxiety	
Fear	x
Lack of confidence	
Nervousness	
Shyness	
Stress	x

Table 2 represents the affective factors that interfere students when they speak in front of the class.

Table 2 shows the affective factors that interfere students when they are speaking in front of the class. According to the teacher, these factors are fear and stress. Other factors such as anxiety, lack of confidence, nervousness and shyness, do not mostly affect students when they are speaking in front of the class. This means that, when students are speaking in front of the class, the teacher notices the fear and stress students express through the way they move and talk during their presentations.

4.1.1.3 Question 3: What are some students' areas of improvement when speaking English in public?

Question 3 is important because it provides the areas where students are able to improve because of their skills and attitude according to the teacher. Based on teacher's response, she stated her students may need to improve areas such as fluency, vocabulary and pronunciation. With the vocabulary, she stated that only 2 or 3 students had problems with vocabulary words.

She added that they do not have problems with grammar or aspects such as eye contact or hand movements when speaking in public. According to her answer, speaking is the subject students practice the less; however, students are always trying to practice it. They try to speak in English during the class and to clear their doubts regarding pronunciation and vocabulary. For this reason, the teacher stated that speaking with all its aspects such as pronunciation, fluency and vocabulary is an area of improvement for them.

4.1.1.4 Question 4: What are the students' strengths regarding pronunciation?

Strengths	Answer
Fluency	
Grammar	x
Pronunciation	
Subject Knowledge	x
Vocabulary	

Table 3 represents students' strengths regarding pronunciation.

Table 3 shows the strengths students have regarding pronunciation. According to the teacher, these strengths are grammar and subject knowledge. Aspects such as fluency, pronunciation and vocabulary are not considered strengths according to the teacher. Based on her answer, for the group is easier to understand the topics reviewed in class and to learn and memorize grammar rules. She added that another strength they have is writing as they can apply grammar rules accurately.

4.1.1.5 Question 5: What are the students' weaknesses regarding pronunciation?

Weaknesses	Answer
Fluency	x
Grammar	
Pronunciation	x
Subject Knowledge	
Vocabulary	x

Table 4 represents students' weaknesses regarding pronunciation.

Table 4 shows the weaknesses students have regarding pronunciation. According to the teacher these weaknesses are fluency, pronunciation and vocabulary. As previously stated, the teacher does not consider that grammar and lack of subject knowledge are the mainly deficiencies students have. Based on her answer, during the class, she does not have enough time to correct aspects in speaking such as pronunciation and fluency, reason why they cannot practice them. The teacher added that vocabulary is also a weakness because 6 or 7 students did not receive English before, so they do not have as many vocabulary words as their classmates have.

4.1.2 Interview to the students

The interview for the students was chosen as part of the instruments because through this, the investigator can identify the deficiencies students have regarding speaking from their own point of view. This is a 4-question interview, which was applied to 17 students out of 18 because one of them had to leave. The following tables show the answer provided by the students to the 4 questions.

4.1.2.1 Question 1: Do you consider speaking as a difficult subject? Why?

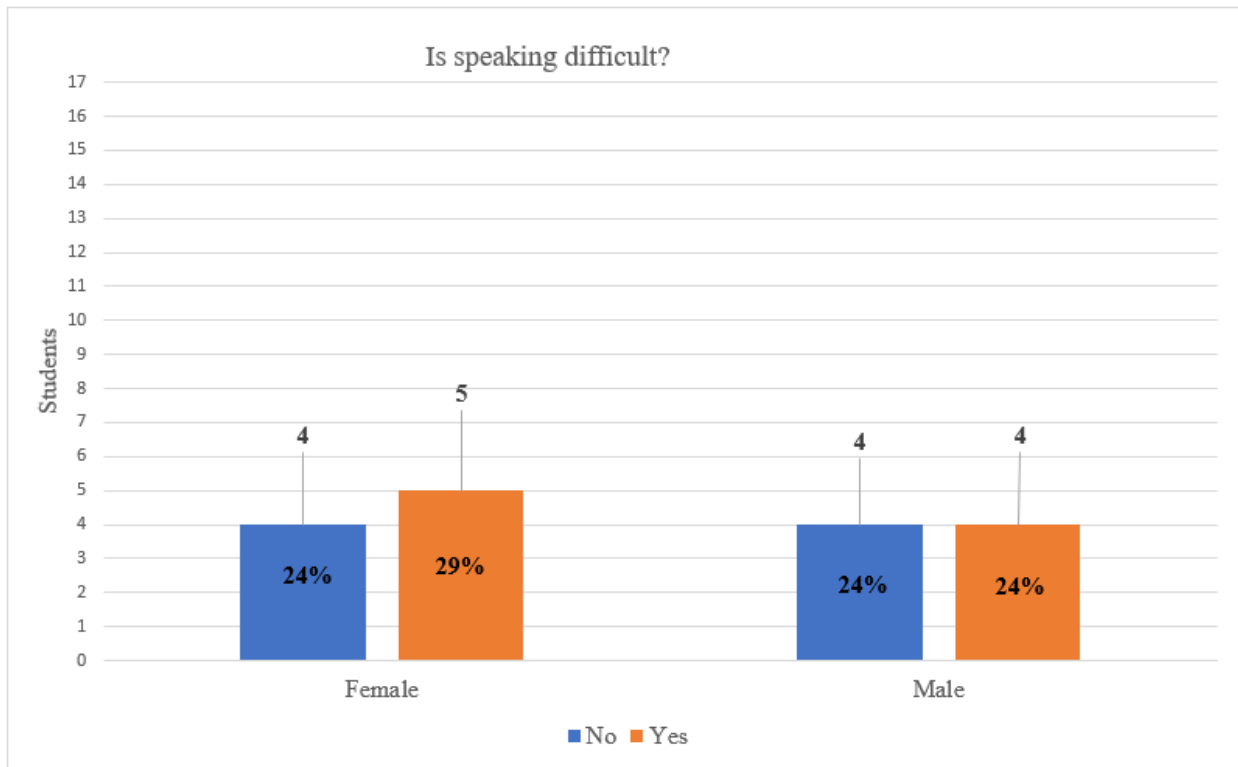


Figure 1 represents the students who consider speaking as a difficult subject.

Figure 1 shows that from a group of 17 students, 9 are girls and 8 are boys. From these 9 girls, 4 answered no and 5 answered yes. That is 24% and 29%, respectively. Also, from the 8 boys, 4 answered no and 4 answered yes. That is, 24% and 24%, respectively. Students who answered that speaking is not a difficult subject stated that it is not because English is easy to learn, and students who answered yes provided three different reasons such as “I did not receive English before”, “I do not feel good” and “I make a lot of mistakes when speaking”. This means that even though, there are more students that consider speaking as a difficult subject, there is a significant number of students who consider that it is difficult.

4.1.2.2 Question 2: How do you feel when you speak English in public?

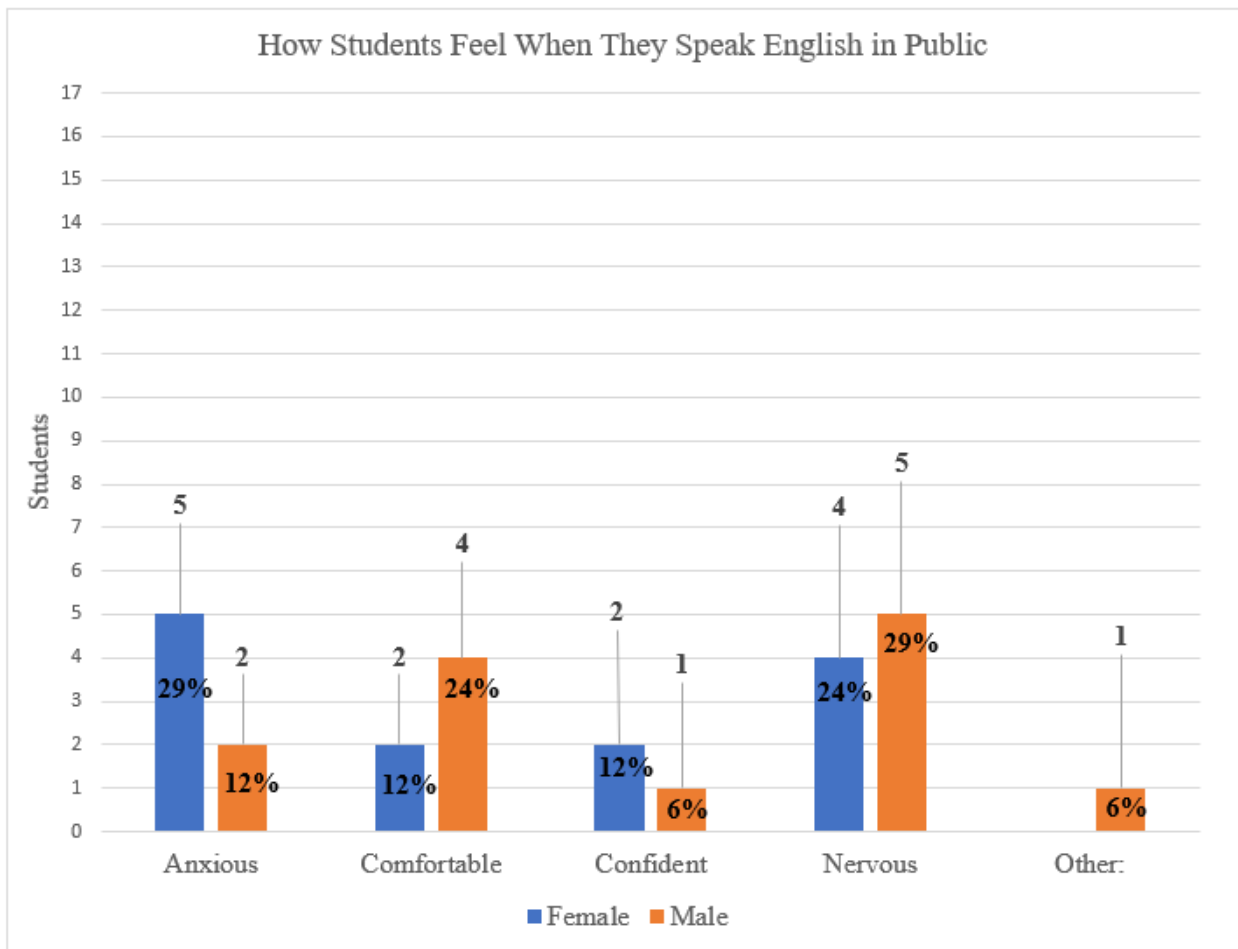


Figure 2 represents how students feel when they speak English in public.

Figure 2 shows that from 17 students, 7 feel anxious when they speak English in public. From these 7, 5 were girls and 2 were boys. That is 29% and 12% respectively. Also, from 17 students, 6 feel comfortable when speaking English in public. From these 6, 2 were girls and 4 were boys. That is, 12% and 24%, respectively. In addition, from 17 students, 3 feel confident when they speak English in public. From these 3, 2 were girls and 1 was a boy. That is 12% and 6%, respectively. Besides, from 17 students, 9 feel nervous when speaking English in public. That is, 24% and 29%, respectively. Finally, from 17 student, only 1 boy provided other feeling. He stated that he feels happy when speaking English in public. This means that nervousness, with 9 students and anxiety with 7 students, are the feelings that most affect students when they are

speaking in public. These two feelings could be the reason why almost half of the class consider speaking as a difficult subject.

4.1.2.3 Question 3: What are the strengths you think you have regarding speaking?

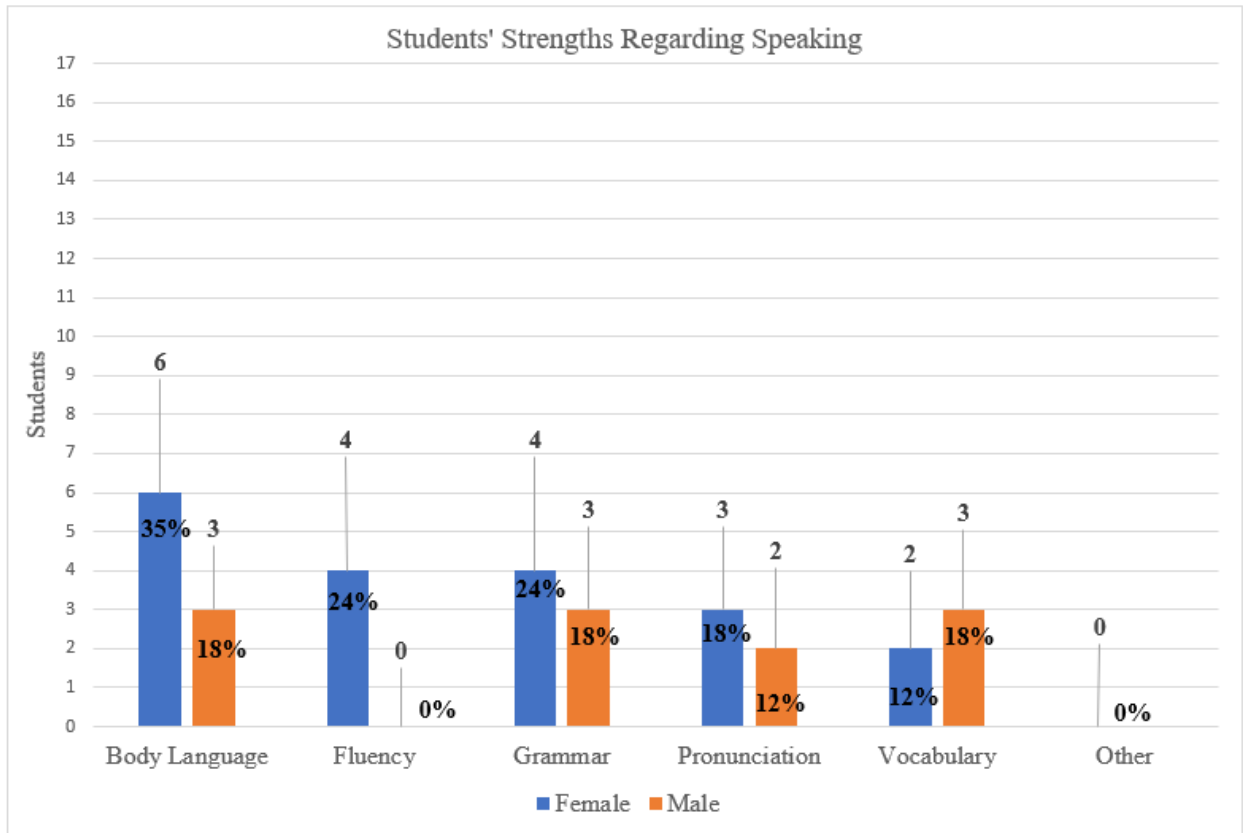


Figure 3 represents students' strengths regarding speaking.

Figure 3 shows from 17 students, 9 think that the body language is one of their strengths. From these 9, 6 were girls and 3 were boys. That is 35% and 18%, respectively. Also, from 17 students, 4 girls and 0 boys think that the fluency is part of their strengths. That is 24% and 0%, respectively. Besides, from 17 students, 7 consider grammar is part of their strengths. From these 7, 4 were girls and 3 were boys. That is, 24% and 18%, respectively. In the same way, from 17 students, 5 think that pronunciation is one of their strengths. From these 5, 3 were girls and 2 were boys. That is, 18% and 12%, respectively. In addition, from 17 students, 5 think vocabulary is one of their strengths. From these 10, 2 were girls and 3 were boys. That is, 12% and 18%,

respectively. Finally, from 17 students, 0 provided a different strength. That is a 0%. Body language with 9 students and grammar with 6 students are the strengths students have the most. This confirms what the teacher answered in her interview on question 4 where she stated that grammar is the subject, they practice the most, so it is less difficult for students.

4.1.2.4 Question 4: What are the weaknesses you think you have regarding speaking?

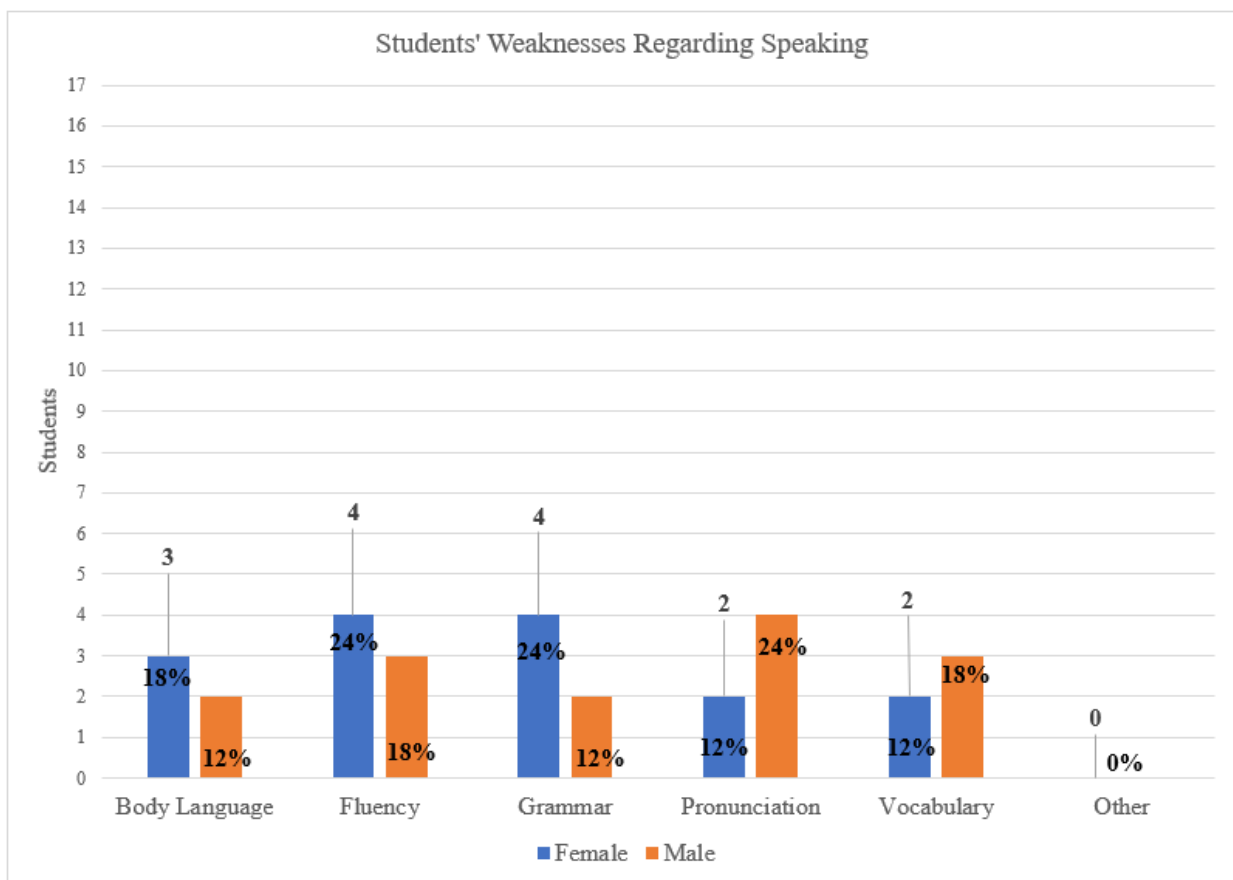


Figure 4 represents students' weaknesses regarding speaking.

Figure 4 shows from 17 students, 5 think that the body language is one of their weaknesses. From these 5, 3 were girls and 2 were boys. That is 18% and 12%, respectively. Also, from 17 students, 7 students think that the fluency is part of their weaknesses. From these 7, 4 were girls and 3 were boys. That is 24% and 18%, respectively. Besides, from 17 students, 6

consider grammar is part of their weaknesses. From these 6, 4 were girls and 2 were boys. That is, 24% and 12%, respectively. In the same way, from 17 students, 6 think that pronunciation is one of their weaknesses. From these 6, 2 were girls and 4 were boys. That is, 12% and 24%, respectively. In addition, from 17 students, 5 think vocabulary is one of their strengths. From these 5, 2 were girls and 3 were boys. That is, 12% and 18%, respectively. Finally, from 17 students, 0 provided a different weakness. That is a 0%. On the contrary to the previous question, this shows the areas where students feel weak. This confirms what the teacher stated in her interview on question five; fluency with 7 students and pronunciation with 6 students are the weaknesses students have the most regarding speaking.

4.1.3 Pre-Likert Scale

The Likert scale was chosen as part of the instruments because through it, the investigator can identify more specific deficiencies students have when producing the English vowels /ə/, /æ/ and /ɑ/ in comparison with Spanish vowel sound /a/. A Likert scale will be also applied before the post-test for the investigator to compare results. This instrument was applied to 18 students individually. The following tables will show the results obtained.

4.1.3.1 Students' Pronunciation Accuracy

Sounds	Excellent	Good	Needs Improvement
/ɑ/	6 students	10 students	2 students
/æ/	6 students	12 students	0 students
/ə/	0 students	9 students	9 students

Table 5 represents students' pronunciation accuracy before the pre-test.

Table 5 shows how accurate students produced the sounds /ə/, /æ/ and /ɑ/. Based on the obtained results, the production of vowel sounds /æ/ and /ɑ/ was easier for students than the production of sound /ə/. With sound /ɑ/, from 18 students, 6 produced it excellent, 10 students did it good and only 2 students need improvement. As well as sound /ɑ/, with sound /æ/, from 18 students, 6 did it excellent, 12 students produced it good and none of the students need improvement with this sound. On the other hand, with sound /ə/, from 18 students, 0 produced it excellent, 9 students did it good and 9 students need improvement with the production of this sound, meaning that sound /ə/ is the one students confuse the most with Spanish sound /ɑ/ because the mouth movement when producing vowel /ə/ is the same as when they produce Spanish vowel /ɑ/.

4.1.3.2 Vowel Sound Production Frequency

Sound	Needs		
	Excellent	Good	Improvement
/ɑ/	15 times	18 times	3 times
/æ/	15 times	21 times	0 times
/ə/	0 times	17 times	19 times
Total of Times	30 times	56 times	22 times

Table 6 represents the vowel sound production frequency.

Table 6 shows how many times the sounds were produced either excellent, good or needs improvement. Based on the results, sound /ɑ/ was produced 15 times in an excellent way, 18 times in a good way and in 3 times, the production needed improvement. In the same way, sound /æ/ was produced 15 times in an excellent way, 21 times in a good way and at any time, the production of the sound needed improvement. Finally, sound /ə/ was never produced in an excellent way, 17 times it was produced good and 19 times its production needed improvement. This evaluation was done based on the mouth, tongue and lip position when producing each sound. This means that students have more deficiencies with this sound than with the others.

4.1.4 Pre-test

The pre-test was chosen as part of the instruments because through it the researcher can start working on the deficiencies, students have when producing English vowel sounds /ə/, /æ/, /ɑ/. The pre-test was applied to 18 students. They worked on groups of 3 and 4; however, the final presentation from each stage was performed individually. The rubric to evaluate the pre-test

was divided into two parts, which are sounds and prosodic features. Below charts show the results from both divisions.

4.1.4.1 Sounds Production Accuracy

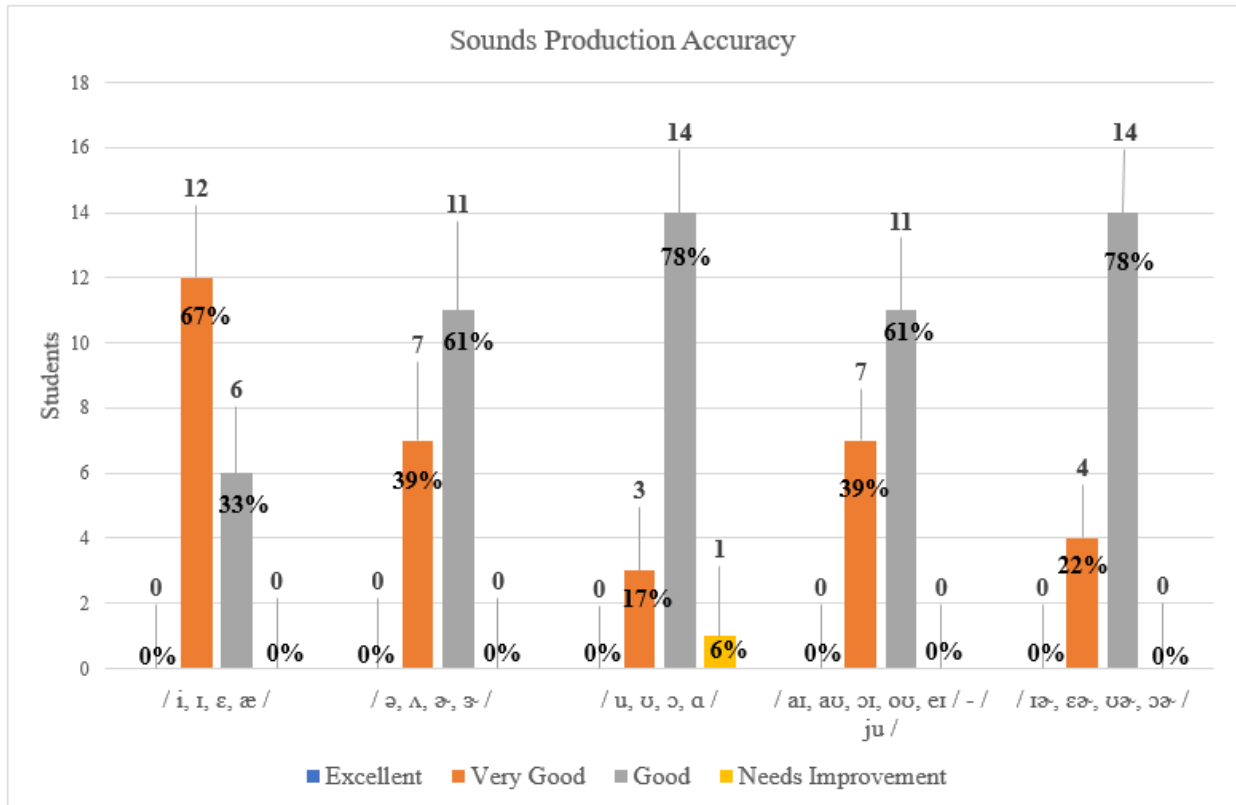


Figure 5 represents the students' sounds production accuracy in the pre-test.

Figure 5 shows the number of students and the respective percentage that produce the sounds / i, ɪ, ε, æ /, / ə, ʌ, ɔ, ɜ /, / u, ʊ, ɔ, ɑ /, / aɪ, aʊ, ɔɪ, oʊ, eɪ / - / ju / and / ɪə, eə, ʊə, ɔə / in a scale of excellent, very good, good and needs improvements. Based on results above, in the production of sounds / i, ɪ, ε, æ /, from 18 students, 0 did it excellent, 12 students did it very good, 6 students did it good and 0 students needed improvements. That is 0%, 67%, 33% and 0% of the students, respectively. Additionally, in the production of sounds / ə, ʌ, ɔ, ɜ /, from 18 students, 0 did it excellent, 7 did it very good, 11 did it good, and 0 needed improvements. That is 0%, 39%, 61% and 0% of the students, respectively. Also, in the production of sounds / u, ʊ, ɔ, ɑ /, from 18

students 0 did it excellent, 3 did it very good, 14 did it good, and 1 needed improvement. That is 0%, 17%, 78% and 6% of the students, respectively. Besides this, in the production of sounds / aɪ, aʊ, ɔɪ, oʊ, eɪ / - / ju /, from 18 students, 0 did it excellent, 7 did it very good, 11 did it good and 0 student needed improvements. That is 0%, 39%, 61% and 0% of the students, respectively.

Finally, in the production of sounds / ɪə, eə, uə, ɔə /, from 18 students, 0 did it excellent, 4 did it very good, 14 did it good, and 0 students needed improvements. That is, 0%, 22%, 78% and 0% of the students, respectively. In the production of these sounds, 0 students did it excellent because the position of the mouth was not efficient. Most of them did it between very good and good, and only 1 student needed improvement with sounds / u, ʊ, ɔ, ɑ /.

4.1.4.2 Differentiation of Sounds Accuracy

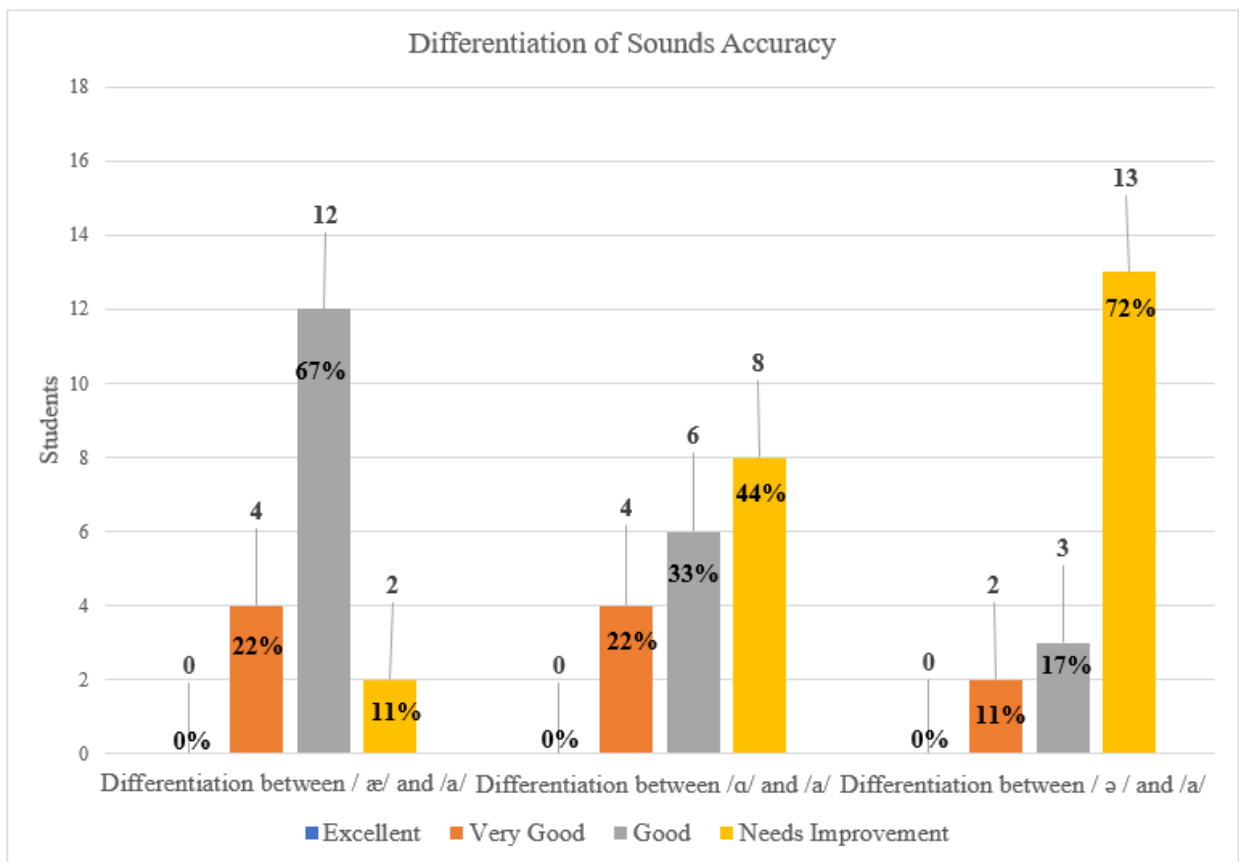


Figure 6 represents the students' differentiation of sounds accuracy in the pre-test.

Figure 6 shows the number of students, and its respective percentage, that differentiate the English vowel sounds /ə/, /æ/, /ɑ/ from the Spanish vowel sound /a/ in a scale of excellent, very good, good and needs improvement. Based on the results above, in the differentiation between /æ/ and /a/, from 18 students, 0 did it excellent, 4 did it very good, 12 did it good and 2 needed improvements. That is, 0%, 22%, 67% and 11% of the students, respectively. Then, in the differentiation between /ɑ/ and /a/, from 18 students, 0 did it excellent, 4 did it very good, 6 did it good and 8 students needed improvements. That is, 0%, 22%, 33% and 44% of the students, respectively. Finally, in the differentiation between /ə/ and /a/, from 18 students, 0 did it excellent, 2 did it very good, 3 did it good and 13 students needed improvements. That is, 0%, 11%, 17% and 72% of the students, respectively. According to the graph, 0 students did it excellent in differentiating the sounds. In the differentiation between /æ/ and /a/, is where students needed improvement the less. On the other hand, in the differentiation between /ə/ and /a/ is where the students need improvement the most. This happened because the sound they were producing was the sound for Spanish vowel /a/.

4.1.4.3 Prosodic Features Accuracy

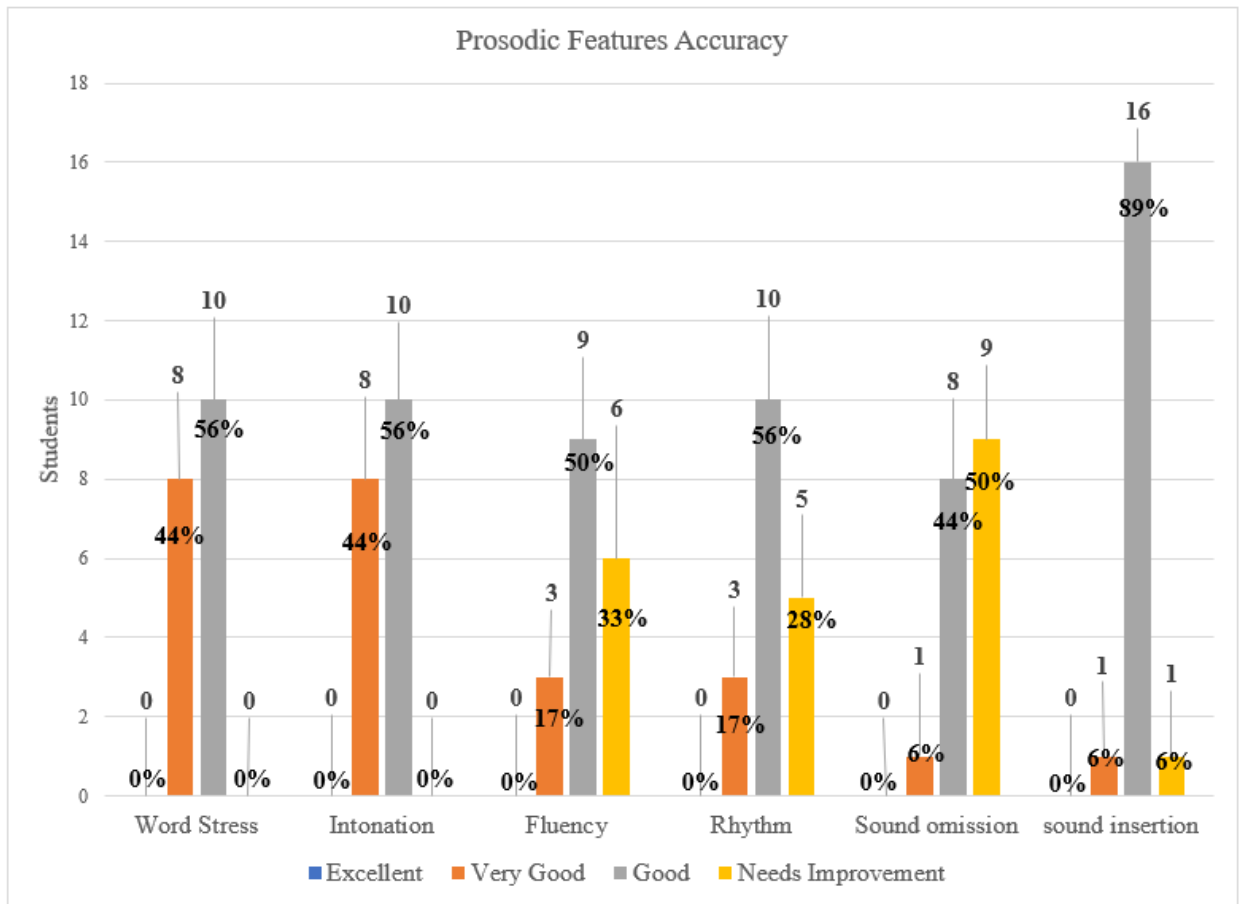


Figure 7 represents the students' prosodic features accuracy in the pre-test.

Figure 7 shows the number of students, and its corresponding percentage, that applied the prosodic features in a scale of excellent, very good, good, and needs improvement. Based on these results, in the word stress, from 18 students, 0 did it excellent, 8 did it very good, 10 did it good and 0 students needed improvements. That is 0%, 44%, 56% and 0% of the students, respectively. Then, in the intonation, from 18 students, 0 did it excellent, 8 did it very good, 10 did it good and 0 students needed improvements. That is, 0%, 44%, 56% and 0% of the students, respectively. Also, in the fluency, from 18 students, 0 did it excellent, 3 did it very good, 9 did it good, and 6 needed improvements. That is 0%, 17%, 50% and 33% of the students, respectively. In the same way, in the rhythm, from 18 students, 0 did it excellent, 3 did it very good, 10 did it

good and 5 students needed improvements. That is 0%, 17%, 56% and 28% of the students, respectively. Besides this, in the sound omission, from 18 students, 0 did it excellent, 1 did it very good, 8 did it good, and 9 student needed improvements. That is, 0%, 6%, 44% and 50% of the students, respectively. Finally, with the sound insertion, from 18 students, 0 did it excellent, 1 did it very good, 16 did it good and 1 student needed improvements. That is, 0%, 6%, 89% and 6% of the students, respectively. The features where students needed improvement the most were fluency and sound omission because when the students were speaking they did not do it easily and accurately, and they omitted a significant number of sounds.

4.1.5 Activity 1: Role Play

The role play was chosen as part of the activities because through it, students were able to create a conversation including words with sounds /ə/, /æ/, /ɑ/, which allowed the investigator to evaluate their production in a real context. The role play was performed by 18 students, who worked in pairs and trios, but the evaluation was done individually. The rubric to evaluate the role play was divided into three sections, which were sounds, differentiation of sounds and prosodic features. The following figures show the results obtained.

4.1.5.1 Sounds Production Accuracy

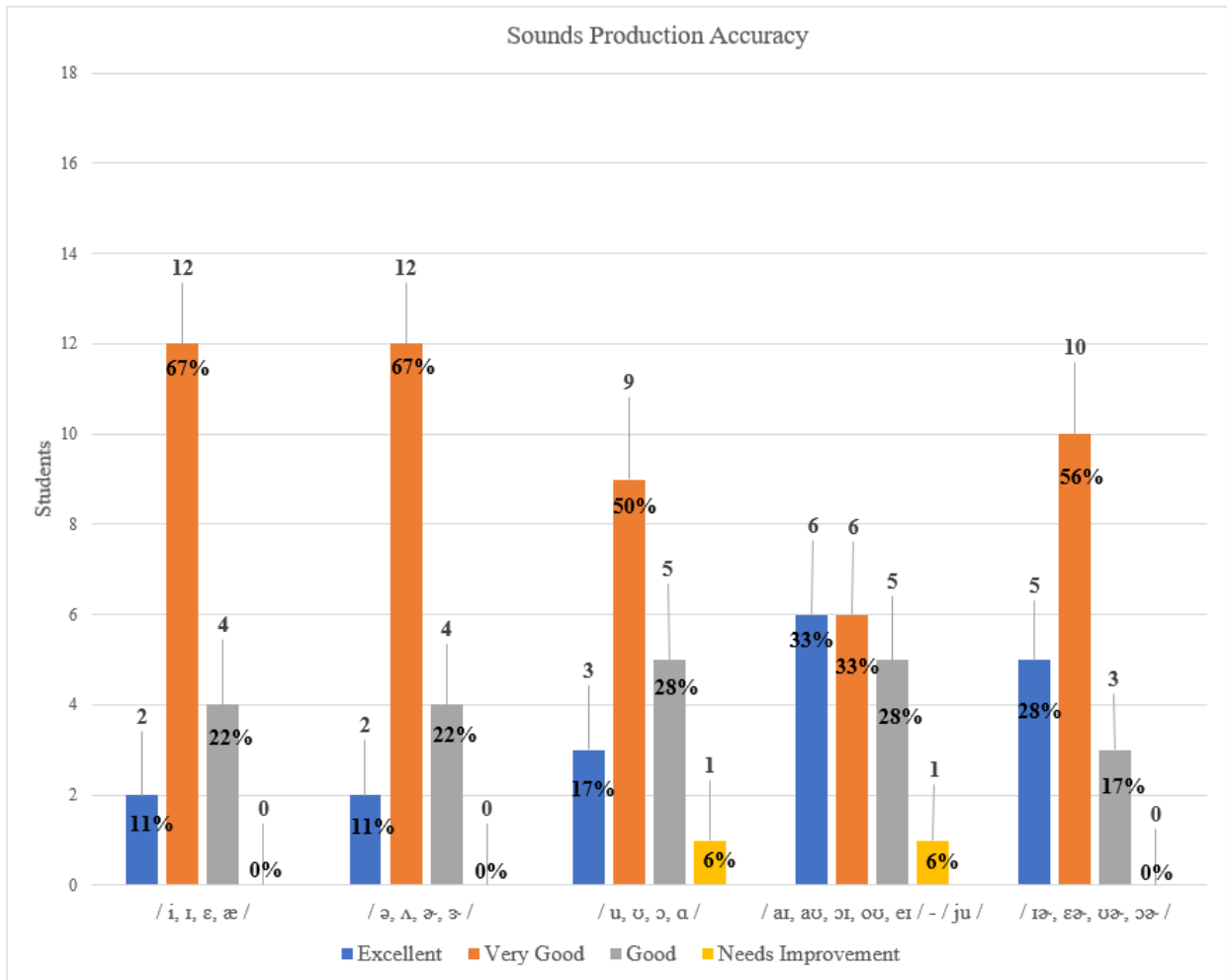


Figure 8 represents the students' sounds production accuracy in the role play.

Figure 8 shows the number of students and the respective percentage that produce the sounds / i, ɪ, ε, æ /, / ə, ʌ, ɚ, ɜ /, / u, ʊ, ɔ, ɑ /, / aɪ, aʊ, ɔɪ, oʊ, eɪ / - / ju / and / ɪə, εə, ʊə, ɔə / in a scale of excellent, very good, good and needs improvements. Based on results above, in the production of sounds / i, ɪ, ε, æ /, from 18 students, 2 did it excellent, 12 students did it very good, 4 students did it good and 0 students needed improvements. That is 11%, 67%, 22% and 0% of the students, respectively. Additionally, in the production of sounds / ə, ʌ, ɚ, ɜ /, from 18 students, 2 did it excellent, 12 did it very good, 4 did it good, and 0 needed improvements. That is 11%, 67%, 22% and 0% of the students, respectively. Also, in the production of sounds / u, ʊ, ɔ,

α /, from 18 students 3 did it excellent, 9 did it very good, 5 did it good, and 1 needed improvement. That is 17%, 50%, 28% and 6% of the students, respectively. Besides this, in the production of sounds / aɪ, aʊ, ɔɪ, ɒʊ, eɪ / - / ju /, from 18 students, 6 did it excellent, 6 did it very good, 5 did it good and 1 student needed improvements. That is 33%, 33%, 28% and 6% of the students, respectively. Finally, in the production of sounds / ɪə, εə, ʊə, əə /, from 18 students, 5 did it excellent, 10 did it very good, 3 did it good, and 0 students needed improvements. That is, 28%, 56%, 17% and 0% of the students, respectively. In the production of these sounds, 4 students average did it excellent, because the sounds were practiced as well as the mouth, tongue and lip positions.

4.1.5.2 Differentiation Between Sounds

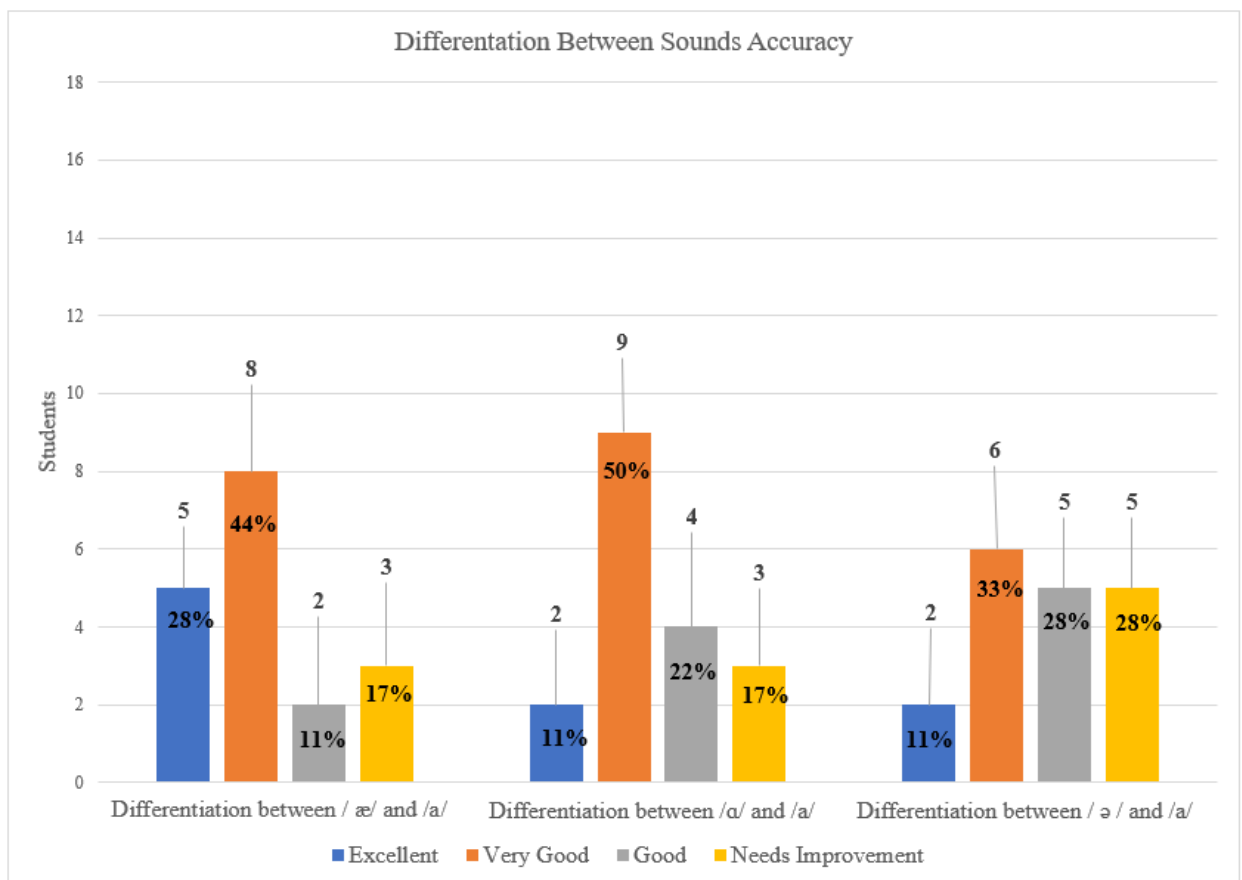


Figure 9 represents the students' differentiation of sounds accuracy in the role play.

Figure 9 shows the number of students, and its respective percentage, that differentiate the English vowel sounds /ə/, /æ/, /ɑ/ from the Spanish vowel sound /a/ in a scale of excellent, very good, good and needs improvement. Based on the results above, in the differentiation between /æ/ and /a/, from 18 students, 5 did it excellent, 8 did it very good, 2 did it good and 3 needed improvements. That is, 28%, 44%, 11% and 17% of the students, respectively. Then, in the differentiation between /ɑ/ and /a/, from 18 students, 2 did it excellent, 9 did it very good, 4 did it good and 3 students needed improvements. That is, 11%, 50%, 22% and 17% of the students, respectively. Finally, in the differentiation between /ə/ and /a/, from 18 students, 2 did it excellent, 6 did it very good, 5 did it good and 5 students needed improvements. That is, 11%, 33%, 28% and 28% of the students, respectively. Since the accurate production of sounds was practiced, in the differentiation of sounds, during the role play, more students did it excellent, and less students needed improvement in the differentiation between /ə/ and /a/ in comparison to the results from the pre-test.

4.1.5.3 Prosodic Features

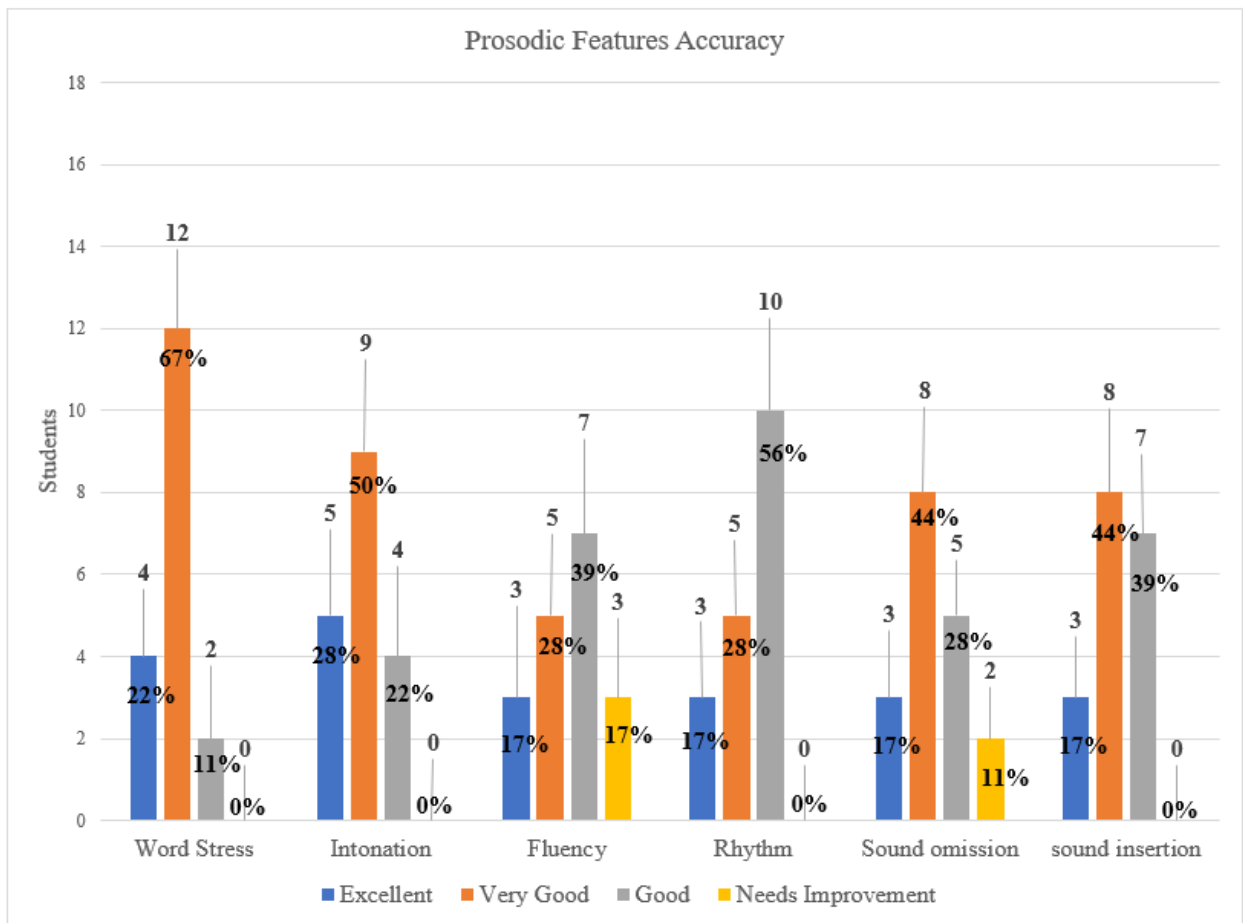


Figure 10 represents the students' prosodic features accuracy in the role play.

Figure 10 shows the number of students, and its corresponding percentage, that applied the prosodic features in a scale of excellent, very good, good, and needs improvement. Based on these results, in the word stress, from 18 students, 4 did it excellent, 12 did it very good, 2 did it good and 0 students needed improvements. That is 22%, 67%, 11% and 0% of the students, respectively. Then, in the intonation, from 18 students, 5 did it excellent, 9 did it very good, 4 did it good and 0 students needed improvements. That is, 28%, 50%, 22% and 0% of the students, respectively. Also, in the fluency, from 18 students, 3 did it excellent, 5 did it very good, 7 did it good, and 3 needed improvements. That is 17%, 28%, 39% and 17% of the students, respectively. In the same way, in the rhythm, from 18 students, 3 did it excellent, 5 did it very good, 10 did it

good and 0 students needed improvements. That is 17%, 28%, 56% and 0% of the students, respectively. Besides this, in the sound omission, from 18 students, 3 did it excellent, 8 did it very good, 5 did it good, and 2 student needed improvements. That is, 17%, 44%, 28% and 11% of the students, respectively. Finally, with the sound insertion, from 18 students, 3 did it excellent, 8 did it very good, 7 did it good and 0 students needed improvements. That is, 17%, 44%, 39% and 0% of the students, respectively. In comparison to the pre-test, more students did it excellent per feature and there were 3 students less that needed improvements with fluency and sound omission.

4.1.6 Activity 2: Classification of Words and Sentence Maker

The classification of words and sentence maker was chosen as part of the activities because through classifying words, students were able to differentiate the sounds used to pronounce these words provided by the researcher, and through the sentences they were able to understand how to pronounce the words in context as they read them aloud. This activity was performed by 18 students. The rubric to evaluate the post-test was divided into three sections which were sounds, differentiation of sounds and prosodic features. The following figures show the results obtained.

4.1.6.1 Sounds Production Accuracy

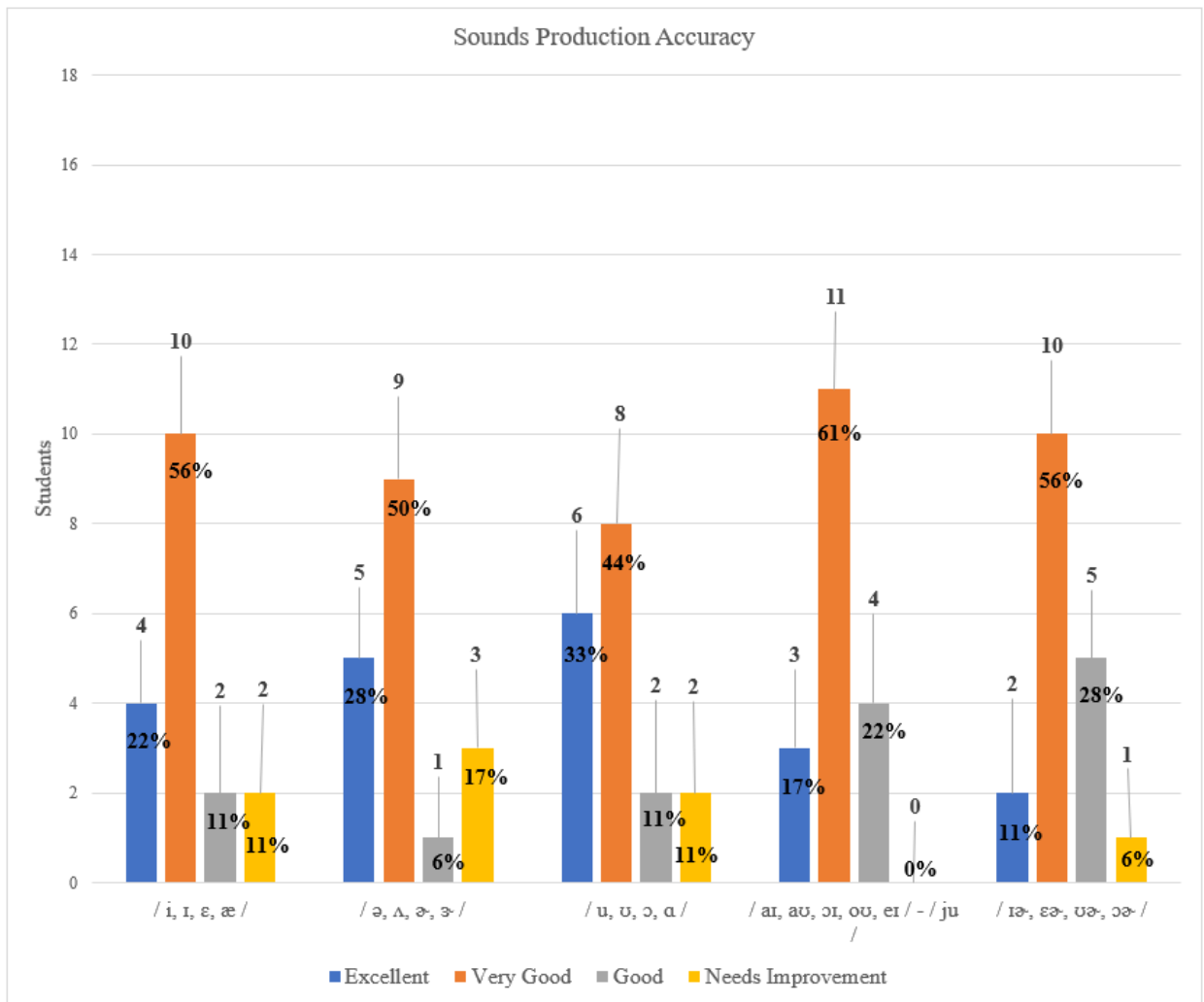


Figure 11 represents the students' sounds production accuracy in the classification of words and sentence maker.

Figure 11 shows the number of students and the respective percentage that produce the sounds / i, ɪ, ε, æ /, / ə, ʌ, ɚ, ɜ /, / u, ʊ, ɔ, ɑ /, / aɪ, aʊ, ɔɪ, oʊ, eɪ / - / ju / and / ɪə, εə, ʊə, ɔə / in a scale of excellent, very good, good and needs improvements. Based on results above, in the production of sounds / i, ɪ, ε, æ /, from 18 students, 4 did it excellent, 10 students did it very good, 2 students did it good and 2 students needed improvements. That is 22%, 56%, 11% and 11% of the students, respectively. Additionally, in the production of sounds / ə, ʌ, ɚ, ɜ /, from 18 students, 5 did it excellent, 9 did it very good, 1 did it good, and 3 needed improvements. That is

28%, 50%, 6% and 17% of the students, respectively. Also, in the production of sounds / u, ʊ, ə, ɑ /, from 18 students 6 did it excellent, 8 did it very good, 2 did it good, and 2 needed improvements. That is 33%, 44%, 11% and 11% of the students, respectively. Besides this, in the production of sounds / ai, aʊ, ɔɪ, oʊ, eɪ / - / ju /, from 18 students, 3 did it excellent, 11 did it very good, 4 did it good and 0 student needed improvements. That is 17%, 61%, 22% and 0% of the students, respectively. Finally, in the production of sounds / iə, eə, uə, ɔə /, from 18 students, 2 did it excellent, 10 did it very good, 5 did it good, and 1 student needed improvements. That is, 11%, 56%, 28% and 6% of the students, respectively. The number of students who did it excellent increased and the production of these sounds is mostly between excellent and very good.

4.1.6.2 Differentiation of Sounds Accuracy

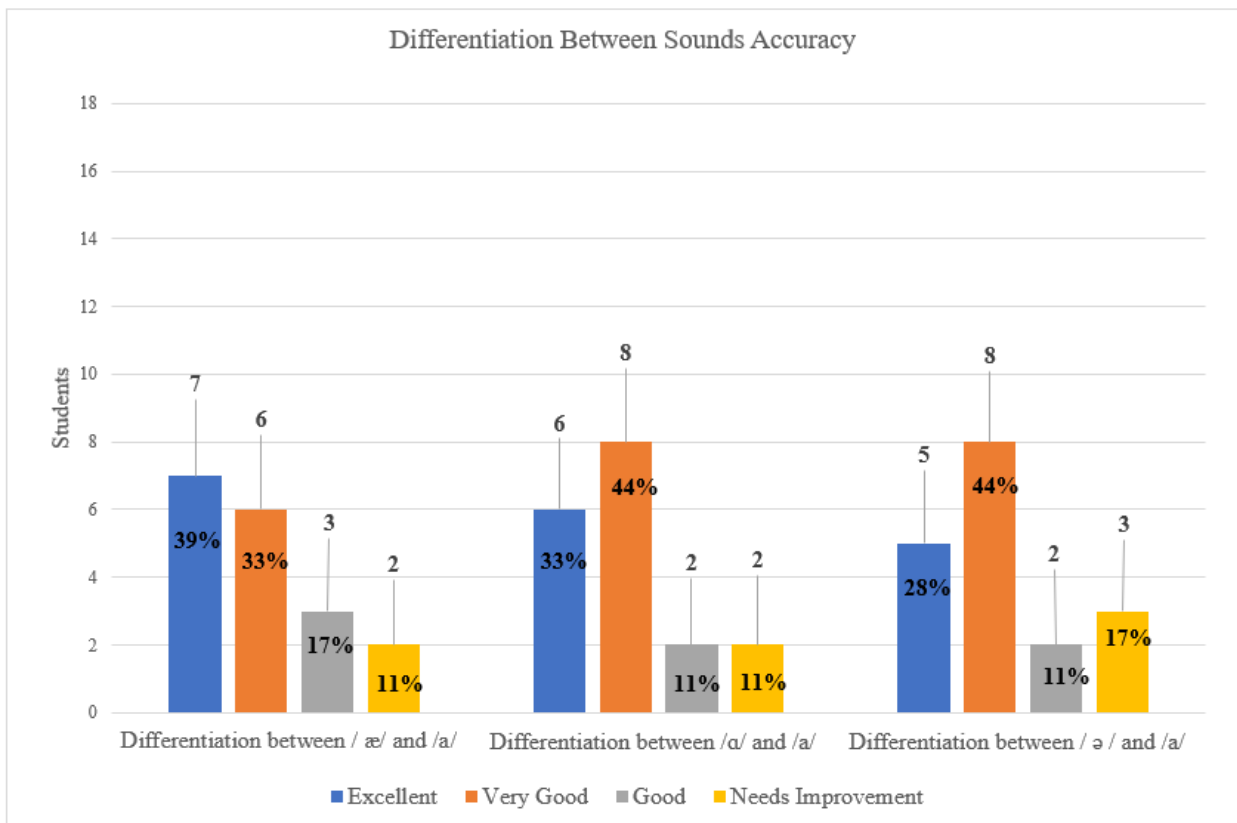


Figure 12 represents the students' differentiation of sounds in the classification of words and sentence maker.

Figure 12 shows the number of students, and its respective percentage, that differentiate the English vowel sounds /ə/, /æ/, /ɑ/ from the Spanish vowel sound /a/ in a scale of excellent, very good, good and needs improvement. Based on the results above, in the differentiation between /æ/ and /a/, from 18 students, 7 did it excellent, 6 did it very good, 3 did it good and 2 needed improvements. That is, 39%, 33%, 17% and 11% of the students, respectively. Then, in the differentiation between /ɑ/ and /a/, from 18 students, 6 did it excellent, 8 did it very good, 2 did it good and 2 student needed improvements. That is, 33%, 44%, 11% and 11% of the students, respectively. Finally, in the differentiation between /ə/ and /a/, from 18 students, 5 did it excellent, 8 did it very good, 2 did it good and 3 students needed improvements. That is, 28%, 44%, 11% and 17% of the students, respectively.

4.1.6.3 Prosodic Features

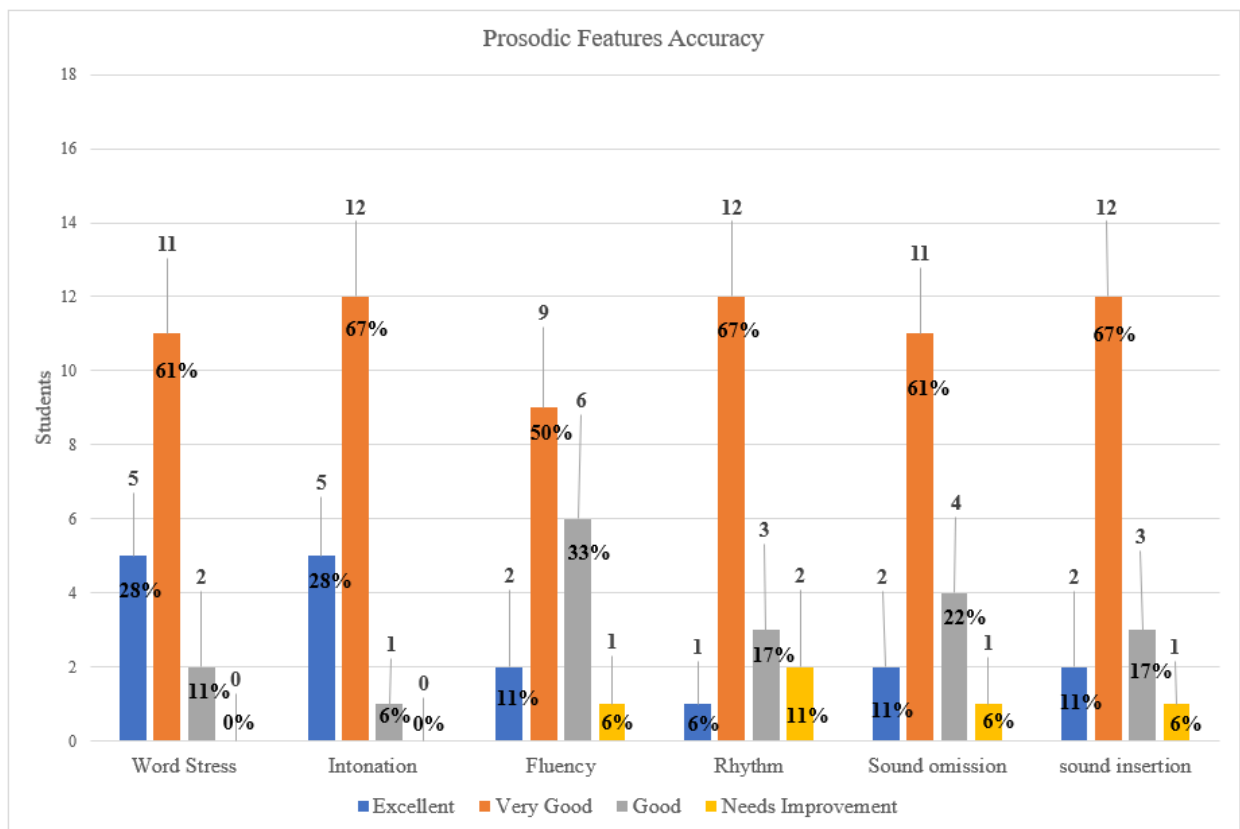


Figure 13 represents the students' prosodic features in the classification of words and sentence maker.

Figure 13 shows the number of students, and its corresponding percentage, that applied the prosodic features in a scale of excellent, very good, good, and needs improvement. Based on these results, in the word stress, from 18 students, 5 did it excellent, 11 did it very good, 2 did it good and 0 students needed improvements. That is 28%, 61%, 11% and 0% of the students, respectively. Then, in the intonation, from 18 students, 5 did it excellent, 12 did it very good, 1 did it good and 0 students needed improvements. That is, 28%, 67%, 6% and 0% of the students, respectively. Also, in the fluency, from 18 students, 2 did it excellent, 9 did it very good, 6 did it good, and 1 needed improvement. That is 11%, 50%, 33% and 6% of the students, respectively. In the same way, in the rhythm, from 18 students, 1 did it excellent, 12 did it very good, 3 did it good and 2 students needed improvements. That is 6%, 67%, 17% and 11% of the students, respectively. Besides this, in the sound omission, from 18 students, 2 did it excellent, 11 did it very good, 4 did it good, and 1 student needed improvements. That is, 11%, 61%, 22% and 6% of the students, respectively. Finally, with the sound insertion, from 18 students, 2 did it excellent, 12 did it very good, 3 did it good and 1 student needed improvements. That is, 11%, 67%, 17% and 6% of the students, respectively. On each feature, 6 students average did it very good, and only 1 student in fluency and 1 student in sound omission needed improvement.

4.1.7 Post-Likert Scale

The Likert scale was chosen as part of the instruments because through it, the investigator can identify more specific deficiencies students have when producing the English vowels /ə/, /æ/ and /ɑ/ in comparison with Spanish vowel sound /a/. This Likert scale can be compared with the one applied before the pre-test. This instrument was applied to 18 students individually. The following tables will show the results obtained.

4.1.7.1 Students' Pronunciation Accuracy

Sound	Excellent	Good	Needs
			Improvement
/æ/	9 students	9 students	0 students
/ɑ/	5 students	12 students	1 student
/ə/	6 students	9 students	3 students

Table 7 represents students' pronunciation accuracy before the post-test.

Table 7 shows the students' pronunciation accuracy after practicing the production of English vowel sounds /ə/, /æ/, /ɑ/ in comparison with Spanish vowel /a/. Based on the results, in the production of sound /æ/, from 18 students, 9 students did it excellent, 9 did it good and 0 needed improvement. Then, in the production of sound /ɑ/, from 18 students, 5 did it excellent, 12 did it good and 1 needed improvement. Finally, in the production of sound /ə/, from 18 students, 6 did it excellent, 9 did it good and only 3 needed improvement. In comparison with the previous Likert scale, less students needed improvement in the production of sounds /æ/ and /ə/. With sound /æ/, the number of students who needed improvement decreased from 2 to 0, and with sound /ə/, the number of students decreased from 9 to 3.

4.1.7.2 Vowel Sound Production Frequency

Sound	Excellent	Good	Needs Improvement
/æ/	18 times	18 times	0 times
/ɑ/	10 times	24 times	2 times
/ə/	12 times	18 times	6 times
Total of Times	40 times	60 times	8 times

Table 8 represents the vowel sound production frequency before the post-test.

Table 8 shows how many times sounds were produced in a scale of excellent, good or needs improvement. Based on the results, sound /æ/ was produced 18 times in an excellent way, 18 times in a good way and in 0 times students needed improvement. Then, sound /ɑ/ was produced 10 times in an excellent way, 24 times in a good way and in 2 times students needed improvement. Finally, sound /ə/ was produced 12 times in an excellent way, 18 times in a good way and in 6 times students needed improvement. This evaluation was done based on the mouth, tongue and lip position when producing each sound. In comparison with the previous Likert scale, sounds went from being produced 30 times in an excellent way, 56 times in a good way and in 22 times students needed improvement, to being produced 40 times in an excellent way, 60 times in a good way and in 8 times students needed improvement.

4.1.8 Post-Test

The post-test was chosen as part of the instruments because through it, the investigator can prove if the contrastive phonology exercises worked for students to improve the production of English vowels /ə/, /æ/, /ɑ/ in comparison with Spanish vowel /a/. The post-test was applied to

18 students. The following figures show the obtained results. The rubric to evaluate the post-test was divided into three sections which were sounds, differentiation of sounds and prosodic features.

4.1.8.1 Sounds Production Accuracy

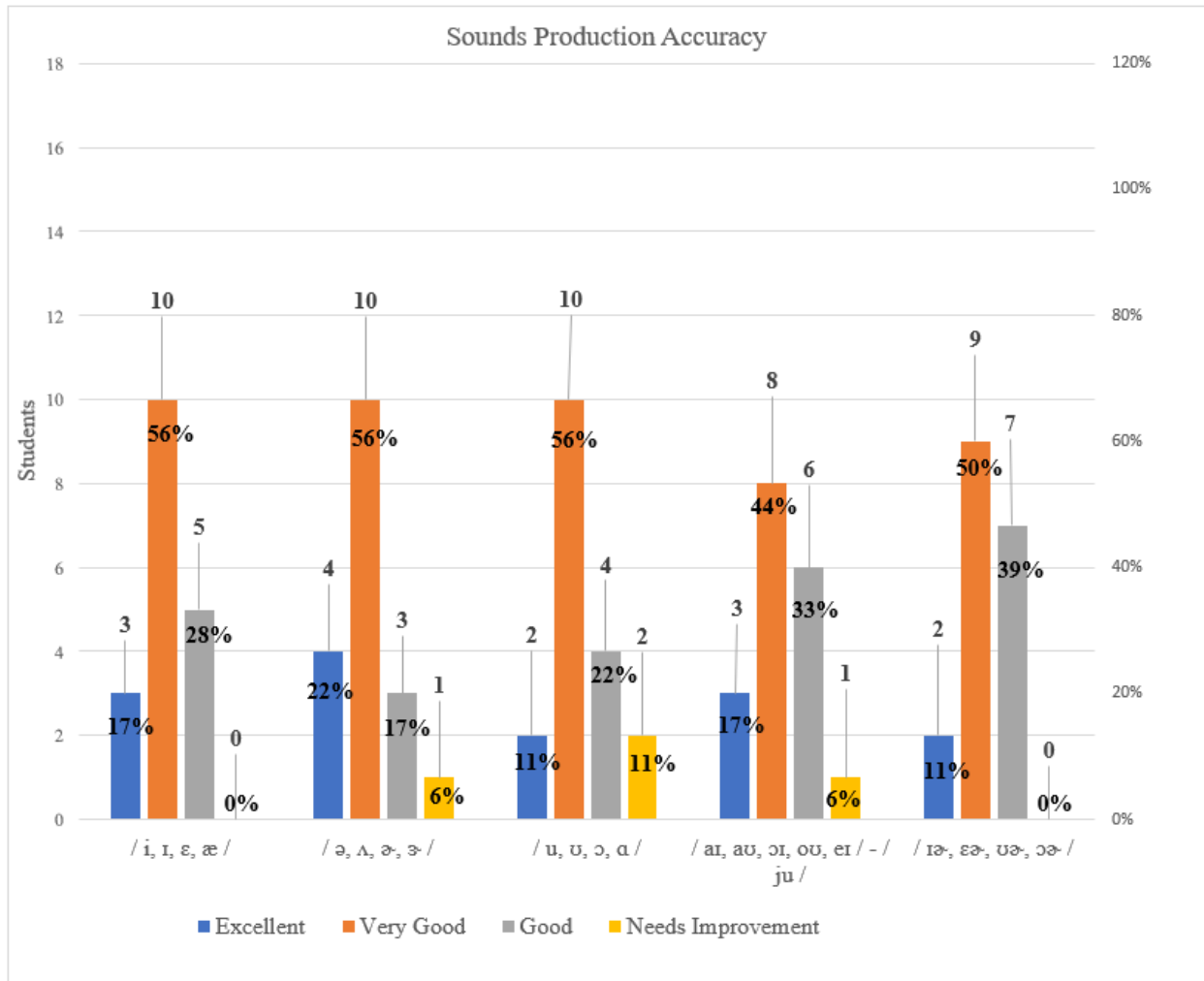


Figure 14 represents the students' sounds production accuracy in the post-test.

Figure 14 shows the number of students and the respective percentage that produce the sounds / i, ɪ, e, æ /, / ə, ʌ, ɔ, ɜ /, / u, ʊ, ɔ, ɑ /, / aɪ, aʊ, ɔɪ, oʊ, eɪ / - / ju / and / ɪə, eə, uə, ɔə / in a scale of excellent, very good, good and needs improvements. This is important as it provides how students are producing the sounds. Based on results above, in the production of sounds / i, ɪ, e, æ

/, from 18 students, 3 did it excellent, 10 students did it very good, 5 students did it good and 0 students needed improvements. That is 17%, 56%, 28% and 0% of the students, respectively. Additionally, in the production of sounds / ə, ʌ, ə, ɜ /, from 18 students, 4 did it excellent, 10 did it very good, 3 did it good, and 1 needed improvement. That is 22%, 56%, 17% and 6% of the students, respectively. Also, in the production of sounds / u, ʊ, ə, ɒ /, from 18 students 2 did it excellent, 10 did it very good, 4 did it good, and 2 needed improvements. That is 11%, 56%, 22% and 11% of the students, respectively. Besides this, in the production of sounds / aɪ, aʊ, ɔɪ, oʊ, eɪ / - / ju /, from 18 students, 3 did it excellent, 8 did it very good, 6 did it good and 1 student needed improvements. That is 17%, 44%, 33% and 6% of the students, respectively. Finally, in the production of sounds / ɪə, eə, ʊə, əə /, from 18 students, 2 did it excellent, 9 did it very good, 7 did it good, and 0 students needed improvements. That is, 11%, 50%, 39% and 0% of the students, respectively. According to the graph, in the production of each group of sounds, most of the students did it very good.

4.1.8.2 Differentiation Between Sounds Accuracy

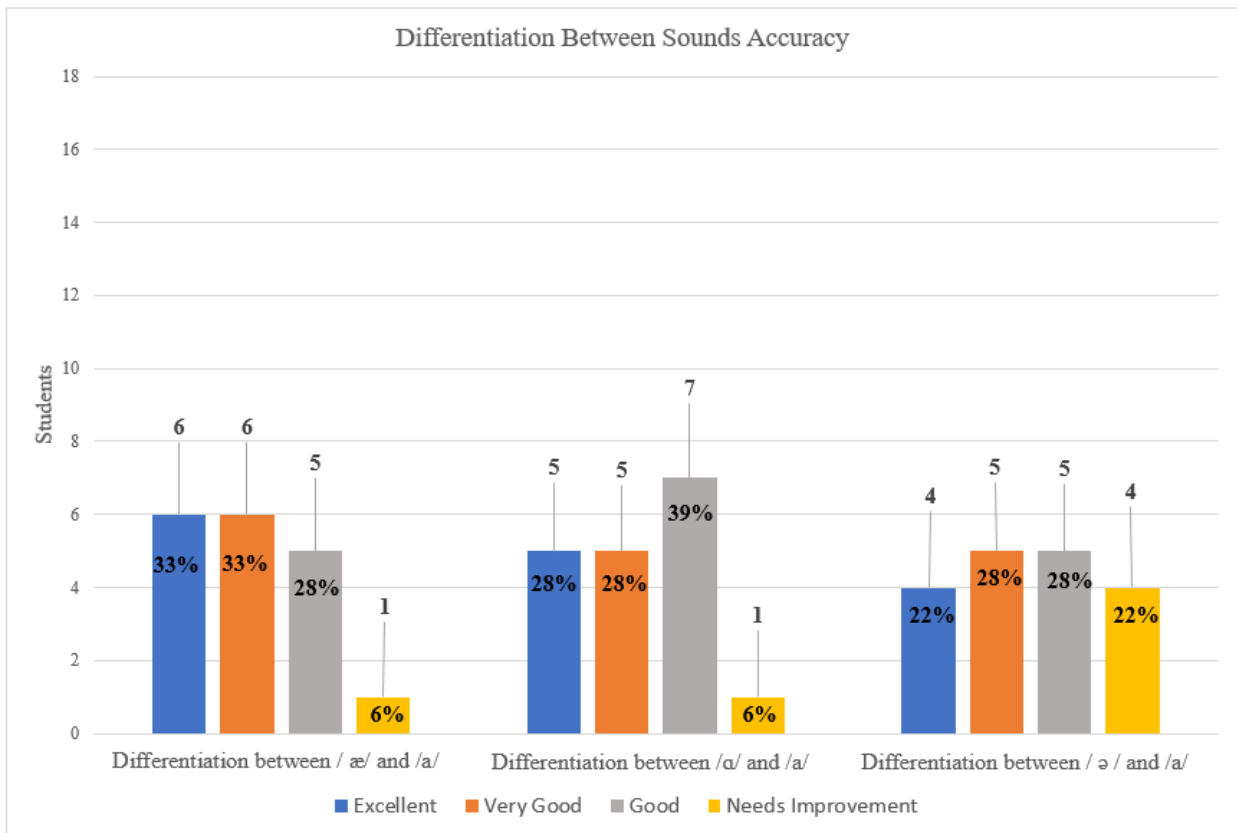


Figure 15 represents the students' differentiation of sounds accuracy in the post-test.

Figure 15 shows the number of students, and its respective percentage, that differentiate the English vowel sounds /ə/, /æ/, /ɑ/ from the Spanish vowel sound /a/ in a scale of excellent, very good, good and needs improvement. This is important because it provides how accurate students differentiate English sounds from Spanish sounds. Based on the results above, in the differentiation between /æ/ and /a/, from 18 students, 6 did it excellent, 6 did it very good, 5 did it good and 1 needed improvement. That is, 33%, 33%, 28% and 6% of the students, respectively. Then, in the differentiation between /ɑ/ and /a/, from 18 students, 5 did it excellent, 5 did it very good, 7 did it good and 1 student needed improvements. That is, 28%, 28%, 39% and 6% of the students, respectively. Finally, in the differentiation between /ə/ and /a/, from 18 students, 4 did

it excellent, 5 did it very good, 5 did it good and 4 students needed improvements. That is, 22%, 28%, 28% and 22% of the students, respectively.

4.1.8.3 Prosodic Features Accuracy

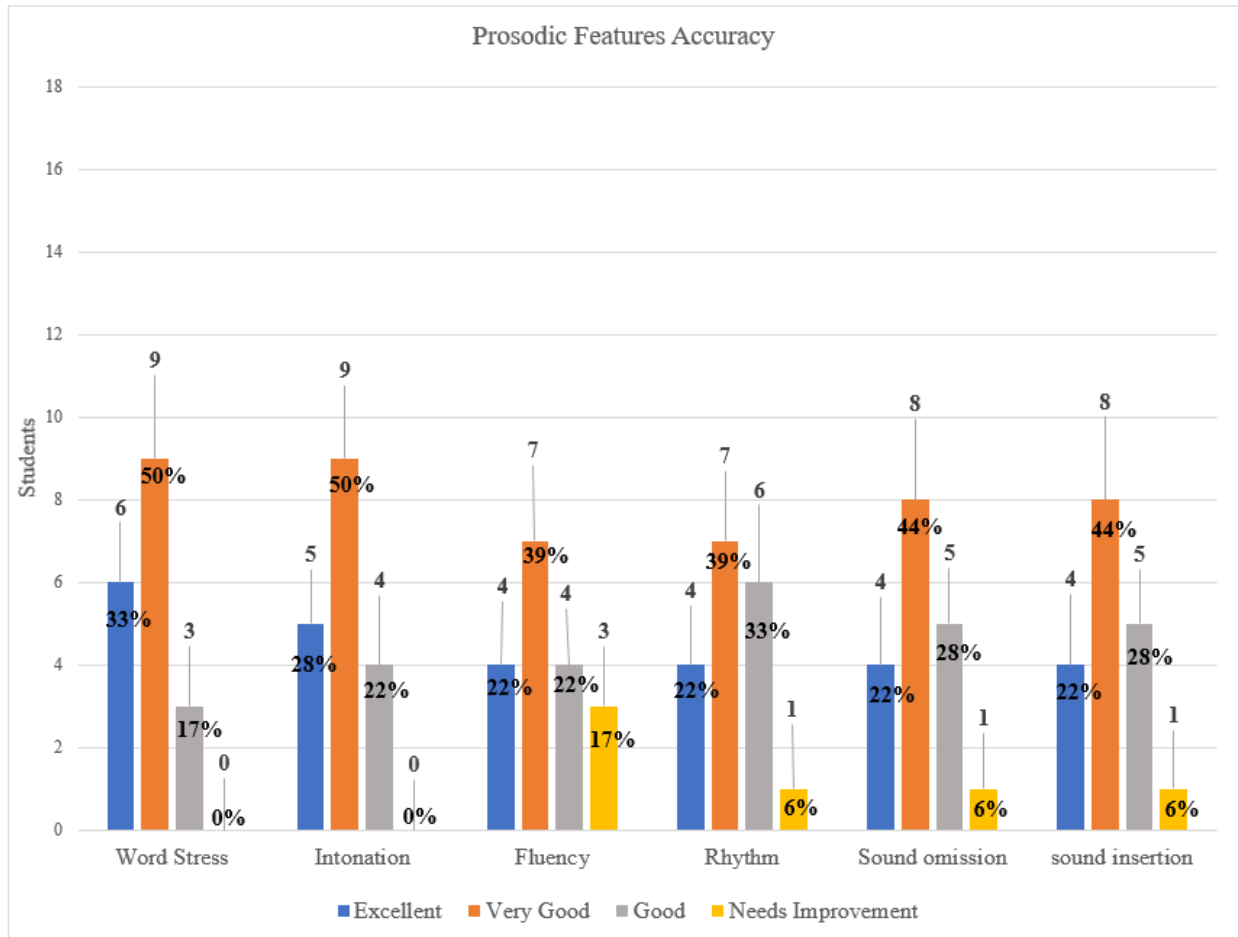


Figure 16 represents the students' prosodic features accuracy in the post-test.

Figure 16 shows the number of students, and its corresponding percentage, that applied the prosodic features in a scale of excellent, very good, good, and needs improvement. This is important because besides the production of specific sounds, it is relevant to know how accurate students apply the prosodic features. Based on these results, in the word stress, from 18 students, 6 did it excellent, 9 did it very good, 3 did it good and 0 students needed improvements. That is 33%, 50%, 17% and 0% of the students, respectively. Then, in the intonation, from 18 students,

5 did it excellent, 9 did it very good, 4 did it good and 0 students needed improvements. That is, 28%, 50%, 22% and 0% of the students, respectively. Also, in the fluency, from 18 students, 4 did it excellent, 7 did it very good, 4 did it good, and 3 needed improvements. That is 22%, 39%, 22% and 17% of the students, respectively. In the same way, in the rhythm, from 18 students, 4 did it excellent, 7 did it very good, 6 did it good and 1 student needed improvements. That is 22%, 39%, 33% and 6% of the students, respectively. Besides this, in the sound omission, from 18 students, 4 did it excellent, 8 did it very good, 5 did it good, and 1 student needed improvements. That is, 22%, 44%, 28% and 6% of the students, respectively. Finally, with the sound insertion, from 18 students, 4 did it excellent, 8 did it very good, 5 did it good and 1 student needed improvements. That is, 22%, 44%, 28% and 6% of the students, respectively.

In conclusion, the final results showed an improvement on all the rubrics. The weaknesses were focused on aspects such as pronunciation in general and fluency and in the production of English sound /ə/. Based on the results, students felt fear and nervous when speaking in English because they did not receive English before and because they made a lot of mistakes when speaking. After applying different exercises, such as the role play, the classification of words and sentence maker, to contrast the English vowel sounds /ə/, /æ/, /ɑ/ with the Spanish vowel sound /a/, for them to understand how to pronounce these different sounds, students started to be more confident, so they were able to speak fluently and to produce the sounds accurately. For this reason the results improved.

CHAPTER V

Conclusions and Recommendations

5.1 Purpose of the Conclusion

In this final chapter, conclusions of this investigation are stated and explained. The conclusions were obtained through the analysis and interpretation of the results obtained from each instrument. The results allowed the investigator to see the progress of the participants, to answer the research question and figure out if the specific objectives were completed. In addition, some recommendations are provided for the current and future investigations about this topic. This may help other researchers who would like to deeper investigate on this topic.

5.2 Conclusions

5.2.1 To identify ninth graders vowel production deficiencies

The first specific objective of the investigation consisted on identifying ninth graders vowel production deficiencies through three instruments, the interviews the post-Likert scale, and the pre-test. The interviews were designed to provide information from the teacher's and students' points of view. At first place, they were used to start identifying deficiencies students had regarding speaking, including all its aspects such as fluency, pronunciation, rhythm, word stress, body language and subject knowledge. Moreover, the interviews provided information on how students felt when they were speaking English in public.

Through the interviews, the researcher found the following aspects based on the teacher's opinion: students get interfere by fear and nervousness when speaking in English. In addition, the strengths they have are grammar and subject knowledge. On the contrary, students' weaknesses are fluency, pronunciation and vocabulary, reason why these are the areas of improvement they have according to her.

Besides the previous, the researcher found the following aspects based on the students' opinion: Half of the class stated that speaking is difficult for them because they did not receive English and they make a lot of mistakes when speaking, while the other half stated the contrary because English is easy to learn for them. In addition, anxiety and nervousness are the affective factors that interfere the most when students are speaking in public. The strengths they had are grammar and body language, and the weaknesses were fluency and pronunciation.

By comparing the results from the interviews, both showed similar results, meaning that the teacher understands where the strengths and weaknesses of her students are, and she knows where she has to work the most.

Then, the pre-Likert scale was designed to identify more specific deficiencies students had when producing the English vowel sounds /ə/, /æ/, /ɑ/ in comparison with the Spanish vowel sound /a/. Aspects such as mouth, tongue and lip position were taken into account to make the evaluation from excellent to needs improvement.

Through the pre-Likert scale, the researcher was able to find the following aspects: For students it was easier to produce the sounds for /æ/ and /ɑ/ than to produce sound /ə/. This happened because they were producing this sound as the Spanish sound /a. It was difficult for them to identify which words contained this sound. Additionally, in a scale of excellent, good and needs improvement, the majority of the students produced the sounds in a good way, meaning that they were more familiarized with these two sounds. Another finding was that, since students had to read aloud different words containing sounds /ə/, /æ/, /ɑ/, most of the times they did it in a good way; however, a significant number of times sound /ə/ needed improvement. This means that most of the difficulties were with sound /ə/.

The pre-test was designed to evaluate the knowledge students had at first instance before applying the contrastive phonology exercises. The pre-test was divided into three sections, which were sounds production accuracy, differentiation between sounds accuracy and prosodic features accuracy, in a scale of excellent, very good, good and needs improvement.

Through the pre-test, the researcher was able to find the following aspects: In the section of sounds production accuracy, the majority of students produced the sounds between very good and good; however, none of them did it excellent, meaning that, when producing the sounds, students did it very similar to the target sounds. Also, in this same section, a small number of students needed improvements with sounds / u, ʊ, ɔ, ɑ /. In the differentiation of sound accuracy section, most of the students differentiate the sounds in a good way; however, almost half of the students needed improvement in the differentiation between sounds /ə/ and /a/, which reaffirms that the production of sound /ə/ was hard to accomplish. Finally, in the prosodic features accuracy section, students applied them in a good way most of the times; however, half of the class needed improvement in the sound omission category as they were not producing certain sounds when speaking.

Based on the previous statements the deficiencies identified by the researcher were that an important percentage of students feel anxiety and nervousness when speaking and their difficulties were specifically in fluency and pronunciation. Moreover, when producing the vowel sounds, deficiencies were found in the production of sounds / ə, ʌ, æ, ɜ /, / u, ʊ, ɔ, ɑ /, / aɪ, aʊ, ɔɪ, oʊ, eɪ / - / ju / and / ɪə, eə, ʊə, ɔə /, as well as in the differentiation of sounds /ə/ and /a/. Additionally, when speaking they constantly omitted sounds.

5.2.2 To apply contrastive phonology exercises in ninth graders for improving vowel production

The second specific objective of the investigation consisted on applying contrastive phonology exercises in ninth graders for improving vowel production. Different exercises were applied such as role play, classification of words and sentence maker. These activities included words with sounds /ə/, /æ/, /ɑ/ for students to practice.

After the application of these exercises, the researcher was able to find the following aspects: Since the production of sounds were practiced after applying the Likert scale, students started to improve when they had to present the role play. The evaluation of the role play was divided into three sections, which were sounds production accuracy, differentiation between sounds accuracy and prosodic features accuracy, in a scale of excellent, very good, good and needs improvement. In the section of sounds production accuracy, the majority of students produced the sounds in a very good way and a small percentage needed improvement in a few sounds. Then, in the differentiation between sounds section, students did it very good when differentiating sounds /æ/ and /ɑ/ from /a/; however, an important number of students still had difficulties when differentiating sound /ə/ from /a/. In the prosodic features section most of the students did it between very good and good, and similar to the sounds production accuracy section, only few students needed improvement in fluency and sound omission. The best results were in the word stress.

Once again, the production of sounds /ə/, /æ/, /ɑ/ was practiced, so in the classification words and sentence maker activity, students improved a little bit more. The evaluation of this activity was also divided into three sections, which were sounds production accuracy, differentiation between sounds accuracy and prosodic features accuracy, in a scale of excellent,

very good, good and needs improvement. In the production of sounds accuracy section, most of the students produced the sounds between excellent and very good. The best results were in the production of sounds / aɪ, aʊ, ɔɪ, oʊ, eɪ / - / ju / as 0 students needed improvement when producing them. Then, in the differentiation of sounds accuracy section, the majority of students did it between excellent and very good when differentiating sounds /æ/ and /ɑ/ from /a/ as well as sound /ə/ from /a/. The number of students with difficulties in the differentiation between sounds /ə/ from /a/ decreased. Finally, in the prosodic features accuracy section the majority of students did it between excellent and very good and the students who needed improvements in fluency and sound omission decreased as well.

Based on the previous statements, after the application of contrastive exercises, the researcher found that students feel more comfortable with the language as they understood how to produce each sound. Because of this, the production of sounds / ə, ʌ, ə, ɜ /, / u, ʊ, ɔ, ɑ /, / aɪ, aʊ, ɔɪ, oʊ, eɪ / - / ju / and / ɪə, εə, ʊə, ɔə / improved as according to the results, the number of students who produced them in an excellent way increased. The same happened with the differentiation between sounds /ə/ and /a/ as they understood how and when to produce sound /ə/. Moreover, when speaking students who needed improvements in sound omission and fluency decreased.

5.2.3 To evaluate the effectiveness of implementing contrastive phonology exercises in ninth graders vowel production

The third specific objective of the investigation consisted on evaluating the effectiveness of implementing contrastive phonology exercises in ninth graders vowel production through a post-Likert scale and a post-test. The post-Likert scale was designed to evaluate the accuracy students had when producing the English vowel sounds /ə/, /æ/, /ɑ/ in comparison with the

Spanish vowel sound /a/. A scale of excellent, good and needs improvement was used, and aspects such as mouth, tongue and lip position were taken into account to make the evaluation from excellent to needs improvement.

Through the post-Likert scale, the investigator was able to find the following aspects: the majority of students produced the sounds between excellent and good, and the number of students who needed improvements with sound /ə/ decreased, meaning that through practicing the accurate production of this sound, students were able to improve. Additionally, since students had to read aloud different words containing sounds /ə/, /æ/, /ɑ/, most of the times they did it between excellent and good, but this time, the number of times when the production of sound /ə/ needed improvement decreased significantly.

In comparison with the first Likert scale applies, the sound with more difficulties was /ə/; however, according to the results, the number of students for which the production of this sound was complicated decreased. Students not only showed improvements in the production of sound /ə/, but also in the production of vowel sounds /æ/ and /ɑ/.

In addition, the post-test was designed for the investigator to evaluate the effectiveness of the contrastive exercises previously applied. The post-test was divided into three sections, which were sounds production accuracy, differentiation between sounds accuracy and prosodic features accuracy, in a scale of excellent, very good, good and needs improvement.

Through the post-test the researcher was able to find the following aspects: In the sounds production accuracy section there are now students who did it excellent, but the majority of them did it very good. Only few students needed improvements with the production of some sounds such as / ə, ʌ, æ, ɜ / and / u, ʊ, ɔ, ɑ /. Then, in the differentiation of sounds, most of the students

did it between excellent and very good in the differentiation between sounds /æ/ and /ɑ/ and /a/, which means that they clearly understand how to position the mouth, lips and tongue to produce them accurately. With the differentiation between sounds /ə/ and /a/, excellent, very good and good, and the number of students who needed improvements decreased significantly. Finally, in the prosodic features accuracy section, students did it between excellent and very good, and the number of students who needed improvements in fluency and sound omission decreased.

In comparison with the pre-test, the sound with more difficulties was /ə/; however, with the contrastive exercises students improved not only the production of this sound, but also the production of all vowel sounds, the differentiation between /æ/, /ɑ/, /ə/ and /a/ and the application of prosodic features such as the fluency and the sound omission, and in every section, the number of students who needed improvement decreased.

5.3 Restatement of the Research Question

How does contrastive phonology exercises enhance vowel production in ninth graders at Instituto de Desarrollo de Inteligencia during the first quarter of 2020?

The main objective of this research was to investigate the contrastive phonology exercises efficiency as ninth graders vowel production enhancer. This objective was achieved through the implementation of different instruments, such as interviews, tests, Likert scales, and activities to practice the sounds, such as role play, classification of words and sentence maker.

Through the analysis and interpretation of the results, it can be stated that for students, speaking is a difficult subject and the main difficulties they had were focused mainly in pronunciation and vocabulary. Even though students have difficulties with sounds /æ/ and /ɑ/, a higher percentage of students needed improvements with the production of sound /ə/ at the

beginning of the investigation. This was discovered by using the interviews, the Likert scale and the pre-test. After applying exercises such as the role play, classification of words and sentence maker, where students had to differentiate sounds /ə/, /æ/, /ɑ/ from /a/ and pronounce them in an accurate way, they started to improve the way they were producing these sounds. They understood how to position their mouth, lips and tongue, so they were able to produce them. As the results of the post-test showed, the number of students who produced the sounds in an excellent way increased, while the number of students who needed improvements decreased, especially in the production of sound /ə/.

Final results demonstrated how the implementation of contrastive phonology exercises during the class, where students understand how to produce each sound, enhances vowel production as the number of students who needed improvements in the production of vowel sounds decreased. Moreover, based on the results, the differentiation between English vowel sounds /æ/, /ɑ/, /ə/ and Spanish vowel sound /a/ improved as the number of students who achieved the accurate production of these sounds increased. Finally, students improved their fluency and were able to notice when they were omitting sounds to correct themselves.

5.4 Recommendations

The last section of this chapter consists on recommendations that the investigator considers important for other researchers who would want to conduct a similar project, or even to continue with the same one.

The first recommendation is to start working beforehand in case that the investigation's course changes. This is important because if any aspect of the investigation changes, probably more data, instruments or activities will be needed, and this may take more time than the expected. For this reason, it is relevant to start preparing all the information needed on time.

The investigator also recommends arranging previous meetings with the participants. Such meetings will help the researcher to know more details about the group or groups he will work with. These details can be useful for the researcher to start thinking which activities will work better with them. Also, this can help participants to know more about the researcher and how the activities will be performed. This will develop a soft environment, so the participants will work better.

The third recommendation is that, if another researcher wants to continue with this study, he can add other activities and other vowel sounds from English and Spanish. It would be interesting to know if contrastive phonology exercises work in the same way in consonants as it works in vowels. Moreover, future researchers can investigate and apply contrastive exercises about diphthongs and consonants. Once the participants manage the vowels' production they can continue with more complex phonemes. If this study is continued, it will be very helpful to students as they will master the pronunciation of English sounds in comparison with the Spanish sounds.

As a continuation of the previous recommendation, future investigators can extend or modify the current research and apply it in a different group. Doing this, the investigator will be provided with different results because of the variation of ages, English levels, attitude, behaviors and environment.

Another recommendation the investigator offers is for future researchers to investigate, before starting with the project, if it is better to work with a young population or with adolescents. Based on this, the researcher can synthesize the topic and choose the activities that will work better with that group.

The results obtained from the interviews showed that students' learning process is interfered by affective factors, so future researchers can investigate if deficiencies in the production of specific sounds can be improved by decreasing or eradicating these affective factors, such as fear and nervousness.

Moreover, the researcher recommends to other investigators who intend to conduct a similar study related to pronunciation, to use audio recordings, and if possible, videos. This can be helpful during the data collecting process because the researcher does not waste time in taking notes and it can also help during the analysis process because the researcher can proceed with a deeper study of how students are producing the sounds. This technique will be also helpful for the participants to be aware of their mistakes as they should be able to listen to themselves in the recording and notice any mispronunciation of sounds. This way participants will start improving their pronunciation.

Furthermore, for those who want to conduct a similar investigation, the researcher recommends taking into account that many strategies or activities can only be achieved if some specific resources are available. For this reason, it is relevant to be sure that all the resources needed to achieve the objectives are available or easy to get. For example, if as part of the activities a computer and a TV are needed, it is important to make sure that the institution counts with them and that the investigator will be able to use them.

The final recommendation is to motivate students and let them know how good they are working once they produce the sounds accurately. This will encourage students to participate and effort to achieve the target sounds, and for the investigator, it will be easier to evaluate students as they are willing to practice and participate.

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APPENDIXES

Appendix A: Interview

Universidad Internacional de las Américas

Graduation Seminar

Researcher: Franci Madrigal Portuguez

High School: Instituto de Desarrollo de Inteligencia

Teacher: _____

The following interview is part of an investigation project conducted with the purpose of applying the contrastive phonology exercises to improve students’ production of vowels /ə/, /æ/, /ɑ/ and /a/. The answers provided will be confidential and only the researcher will have access to them.

Directions: Answer the following questions based on your personal experience towards the English language.

1. Which of the following difficulties do you think students have when they speak English? Choose 1 or more if necessary.

Grammar mistakes	
Unnecessary repetitions	
Lack of vocabulary	
Pronunciation mistakes	
Lack of subject knowledge	

2. Which of the following affective factors interfere students when speaking in front of the class? Choose 1 or more if necessary.

Anxiety	
Stress	
Nervousness	
Lack of confidence	
Shyness	
Fear	

3. What are some students’ areas of improvement when speaking in English in public?

4. What are the students' strengths regarding pronunciation? Choose 1 or more if necessary.

Fluency	
Vocabulary	
Pronunciation	
Grammar	
Subject Knowledge	
Other:	

5. What are the students' weaknesses regarding pronunciation? Choose 1 or more if necessary.

Fluency	
Vocabulary	
Pronunciation	
Grammar	
Body language	
Other:	

Appendix B: Interview

Universidad Internacional de las Américas

Graduation Seminar

Researcher: Franci Madrigal Portuguez

High School: Instituto de Desarrollo de Inteligencia

Sex: F () M ()

The following interview is part of an investigation project conducted with the purpose of applying the contrastive phonology exercises to improve students’ production of vowels /ə/, /æ/, /ɑ/ and /a/. The answers provided will be confidential and only the researcher will have access to them.

Instructions: Answer the following questions based on your personal experience towards the English language.

1. Do you consider speaking as a difficult subject? Why?

2. How do you feel when you speak English in public? Choose 1 or more if necessary.

Comfortable	
Confident	
Anxious	
Nervous	
Other:	

3. What are the strengths you think you have regarding speaking? Choose 1 or more if necessary.

Fluency	
Vocabulary	
Pronunciation	
Grammar	
Body language	
Other:	

4. What are the weaknesses you think you have regarding speaking? Choose 1 or more if necessary.

Fluency	
Vocabulary	
Pronunciation	
Grammar	
Body language	
Other:	

Appendix C: Pre-Likert Scale

The following Likert scale is part of an investigation project conducted with the purpose of comparing the production of English vowels /ə/, /æ/, /ɑ/ with the production of Spanish vowel /a/. The answers provided will be confidential and only the researcher will have access to them.

Pronounce the following words, which contains English sounds /ə/, /æ/, /ɑ/.

Word	Excellent	Good	Needs Improvement
Magic			
Party			
Afraid			
Back			
Glass			
Machine			

Appendix D: Pre-Test Evaluation Rubric

Universidad Internacional de las Américas

Graduation Seminar

Researcher: Franci Madrigal Portuguez

High School: Instituto de Desarrollo de Inteligencia

The following rubric is part of an investigation project conducted with the purpose of applying the contrastive phonology exercises to improve students' production of vowels /ə/, /æ/, /ɑ/ and /a/. The answers provided will be confidential and only the researcher will have access to them.

Total points: 52 points

Total points obtained:

Sounds	Excellent 4	Very Good 3	Good 2	Needs Improvement 1
/ i, ɪ, ε, æ /				
/ ə, ʌ, ɔ, ɜ, ɝ /				
/ u, ʊ, ɔ, ɑ /				
/ aɪ, aʊ, ɔɪ, oʊ, eɪ / - / ju /				
/ ɪə, εə, ʊə, ɔə /				
Diferentiation between / æ/ and /a/				
Diferentiation between /ɑ/ and /a/				
Diferentiation between / ə / and /a/				
Prosodic Features				
Word Stress				
Intonation				
Fluency				
Rhythm				
Sound omission				
Sound insertion				

Comments:

Appendix E: Role Play Evaluation Rubric

Universidad Internacional de las Américas

Graduation Seminar

Researcher: Franci Madrigal Portuguez

High School: Instituto de Desarrollo de Inteligencia

The following rubric is part of an investigation project conducted with the purpose of applying the contrastive phonology exercises to improve students’ production of vowels /ə/, /æ/, /ɑ/ and /a/. The answers provided will be confidential and only the researcher will have access to them.

Total points: 52 points

Total points obtained:

Sounds	Excellent 4	Very Good 3	Good 2	Needs Improvement 1
/ i, ɪ, ε, æ /				
/ ə, ʌ, ɔ, ɜ, ɝ /				
/ u, ʊ, ɔ, ɑ /				
/ aɪ, aʊ, ɔɪ, oʊ, eɪ / - / ju /				
/ ɪə, εə, ʊə, ɔə /				
Diferentiation between / æ/ and /a/				
Diferentiation between /ɑ/ and /a/				
Diferentiation between / ə / and /a/				
Prosodic Features				
Word Stress				
Intonation				
Fluency				
Rhythm				
Sound omission				
Sound insertion				

Comments:

Appendix F: Classification of Words and Sentence Maker Evaluation Rubric

Universidad Internacional de las Américas

Graduation Seminar

Researcher: Franci Madrigal Portuguez

High School: Instituto de Desarrollo de Inteligencia

The following rubric is part of an investigation project conducted with the purpose of applying the contrastive phonology exercises to improve students’ production of vowels /ə/, /æ/, /ɑ/ and /a/. The answers provided will be confidential and only the researcher will have access to them.

Total points: 52 points

Total points obtained:

Sounds	Excellent 4	Very Good 3	Good 2	Needs Improvement 1
/ i, ɪ, ε, æ /				
/ ə, ʌ, ɔ, ɜ, ɝ /				
/ u, ʊ, ɔ, ɑ /				
/ aɪ, aʊ, ɔɪ, oʊ, eɪ / - / ju /				
/ ɪə, εə, ʊə, ɔə /				
Diferentiation between / æ/ and /a/				
Diferentiation between /ɑ/ and /a/				
Diferentiation between / ə / and /a/				
Prosodic Features				
Word Stress				
Intonation				
Fluency				
Rhythm				
Sound omission				
Sound insertion				

Comments:

Appendix G: Post-Likert Scale

The following Likert scale is part of an investigation project conducted with the purpose of comparing the production of English vowels /ə/, /æ/, /ɑ/ with the production of Spanish vowel /a/. The answers provided will be confidential and only the researcher will have access to them.

Pronounce the following words, which contains English sounds /ə/, /æ/, /ɑ/.

Word	Excellent	Good	Needs Improvement
Bad			
Plaid			
Past			
Balm			
About			
Away			

Appendix H: Post-Test Evaluation Rubric

Universidad Internacional de las Américas

Graduation Seminar

Researcher: Franci Madrigal Portuguez

High School: Instituto de Desarrollo de Inteligencia

The following rubric is part of an investigation project conducted with the purpose of applying the contrastive phonology exercises to improve students’ production of vowels /ə/, /æ/, /ɑ/ and /a/. The answers provided will be confidential and only the researcher will have access to them.

Total points: 52 points

Total points obtained:

Sounds	Excellent 4	Very Good 3	Good 2	Needs Improvement 1
/ i, ɪ, ε, æ /				
/ ə, ʌ, ɔ, ɜ, ɝ /				
/ u, ʊ, ɔ, ɑ /				
/ aɪ, aʊ, ɔɪ, oʊ, eɪ / - / ju /				
/ ɪə, εə, ʊə, ɔə /				
Diferentiation between / æ/ and /a/				
Diferentiation between /ɑ/ and /a/				
Diferentiation between / ə / and /a/				
Prosodic Features				
Word Stress				
Intonation				
Fluency				
Rhythm				
Sound omission				
Sound insertion				

Comments:

Appendix I: Lesson Plan

UNIVERSIDAD INTERNACIONAL DE LAS AMERICAS
 Instituto de Desarrollo de Inteligencia
 Didactic Planning
 Level: 9th
 Franci Madrigal Portuguese
 Month: February

Linguistic Objectives	Mediation Strategies	Evaluation of Learning Outcomes
<p>At the end of the lesson...</p> <p>SPEAKING</p> <p>S.1 I can differentiate the pronunciation of English vowels /æ/, /ɑ/ and /ə/ from Spanish vowel /a/</p>	<p>Routine: Checking attendance, class agenda</p> <p>Participating</p> <p>Warm-up</p> <p>Activation of Prior Knowledge: Teacher asks students to read two tongue twisters containing the sounds /ə/, /æ/ and /ɑ/. (10 minutes)</p> <p style="text-align: center;">Introducing</p> <p>Teacher explains that these <u>particular sounds</u> are confused by learners and let students know what the difference between them is.</p> <p>Role Play</p> <p>Teacher provides words such as alone, family, protect, backpack, man, car, gas station, party, afraid, better. These words represent sounds /ə/, /æ/ and /ɑ/. In pairs or trios, students will create a short conversation including these words. The role play is presented in front of the class, and the teacher can proceed to comment on how to correct the production of the <u>sounds</u> students mispronounced. (20 minutes)</p>	<p>Students will be assessed through...</p> <p>S.1 Accurate production of English vowels /æ/, /ɑ/ and /ə/ in contrast with Spanish vowel /a/</p>

	<p>Classifying Words</p> <p>Teacher divides the board into three spaces named /ə/, /æ/ and /ɑ/, and the group is divided into two groups: A and B. The teacher produces the sounds /ə/, /æ/ and /ɑ/ for the students to differentiate them. Then, they are provided with a list of words such as hand, black, across, rabbits, sensible, petition, half, charge, bath, heart, fat, happen, animal, band, accuse, police and common. Each group can choose a person per turn to read a word aloud and classify it depending on the sound. At the end, the teacher makes the necessary corrections. (20 minutes)</p> <p>Sentence Maker</p> <p>Teacher divides the group into trios or groups of four. Students are provided with a list of words containing the sounds /ə/, /æ/ and /ɑ/ such as jacket, natural, action, father, farm, problem. In a piece of paper, each group <u>have to</u> create sentences with the provided words. During the brainstorming, students must speak in English. After that, the groups read their sentences in front of the class. Each member of the group must read at least one sentence. The teacher corrects the mispronounced words. (20 minutes)</p>	
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Tribunal Examinador

Esta Tesina fue aprobada por el Tribunal Examinador de las Carreras de Inglés de la Universidad Internacional de las Américas, como requisito para optar por el grado de Bachiller en Inglés con énfasis en la Enseñanza.

MSc Yanith Delgado Chacón
Tutora

MSc Catalina Guerrero Troyo
Lectora

Lic. Leslie Elizondo Mora
Director de las Carreras de Inglés

Carta del Director de Carrera

San José, 17 de abril de 2020

Señores
Universidad Internacional de las Américas
Estimados señores:

El suscrito Lic. Leslie Elizondo Mora, Director de las Carreras de Inglés, hace constar que ha revisado la Tesina del estudiante, Franci Madrigal Portuguez, portador(a) de la cédula de identidad no. 1-1686-0133, que ha titulado: Contrastive Phonology for Enhancing Ninth Graders Production of Vowels /ə/, /æ/, /ɑ/ and /a/ at Instituto de Desarrollo de Inteligencia during the First Quarter of 2020.

La mencionada Tesina, responde a los requisitos exigidos en la Guía que nuestra carrera tiene para estos casos. Por tanto, se autoriza al autor para que lo presente ante el tribunal examinador nombrado para esta ocasión.

Atentamente,

Lic. Leslie Elizondo Mora

Director de las Carreras de Inglés

Carta del Lector

San José, 17 de abril de 2020

Licenciado
Leslie Elizondo Mora
Director de las Carreras de Inglés
Universidad Internacional de las Américas

Estimado señor:

La estudiante Franci Madrigal Portuguez, portadora de la cédula de identidad no. 1-1686-0133, ha presentado para su lectura y corrección de estilo la tesina denominada *Contrastive Phonology for Enhancing Ninth Graders Production of Vowels /ə/, /æ/, /ɑ/ and /a/ at Instituto de Desarrollo de Inteligencia during the First Quarter of 2020*. He revisado y corregido la coherencia de los objetivos con el marco teórico, instrumentos y resultados, la calidad del trabajo y la relevancia del trabajo. Por lo tanto, hago constar que este se encuentra listo para ser presentado a la Universidad como trabajo de graduación.

Atentamente,

.....
MSc. Catalina Guerrero Troyo
Lectora de Tesis

Carta del Revisor

Lunes, 23 de marzo del 2020

Máster
Dinier Amador Serrano
Director de las Carreras de Inglés
Universidad Internacional de las Américas

Estimado señor:

La estudiante Franci Poulette Madrigal Portuquez, portadora de la cédula de identidad no. 1-1686-0133, ha presentado para la respectiva revisión la tesina denominada *Contrastive Phonology for Enhancing Ninth Graders Production of Vowels /ə/, /æ/, /ɑ/ and /α/ at Instituto de Desarrollo de Inteligencia During the First Quarter of 2020*. Por lo tanto, se hace constar que el documento fue revisado en lo relativo a la estructura gramatical, ortografía, puntuación, cohesión y terminología. Asimismo, se comprobó que las correcciones sugeridas se incorporaran al documento. Por ende, una vez incorporadas las recomendaciones efectuadas en el documento, el mismo se considera listo para su presentación la Universidad como trabajo de graduación.

Atentamente,



M.Sc. Catalina Guerrero Troyo
Cédula: 1-1012-0519



Universidad Internacional de las Américas Código de Ética

La suscrita Franci Poulette Madrigal Portuguez número de carné: 1-1686-0133 graduada del grado de bachillerato de la Universidad Internacional de las Américas, se compromete a cumplir, durante el ejercicio profesional, con el Código de Ética de la Institución, que se rige por los siguientes principios:

PROBIDAD: actuar siempre con rectitud y honradez.

PRUDENCIA: actuar con pleno conocimiento de la materia sometida a su consideración.

JUSTICIA: permanente disposición hacia las funciones de la profesión, bajo los lineamientos legales que debe respetar todo profesional.

RESPONSABILIDAD: cumplir con los deberes, tanto en calidad como en oportunidad.

DISCRECIÓN: guardar respeto sobre los hechos o informaciones de los que tenga conocimiento con motivo del ejercicio profesional, sin que esto perjudique las funciones y responsabilidades.

INDEPENDENCIA DE CRITERIO: no involucrarse o comprometerse con situaciones, intereses o actividades contrarias a la moral, a la sana crítica y que, por ley, sean incompatibles con las funciones profesionales correspondientes.

DIGNIDAD Y DECORO: actuar con sobriedad y moderación.

TOLERANCIA: evidenciar una actitud paciente y de comprensión ante las opiniones divergentes que puedan expresar otras personas.

EQUILIBRIO: desempeñar las funciones profesionales con sentido práctico, buen juicio y equidad.

ACTUALIZACIÓN: comprometer parte del tiempo en actualizar los conocimientos y adaptarlos en el desarrollo de la actividad profesional.

VOCACIÓN: mostrar siempre apego al trabajo y a la educación recibida, como fundamentos para el desempeño laboral.

BUENA FE: toda conducta o comportamiento, criterio emitido y labor desempeñada debe basarse en los más altos principios éticos y tendrá como fundamento la buena fe.

Franci Madrigal Portuguez

1-1686-0133

