Universidad Pedagógica Nacional
Francisco Morazán
Vicerrectoría de Investigación y Postgrado
Dirección de Postgrado
Maestría en la Enseñanza de la Lengua

TITLE:

Transfer of L1 sounds onto the pronunciation of L2 phonemes in students of English at Universidad Pedagógica Nacional Francisco Morazán in Santa Rosa de Copán

Researcher

Sandra Margarita Alvarado Lara

Thesis Advisors

Ph.D. Gloria Ester Ulloa

Ph.D. René A. Noé

Santa Rosa de Copán, August, 2020

Transfer of L1 sounds onto the pronunciation of L2 phonemes in students of English at Universidad Pedagógica Nacional Francisco Morazán in Santa Rosa de Copán

Universidad Pedagógica Nacional

Francisco Morazán

Vicerrectoría de Investigación y Postgrado

Dirección de Postgrado

Maestría en la Enseñanza de la Lengua

1. THESIS TITLE

Transfer of L1 sounds onto the pronunciation of L2 phonemes in students of English at Universidad Pedagógica Nacional Francisco Morazán in Santa Rosa de Copán

Researcher

Sandra Margarita Alvarado Lara

Thesis Advisors

Ph.D. Gloria Ester Ulloa

Ph.D. René A. Noé

Santa Rosa de Copán, August, 2020

AUTORIDADES

Dr. **HERMES ALDUVÍN DÍAZ LUNA**
Rector

M.Sc. **BARTOLOMÉ CHINCHILLA CHINCHILLA**
Vicerrector Académico

M.Sc. **JOSÉ DARIO CRUZ ZELAYA**
Vicerrector Administrativo

Dr. **JOSÉ HERNÁN MONTÚFAR CHINCHILLA**
Vicerrector de Investigación y Postgrado

Dra. **JENNY MARGOTH ZELAYA MATAMOROS**
Vicerrectora del CUED

M.Sc. **JOSÉ WILMER GODOY ZEPEDA**
Secretario General

Dr. **ROGERS DANIEL SOLENO**
Director de Postgrado

Santa Rosa de Copán, Agosto, 2020.

TERNA EXAMINADORA

Esta tesis fue aceptada y aprobada por la terna examinadora nombrada por la Dirección de Estudios de Postgrado de la Universidad Pedagógica Nacional Francisco Morazán, como requisito para optar al grado académico de máster en la Enseñanza de Lenguas.

Tegucigalpa, M.D.C. Agosto, 2020

Dr. René Antonio Noé Martínez
Grado académico, nombres y apellidos completos
Examinador(a) presidente(a)

MSc. Erika Patricia Bulnes García
Grado académico, nombres y apellidos completos
Examinador (a)

MSc. Irma Ruth Mendoza Rosales
Grado académico, nombres y apellidos completos
Examinador(a)

Sandra Margarita Alvarado Lara
Tesista

ACKNOWLEDGMENTS

I would first like to thank Jehovah, the Almighty, for giving me the strength and opportunity to achieve this goal in my life. I admit that without his blessings this achievement would not have been possible.

I also thank two persons who are the reasons of my life: My mother and my beloved daughter. They are the motivation that sustain my entire existence.

I would like to express thanks to my brother René Alvarado, for standing by my side when I have need it most.

My special gratitude to PhD. Edgar Vásquez Alberto, for his valuable guidance, advices and constant support during this academic process. This thesis would not have been possible without his encouragement.

I am highly indebted to my thesis advisors, PhD. Gloria Ulloa, and PhD. Rene A. Noé, who have guided the development of thesis with their academic expertise since the beginning of this research project. I appreciate their patience, constant guide and support whenever I needed them.

I am deeply grateful to Lee-Ann Johnson for her valuable analysis of the information, comments and recommendations in the process of this project. Also, to my friends and colleagues who have inspired me to continue working on this project.

I also express my gratitude to the Universidad Pedagógica Nacional Francisco Morazán, **UPNFM** for opening the doors of knowledge and letting me up grade professionally.

Table of content

LIST OF FIGURES

LIST OF TABLES

ANNEX TABLES

I. INTRODUCTION

English is one of the most spoken languages and it is currently considered as "lingua-franca (business' language). Additionally, this is the language used for political, touristic and economical purposes (Daily Mail, 2013). Consequently, the Universidad Pedagógica Nacional Francisco Morazán (UPNFM) has decided to open the English Career Program in Santa Rosa de Copán, to train teachers of English aimed at closing this need in bilingual education in this region. In this new process, the students of English at the UPNFM have been learning English as a foreign language (EFL) and trained to become teachers of English. However, many of them have difficulties in the pronunciation of the English sounds.

According to Gerald Kelly (2007), one of the negative effects of phonological transfer on the learners is misunderstanding, which causes frustration when they try to communicate in the second language. Another problem is the inability to perceive L2 phonemes accurately, and due to this negative transfer, the speaker may lead to communication error in the L2 (Benson, 2002 cited by Rasier & Hiligsmann, 2009).

This study attempts to identify the Spanish phonemes that may cause an inaccurate pronunciation of English phonemes in the students of English at the Universidad Pedagógica Nacional Francisco Morazán in Santa Rosa de Copán. This work emphasizes the fact that pronunciation is influenced by language transfer affecting a proper sound production among the English students, which show a great difficulty in this fundamental aspect of the linguistic field.

This research work has been analyzed through a qualitative approach within a case study design. Its primary objective is to analyze in depth what the English phonemes affected by Spanish sounds are regarding listening and speech production by the students of the English Program. The secondary objective will describe the English phonemes according to the International Phonetic Alphabet (IPA) which students of the undergraduate English Program have difficulties when speaking English.

This research work also follows the principles of case studies design, therefore it does not attempt to be generalized (Yin, 2008).

The theoretical framework analyzes the phonological transfer, the interlanguage, and the different methodologies that emphasize listening to teach English as a foreign language. This study ends with a deep analysis of the phonetic features of both Spanish and English languages.

CHAPTER I

OBJECT OF STUDY

1.2 STATEMENT OF THE PROBLEM

It is extremely challenging for learners of a new language to produce certain L2 speech sounds accurately, especially English because it is not a phonetic language (Ravin, 2012). When a Spanish native speaker acquires the basic linguistic structure of English as a new language, it is difficult for them to distinguish and produce English as a new phonetic system (Alexopoulou, 2010). Related to this matter, teachers of the English Program have observed that students of advanced courses of English from the Universidad Pedagógica Nacional Francisco Morazán, campus Santa Rosa de Copán, present issues with the pronunciation of English phonemes having the tendency to produce the non-aspirated sounds or articulate the sounds differently, as a result, Spanish speakers can assimilate the English sounds such as /t/, /d/, /k/, /g/, /p/, /b/ with the sounds of Spanish, (Hernández, Gonzáles & Algara, 2011) (Case, 2012). However, the form to produce these particular sounds which are called alveolar, velar and bilabial respectively, are uttered distinctively in English. In this aspect, according to the studies of the authors Hernandez et al, (2011) and Gorman, & Kester (2013) it seems that the student has the predisposition to associate the new sounds with the phonetic system of Spanish. This perception and production of L2 sounds have been studied broadly. Jenkins (2001) defines this phenomenon as interference because of the influence that the learner's L1 applies over the acquisition of an L2.

In the case of the students of English Language Program, they come from the western region of Honduras where they present a unique cultural context, because most of them have declared in class interviews that they have never had a strong previous influence of English through mass media or social networks. On this subject, Bhela (1999) mentions that "language environment encompasses everything the language learner hears and sees in the new language, it may include a wide variety of situations - exchanges in restaurants and stores, conversations with friends, watching television" (p.1). Therefore, this lack of exposure to the foreign language affects their learning acquisition process. This is related to the local cultural context of the students inserted in the English Program who learned a little English vocabulary and even less pronunciation during their primary and secondary education. Hence, their first contact with English was at the university level.

It is widely accepted that pronunciation plays a significant role in intelligibility between the non-native and the native speakers of English, and knowing the existence of those differences between the phonological systems of both languages, this may interfere with both phonological systems consequently. This phonological interference may have serious consequences in the communication with English speakers. It could lead to problems since non-native teachers of English who have faulty pronunciation seem less fluent than they are. Thus, it may affect their English communicative skills in a negative manner such as a faulty pronunciation that creates deficient intonation, which is unacceptable in foreign language teachers (Kelly, 2007).

Subsequently, they struggle with many pronunciation problems of the English phonemes that lead to an ineffective level of communication, and even worse, they may face troubles to get a job as non-native English teachers (Levis, Sonsaat, Link and Barriuso, 2016). Above all, it is necessary to identify those predominant phonemes of English that are produced with a transference of Spanish sounds and their relationship to an inaccurate production of English sounds in nonnative English speakers. Through this study, the researcher analyzed the elements described above and it may be a source for future studies related to the field of linguistic interference. The research is going to establish a deeper understanding of second language acquisition of the students of the Western region of our country.

1.3 JUSTIFICATION OF THE STUDY

How does the perception of speech sounds of the phonetic system of L2 influence their eventual production? This research stands out the transference of Spanish sounds and its relationship with an accurate pronunciation of English sounds in foreign English speakers, and how this leads to ineffective communication in their future professional career as non-native English teachers. The relevance of this study is to highlight how pronunciation has recently reached within the theory and practice of the second language acquisition and its relationship with an accurate articulation of the English phonemes, to enhance pronunciation acquisition.

In this line or argument, Barrera (2009) posits that students must analyze the main characteristics of the foreign language from the first moment in which they have contact with English. This situation has been studied in similar research processes conducted in the Pontificia Javeriana University of Bogotá (Guzman & Martinez, 2013). These investigations provide evidence that transfer or interference from the L1 is an important factor that interrupts an accurate production of L2 English phonemes.

In a similar perspective, this study aims at the field of language teaching, especially both, its students and teachers because it allows to identify what the English phonemes are mainly affected by Spanish phonemes particularly in the students of English from the UPNFM. Besides, this research attempts to know what prevailing sounds of English are affected and how the learners transfer them.

With those elements in mind, this research provides valuable information for teachers in charge of English classes to become more aware of the mistakes the learners are prone to make, so the learners can recognize and overcome those pronunciation issues which would help them to become fluent speakers. The added confidence engendered fluency and the deeper fluency itself will help them succeed in their professional lives as non-native English teachers.

This research project was carried out in Santa Rosa de Copán, UPNFM, campus, in the second term of 2018. Focusing on identifying the profound influence of Spanish

phonetic sounds (L1) which affects an accurate English (L2) sound production, with the benefit to generate awareness and give emphasis on an accurate pronunciation and listening comprehension aimed to reduce L1 accent 1, among the students of English.

1.4 OBJECTIVES OF THE STUDY

1.4.1. General Objectives

The main objective of this research is:

To determine the Spanish phonemes (L1) that affect English phonemes (L2) in speaking skills that interfere with an assertive pronunciation among students from the Universidad Pedagógica Nacional Francisco Morazán, UPNFM Centro Universitario, Santa Rosa de Copán.

1.4.2 Specific Objectives

This investigation has the following specific objectives:

- To identify the most common Spanish phonemes that affect the oral production of English phonemes in students from UPNFM Santa Rosa de Copán.
- To describe the English phonemes according to the International Phonetic Alphabet (IPA) where students have difficulties pronouncing assertively.
- Compare the similarities and differences in the articulatory process among the phonemes in both languages (English and Spanish) produced by the students.
- To describe how the language interference phenomenon (Spanish L1) affects the phonological awareness on the production of English by the students.

1. 5 QUESTIONS OF THE STUDY

1. What are the most common Spanish phonemes that affect the oral production of the English phonemes in students from UPNFM Santa Rosa de Copán?

2. Which English phonemes do students mispronounce according to the International Phonetic Alphabet (IPA)?
3. What are the similarities and differences in the articulatory process between phonemes of both languages (English and Spanish) produced by the students of English?
4. What are the effects of language interference phenomenon (Spanish L1) on the phonological awareness on English students?

CHAPTER 2

2. LITERATURE REVIEW

STATE OF THE ART

The study of pronunciation on learners of a foreign language has been done several times. One research was carried out in Colombia by Navarrete (2012) to measure the transference of the learners, showing that students have the tendency to modify the pronunciation of English with phonetic sounds of Spanish when speaking.

Other studies carried out related to the influence of L1 on L2 utterance production was investigated by Rogers (1997). The researcher examined the speech of native English speakers and Mandarin speakers speaking English. The conclusions of this study revealed that on spite the place of articulation, the manner of articulation, and voicing, Mandarin speakers presented difficulty pronouncing consonants at the end of the words, and that might be due to Mandarin having fewer words ending with consonants.

2.2 DEFINITION OF PRONUNCIATION

This fundamental aspect of a language has a definition provided by Merriam Webster Dictionary (2019) as “the act or manner of pronouncing something”, in words of

Cook (1996) he defined pronunciation as the production of English sounds. In the field of language teaching, pronunciation is learned by repeating sounds providing feedback to correct them when produced inaccurately (Pourhosein, 2016). During the process of learning a second language the learners start acquiring pronunciation, so they are able to make new habits of articulation in order to overcome the difficulties resulting from the first language. According to Yates & Zielinski, (2009) pronunciation refers to the production of sounds that is focused on meaning. Moreover, pronunciation is the creation of a sound system that doesn't interfere with communication from the speakers or the listeners' viewpoint. Pronunciation is the elemental form of real communication when the speaker utters a word in an accepted manner (Otlowski, 1998).

It is worthy to mention that pronunciation is one of the most difficult skills to be acquired by the learner of a new language, due to comprises of neuro-cognitive-motor skills, it is a physical practice that cannot be acquired only from reading textbooks. Connected to this idea, Pourhosein (2016) emphasized that "non-native speakers should develop functional intelligibility, functional communicability, increased self-confidence, the speech monitoring abilities, and speech modification strategies". (p.1). Therefore, this skill is complex for the learner of a new idiom.

Pronunciation is classified into segmental features (i.e., vowels and consonants) and Suprasegmental (prosodic) features like stress, intonation, pitch, and rhythm. The learner needs to identify the sound patterns of the target language, but in real classes pronunciation is viewed as a sub-skill of speaking, not as the most important skill of speaking. The consequence is that poor pronunciation creates an additional barrier in understanding between the non-native speaker and a person in a conversation. Thus, pronunciation is a very important part to master any foreign language, and in our context this includes English, where an effective training may provide the learner how to be understood by others. Research in different fields of L2 learning languages has shown that the use of explicit instruction has positive effects in learning (Bodorik, 2018, Yates & Zielinski (2009)). Despite its importance, Celce-Murcia (2001) cites that pronunciation has been the "Cinderella" of language teaching, so it is mandatory to explore the elements implied in the field of teaching English pronunciation.

2.2.1 TEACHING ENGLISH PRONUNCIATION

A consideration of pronunciation embedded in a method or approach is necessary, because without an assertive production of the target language, it cannot exist a successful communication of the learner. Related to these ideas, Archival (1998, p.37) says "When we look closely at the construct of accent we realize that it is highly complex. A second language learner must learn to present and implement information related to such things as the segmental inventory, phonotactics, syllable structure, stress, rhythm, and intonation of the language in question".

Teaching pronunciation should involve a continuous analysis by teachers to share experiences of other colleagues and the search for new strategies to improve teaching. In the field of teaching a foreign language, a teacher must think about the specific qualities offered to students of their native idiom. In this sense, the methodology of teaching English pronunciation has to take into account the problems posed by the English language for the students who are learning it. The procedure of teaching English pronunciation stands in relationship with several challenges and provides answers to some relevant questions such as: What does the teacher have to teach? What methods or approaches are more convenient to teach pronunciation? What knowledge, skills and habits must students have to obtain in the process of learning the language sounds? All in all, every language teacher must give attention to the following personal initiatives to provide a successful teaching as Tamura indicates (2006, p.169):

- *To awaken and develop the potentiality and ability of students for studying.*
- *To help students develop habits through frequent repetition.*
- *To inspire, to kindle the interest of the student in studying.*
- *Also, the teacher should know how to go from easy stages to more difficult ones.*

The teaching of foreign languages has been evolving through over time, during that process, several different methods to teach languages have been implemented which includes scientific, psychological advances and, recently, the neurolinguistics. In recent times, technology has come across to provide new tools enhancing the learning of languages. On the other hand, teaching a language is not only associated to methodology, but also to the motivation of the learner and other external factors that play a relevant role in this area of language acquisition. Along the history of the teaching and learning process of a second language, the development of new approaches and methods have emerged proposing theories of how humans learn new idioms, how to apply innovative strategies and techniques directed to make an efficient language acquisition.

The following chart describes a timeline of the development of some methods that have given emphasis to pronunciation.

Figure 1

Timeline of the Teaching pronunciation approaches

YEARS	APPROACH	DEFINITION
Late 1800 & late 1900s	Direct Method	Teachers provided L2 learners with a model for native-like speech. By listening and then imitating the modeler. L2 Improved their pronunciation.
1940-1950s	Audio-Lingual Method in the US & Oral Approach in the UK	Pronunciation was taught explicitly from star, and L2 learners imitated or repeated after their teacher or a recording model.
1960s	Cognitive Approach	This de-emphasized pronunciation in favor of grammar and vocabulary.
1970s	Silent Way	L2 learners focused on the sound system without having to learn a phonetic alphabet. Attention was on the accuracy of sounds and structures of the L2 from the outset.
	Community Language Learning	The pronunciation syllabus was primarily student-initiated and designed. The approach was imitative.
	Communicative Approach	The ultimate goal was communication. Teaching pronunciation was urgent and it was necessary in oral communication. Techniques to teach are emphasized on an effective communication.

Note: sciencedirectassets.com. Intuitive-imitative Approach versus Analytic-linguistic Approach toward Teaching /7/, /'/, and /w/ to Iranian Students. by Jam & Adibpour, 2014

The table above indicates the only few methods have given importance to pronunciations. Today, most teachers and students take communication in class for granted. With English as a Foreign Language (EFL), history clearly shows that this has not always been the case and now communicative approach is leading the teaching and learning of a foreign language centering more on communication than just grammar and vocabulary, involving communicative competence, which is the ability to be understood. Language teaching using this approach might simply mean adding more opportunities to communicate than a traditional grammar based curriculum.

According to studies conducted by Breitkreutz, Derwing, & Rossiter, (2001), language teachers tend to avoid dealing with pronunciation for they have lack of confidence, skill, and knowledge. Furthermore, in many cases there is an evidence that curricula, methodology, and the nonexistence of appropriate materials may cause inadequacies of pronunciation (Hismanoglu & Hismanoglu, 2010). In the same line, the English language has a main feature which is a lack of a one to one correspondence between spelling and pronunciation on letters. Taking into consideration this information it is necessary to explore some methods and methodologies implemented to increase pronunciation awareness among second language learners.

2.3 METHODOLOGY OF LANGUAGE PRONUNCIATION

The teaching of language pronunciation has been a field of constant changes through the passes of the time, where approaches and methods have proliferated, viewing the learning-teaching process according to different theories and the nature of language that is in the first principle the foundations of the any approach or method to teach language. These methods determine the goals and procedures of teaching a foreign language (Celce-Murcia, 1996).

The implications of the methods and approaches have shaped the different methodologies applied by the teachers of languages, however it was until 1886, when the insight of language increased. Consequently, the results in the creation of the International

Phonetic Association was done by some scholars such as Henry Sweet, Wilhem Viëtor and Paul Passy, who were part of the movement of changes in the process of language teaching at the time (Celce-Murcia, 2001). These talented linguists established the main scientific bases by promoting that; the spoken form of a language should be taught first. Their next point is that phonetics has to be applied to language teaching, and emphasized that teachers should have a solid training in phonetics, as well learners ought to receive phonetic training to establish good speech habits (Celce-Murcia, 2001). Due to the complex phonetic system of English, it is necessary to analyze those methods that are designed to teach pronunciation.

The approaches described below address the area of teaching English pronunciation and more specifically listening and phonetic skills.

2.3.1 Intuitive-imitative approach

The intuitive-imitative approach has its origins before the 19th Century. It was developed based on the learner's ability to listen to imitate the sounds in the target language. This approach emphasizes in a way a good level of listening, and production of the idiom, which leads to the development of an acceptable threshold of pronunciation. This approach requires good and reliable resources like audio-clips, audio visual aids, songs, rhymes, so it complements the teachers and the textbooks. As it has been said before, the learner needs to learn to listen, enhancing the students' knowledge and observations about sounds grounded on orthography rather than phonetic symbols. Celce-Murcia (2011) mentions that this method:

1. Depends on the learner's ability to listen to and imitate the rhythms and sounds of the target language without the intervention of any explicit information;

2. Presupposes the availability, validity, and reliability of good models to listen to.

Another aspect that helped the expansion of the intuitive-imitative approach was the audiolingual method during the 60's, 70's and right up into the 80's, but here in Honduras indeed, many contemporary second language practitioners still hold to this methodology.

2.3.2 Analytic-Linguistic Approach

The analytic-linguistic approach is explained by Celce Murcia (2001) as an explicit intervention of pronunciation pedagogy. Under this methodology is emphasized that learners are trained with explicit information linked to pronunciation, implementing phonetic transcriptions, articulatory descriptions, and vocal charts. The specific phonetic and phonological features of English sound system can be presented in different interactive speech software and websites. According to Celce Murcia (2001, p.2) this linguistic approach has the following characteristics:

1.Utilizes information and tools such as a phonetic alphabet, articulatory descriptions, charts of the vocal apparatus, contrastive information, and other aids to supplement listening, imitation, and production.

2. Explicitly informs the learner of and focuses attention on the sounds and rhythms of the target language.

3. It was developed to complement rather than to replace the intuitive-imitative approach, which was typically retained as the practice phase used in tandem with the phonetic information

This approach can be embedded with communicative approach methodologies, where the learner of English practices pronunciation from different perspectives. Rather than replace other methods, this approach focuses on complementing other language methods.

2.3.3 Integrated Whole-body Approach:

This is a model for teaching pronunciation suggested by Celce Murcia (2001). The characteristics embedded in this approach are that teachers should use short videotaped interactions as the basis for instruction. First, clips from films, television programs or media videos are shown silently for general cues. Then, it is shown with sound to confirm predictions about the context. Through repeated listening, each line is carefully analyzed. This intensive listening is followed by intensive speaking practice in which learners try to imitate the pronunciation as well as the movements of each line. Teachers can also use audio recordings in order to provide students with intensive listening activities to improve pronunciation.

2.3.4 Direct Approach

This approach is the result of the constant evolution of language teaching. The main and recognized principle of this method is that it encourages the importance of acquiring the spoken language. Taking into account the findings on the studies of language acquisition by the recognized linguist L. Sauveur (1826-1907), who conceived his approach to teach English as a unique one. He identified that grammar is not the best way to teach a language. His principles underlie structured lessons where conversations were called “oral method”. A remarkable element incorporated in his classes was to teach English language through oral exercises (Richards & Rodgers, 1986).

The connection of the Direct Method with pronunciation is that it stresses as the main principle that language is primarily acquired by speech and good reading and writing follows from correct speaking (Mahapatra, 2014). Consequently, it gives special attention to the oral aspect of the language.

Since this method aims at learning a new language through speech, it lays much stress on the pronunciation teaching of the target language, providing ample opportunity for fluency in speech and good pronunciation. Another key element of this method is that it encourages the pupil to think in the target language and develops his power of self-expression in the target language.

2.3.5 Audiolingual Method

Audiolingualism (a term coined by Professor Nelson Brooks in 1964) claimed to have transformed the teaching of language from an art into a science. This method gives importance to pronunciation, being one of its main characteristics the encouragement of aural training first, followed by pronunciation training. Its view of speaking, reading, and writing is structural, and language is identified as speech and embedded throughout the structure.

Under this method, pronunciation is viewed under the system of structure, which resembles a pyramid: phonemic systems led to morphemic systems, and these, in turn, led to higher-level systems of phrases, clauses, and sentences. Learning in a language it was assumed, required mastering the elements or building blocks of the language and learning the rules covering how these elements are combined from phoneme to morpheme to word to phrase to sentence. The phonological system defines those sound elements that contrast in specific environments (allophones) and their permissible sequences (phonotactics). The phonological and grammatical systems of the language make up the organization of the language, and by implication, the units of production and comprehension. According to Rivers (1964, p.19-22) the principles of Audiolinguism are:

> 1. Foreign language learning is basically a process of forming mechanical habits. Giving correct responses rather than making mistakes creates good habits. Memorizing dialogues and practicing pattern drills minimizes the chances of making mistakes. Language is a verbal behavior that is the automatic production and comprehension of sounds and can be learned by encouraging students to participate in the practice.
>
> 2. If language skills are presented in spoken form before they are seen in written form, those skills will be learned more effectively. Aural-Oral training provides the foundation for development of other language skills.

3. Students should practice a pattern in different contexts and acquire an understanding of the analogies involved before the rules are explained to them. Drills can help learners form correct analogies.

All in all, Audiolingual is a suitable method that gives some level of relevance to the teaching of pronunciation applying some techniques to help the learners a basic level of the acquisition of pronunciation of the target language.

2.3.6 Communicative Approach

The different models to teach English have been diverse through the times, and in the last quarter of century the contributions of Psychology have shed light on how humans learn and interpret their own reality. It holds the main idea that language is a tool for communication therefore, using language to communicate should be the principal objective in all classroom language instruction.

In the field of language teaching and language acquisition there have been many changes, since the inadequacy of a model based on the four skills. The social role of language and its place in the 'social process' as a means of communicating meaning were perhaps first hinted at by Firth (1957 a,b as cited by Roberts, 2004). Later as time passed, the development was focused on language as a social tool. The main goal of the Communicative Approach is based on the idea that learning language successfully comes through having to communicate real meaning. It emphasizes the concept that the learners have to be able to be involved in real communication, using natural strategies for language acquisition.

The introduction to the same document comments that “communicative purposes may be of many different kinds. What is essential in all of them is that at least two parties are involved in an interaction or transaction of some kind where one party has an intention and the other party expands or reacts to the intention” (Yalden, 1983, as cited by Richards

& Rogers, 1986 p. 75) The authors mentioned that there are six communicative language teaching design options, ranging from a model in which communicative exercises are attached onto an existing structural syllabus, to a learner-generated view of syllabus design.

Likewise, Nunan (1996) distinguishes between a strong ”and a “weak” version of Communicative Language Teaching. There is, in a sense, a ‘strong’ version of the communicative approach and a weak version. The weak version which has become more or less standard practice in the last ten years, stresses the importance of providing learners with opportunities to use their English for communicative purposes and, characteristically, attempts to integrate such activities into a wider program of language teaching. The ‘strong’ version of communicative teaching, on the other hand, advances the claim that language is acquired through communication, so that it is not merely a question of activating an existing but inert knowledge of the language, but of stimulating the development of the language system itself. If the former could be described as ‘learning to use’ English, the latter entails ‘using English to learn it’ (1984, p.279).

Current communicative approaches mentioned by Finocchiaro and Brumfit (1983, as cited by Richards and Rodgers, 1986, p.68) indicate the distinctive features of Communicative Approach, according to their interpretation:

1. Attends to give more importance to meaning.

2. Dialogs, if used, center around communicative functions and are not normally memorized.

3. Contextualization is a basic premise.

4. Language learning structures, sounds, or words.

5. Effective communication is sought.

6. Comprehensible pronunciation is sought.

7. Attempts to communicate may be encouraged from the very beginning.

8. Translation may be used where students need or benefit from it.

9. Communicative competence is the desired goal (i.e. the ability to use the linguistic system effectively and appropriately).

The above information emphasizes that the key meaning of the language structure is supreme to dialogues, if used, they are centered around communicative functions and are not normally memorized. The idea to give the language into a contextualized situation is a basic premise. Another element is that the language learning is focused to satisfy the communication needs of the speaker. Thus, the purpose since the beginning is to achieve effective communication. Of course, drilling may occur, but peripherally along with different styles of decoration on the walls or charts related to the topic of the lesson. The key when speaking is to achieve a comprehensible pronunciation. This approach emphasizes the use of any device that helps the learners to acquire the target language, these task base materials are adapted according to the age, interest, and culture of the student. Another characteristic of Communicative Approach is that it encourages the learner to communicate from the very beginning of the lessons, however judicious use of native language is allowed whenever possible. Translation may be used where students need or benefit from it and reading and writing can start from the first day, if desired. The target linguistic system will be learn hola mami ed best through the process of struggling to communicate in the target language.

Communicative competence is the desired goal (i.e., the ability to use the linguistic system effectively and appropriately). Different aspects of linguistic variation is a central concept in materials and methodology inside of this methodology. Sequencing is determined by any consideration of content, function, or meaning that maintains interest. Under these principles language is created by the individual, often through trial and error. Fluency and acceptable language are the primary goal, and accuracy is judged not in isolation but in context. Another important aspect of this method, is that students are expected to interact with other people, either in the flesh, through pair and group work, or in their writings. The teacher cannot know exactly what language the students will use. Intrinsic motivation will spring from an interest in what is being communicated by the language.

Apart from being an interesting example of how proponents of Communicative Language Teaching stack cards in their favor such a set of contrasts illustrates some of the major differences between communicative approaches and earlier traditions in language teaching. The wide acceptance of the Communicative Approach and the relatively varied way in which it is interpreted and applied can be attributed to the fact that practitioners from different educational traditions can identify with it and consequently interpret it in different ways. One of its North American proponents, Savignon (1983), for example, offers as a precedent to Communicative Language Teaching a commentary by Montaigne on his learning of Latin through conversation rather than through the customary method of formal analysis and translation.

2.3.7 Techniques to learn Pronunciation Based on Communicative Language Teaching

Phonetic transcription

One well known technique that has long been used by many teachers is phonetic transcription, which is a code consisting of phonetic symbols. Each symbol represents a single sound, which is in fact different from a letter of the alphabet. True as it is, in order to use phonetic transcription one must learn the code and it takes time and effort. Although it is possible to learn the pronunciation without using the code, many linguists believe it to be a valuable tool in learning the foreign sound system. One obvious advantage of learning the code is the ability to find the pronunciation of unfamiliar words in a dictionary. All good modern learners' dictionaries use phonetic symbols to indicate pronunciation, and learners must therefore be familiar with them.

Through the implementation of this practice, the spoken language phonetically is transcribed very straightforward: the learner basically learns how to write the phonetic symbols of the target language that correspond to the sounds heard. Even if the student is not able to understand what he/she hears, as long as the sounds can be recognized and transcribe. In order to do this process it is necessary to use the International Phonetic

Alphabet (IPA) which has hundreds of symbols, but fortunately only fifty or so corresponding to the number of sounds used in English.

There are two styles of transcription used in an English as Second Language (ESL) and English as Foreign Language (EFL) class, (Atkielsky, 2005) the first is narrow transcription: it's features of transcription attempts to record every single phonological sound of a word, and it does not matter if it is important to meaning or not. If the teacher needs to show students a comparison of foreign accents, that is when narrow transcription is useful or when it is necessary to compare English pronunciation with other languages. The second form of transcription is denoted as broad transcription. It shows only the sounds that are important to meaning. This type of transcription is called phonemic transcription. In this case of Broad transcription, it documents to students how a sound of a particular word should be pronounced. Additionally, it emphasizes only the sound differences to serve to distinguish meaning; but tiny pronunciation features that are part of a regional accent are not transcribed. This broad transcription is the type used in pronunciation keyboards and dictionaries to show the pronunciation of words.

Auditory reinforcement

This is a completely different method mentioned by A. Brown (1992) who thought about some notes, because there is a common assumption among teachers that perceptual and productive language skills such as listening and speaking are taught through the same medium, namely speaking and listening. As a result, many of them use the traditional listen and repeat techniques in spite of the present tendency for communicative language teaching. Techniques based on this method are often production oriented and aim at improving students' spoken English. Many of such techniques employ minimal pairs, which are words that have different meaning and their pronunciation differs only in one sound.

Minimal pair

The English phonemes have different features of pronunciation, so the English learner must be aware of such characteristics. This is the main purpose of minimal pairs, which are defined by Barlow & Gierut (2002, p.58) as "a set of words that differ by a single phoneme, whereby that difference is enough to signal a change in meaning. For instance, the words "map" [mæp] and "mat" [mæt] form a minimal pair in English".

As is observed those two words have identical first consonants and vowels, but they differ only by the last consonant [p], [t] and this difference indicates a change in meaning. Inside of this technique there is a constant emphasis for the use of drills. This technique was introduced during the Audiolingual era and has still been used both in isolation at a word-level and in context at a sentence-level. The technique is useful for making learners aware of troublesome sounds through listening and discrimination practice.

Visual reinforcement

The use of visual aids are useful to enhance language teaching because they help teachers to bring the real world into the classroom, making the learning of a new language more meaningful and exciting. According to Bradshaw (2003) visual aids are very useful to obtain information, build new knowledge and enhance successful educational outcomes.

This technique has been connected with the teaching of pronunciation since the time of the first methods, but with Silent Way the skill was taught through the use of word charts and colour rods. Since that time many other ways of visualizing pronunciation have been introduced. They may be especially useful for adult learners who undergo the process of fossilization. While children benefit from oral repetition, drills and taping themselves, adult learners find it difficult to learn the patterns of intonation, stress and rhythm. The reason may be that they simply do not know whether the patterns they produce are acceptable. Real time visual displays are to show learners the relationship between the patterns they produce and those they are required to repeat. One of the possible conventions for making the word stress visible is writing the stressed syllable in capital letters:

FAshion, SEssion, beHAVE

There is another common form to the visualization of word stress, which is the use of dots. The large dots mark a stressed syllable in a word: catwalk

●

Tactile reinforcement

The use of the sense of touch is another frequently employed technique, because it is not discussed very often. In fact, some teachers might be taking advantage of it without even realizing this technique. Celce-Murcia (2011) names this model into a visual reinforcement. One of the forms of this strengthening includes placing fingers on the throat in order to feel the vibration of the vocal cords, and it may be useful when teaching the distinction between voiced and voiceless consonants. There is another version, as a different form of tactile reinforcement that incorporates simple tactile descriptions given to the students: "When you pronounce /r/ your tongue feels liquid and your jaw is tight" (Celce-Murcia, 2011, p. 296).

2. 4 THEORIES OF LANGUAGE TRANSFER FROM L1 (SPANISH) INTO L2 (ENGLISH)

2. 4.1 Contrastive Analysis Hypothesis:

The process of language acquisition has brought to the table different theories to be explained. Many questions have arisen, for example: Is it true that what a speaker already knows in L1 will sometimes help the learner, but may it hurt the apprentice as well? Considering this question, and taking into consideration the structure(s) involved was the origin of this important theory.

In order to improve the process of learning a second language, into a more efficient way, the field of applied linguistics has led the development of different theories that have

emerged along with the results of investigations. One of the earliest theories related to explain the process of learning a second language is the fundamental formulating of the Hypothesis of Contrastive Analysis of Lado (1957). This theory idea assumes that students who come in contact with the foreign language will find some features of it quite easy and others extremely difficult. Following these ideas, there is an interesting theory of Lado's who wrote "making comparison between native language L1 and second language L2 it is possible to predict mistakes produced by the learner linked to linguistic transference", (as cited by Gonzales et al, 2010). At the beginning it was assumed one strong version of the contrastive analysis hypothesis predicted that all errors made by L2 learners would be interference errors. However, this claim was abandoned due to the difficulty for researchers to find and classify the learner's error or the native language was not the source of the learning problems he/she faced.

In Fries considerations, it is implied the existence of the phenomenon of transference in the process of learning by adults of the sound system and grammar of foreign languages. The author maintains that L2 learning is achieved through the formation of a set of habits both "automatic" and "unconscious." (Gonzalez, et al, 2010). This view corresponds with the psychological behavioral and structural linguistics governing at the time. In this respect, contrastive analysis is useful, because it helps to discover the differences between the two languages concerned and it may predict the difficulties the learners have to overcome. Therefore, teaching could be focused at those points where there are structural differences. This, in theory may determines to a great extent what the learner has to learn and what the teacher has to teach to improve the process of the acquisition of the target language.

2.4.2 Hypothesis of Interlanguage

Establishing a connection of studies developed around the learning of second language, the linguist Larry Selinker (Selinker, 2014) who postulated the theory of interlanguage (IL) devoted to explain the process by a second language learner attempts to express meaning in the language being learned, this new system occurs as an intermediate

segment which it is necessary in order to achieve the linguistics objectives: acquire a second language. Selinker defines interlanguage as:

Interlanguage is that linguistic/cognitive space that exists between the native language and the language that one is learning. Interlanguages are non-native languages which are created and spoken whenever there is language contact" (p.222).

However, during this stage, a central characteristic may happen: fossilization, that is, it stops to "develop at some point short of full identity with the target language. Thus, the adult second-language learner never achieves a language competency easily in the use of the target language" (Tarone, 2006) in comparison to the level achievable by any child acquiring a native language. According to this perspective, in one situation a learner may produce a target-like variant e.g. 'I don't' and in another context a non-target like expression e.g. 'I doesn't'.

The principal exponents of this theory Tarone et al.(2006) go on to detail the IL hypothesis (p. 97): There are four sets of observable facts upon which the IL hypothesis is based, which may be used to evaluate that hypothesis. Each of these observable facts is to be studied: first, the stability over time of certain errors and other surface forms in learner-language systems (i.e., fossilization). Second, the mutual intelligibility that appears to exist among speakers of an IL; third, the phenomenon of backsliding, or the regular appearance in bilingual speech of errors that were thought to be eradicated; and fourth, the systematicity of the IL at one particular point in time.

For further explanation about the meaning of "fossilization" a term coined by Selinker, it refers to the process of 'freezing' of the transition between the L1 and L2, and is regarded as the final stage of interlanguage development. Another feature in this concept is that it can occur even in highly motivated learners who are continuously exposed to L2. There are some explanations for this phenomenon due to complacency or inability to overcome the obstacles to acquiring proficiency in the L2. Fossilization is common among adult language learners, when they do not perceive the need to correct the form or structure, so the student fossilizes the form instead of correcting it. Furthermore, interlanguage has different features; it can be adjustable across different contexts, because it may be more

accurate, complex and fluent in one domain or language (native) than in another (second language). It could be applied from an interlanguage perspective to a learner's underlying knowledge of the target language sound system (interlanguage phonology), grammar, e.g. morphology, syntax or vocabulary (lexicon), or even language-use norms among learners (interlanguage pragmatics).

Interlingua theory is a non-conventional linguistic system employed by second language learners, it manifests different factors identified by Gargallo (1993, cited by Orduz, 2012 p.95). The linguistic transference denotes the use of phonemes and other subsystems of mother language.

A relevant characteristic of interlanguages is that they become independent of both native and target language (Selinker 1969). This phenomenon has empirical fact supporting where the speakers attempting to produce a second language sound or utterance produce "NEW FORMS" (Selinker, 2011), because the new sounds are neither in native nor target language. The word [Espanish] is one phonetic example of such a new form. In similar field, there is one syntactic example provided by Selinker (2011) in a possible situation of the Spaniard in London overheard at a kiosk asking:

English Learner*: "How much cóst banana?"*

Native Speaker: *"Pardon?"*

When the learner is not understood because of the interlanguage utterance, the Spanish-English speaker could become frustrated, and rephrasing says: *"How much dóes cost banana?"*

The above example is interesting as the Spanish speaker has broken two English grammatical rules. However, the native speaker uses this phrase all the time, but that phrase is being used in different idiosyncratic ways than native speakers would and "has thus created a new construction in his interlanguage English" Selinker (2011, p.2).

"How much dóes cost banana?". Such examples have appeared a thousand fold in the literature. Everyone finds in their production data new forms, not in the native nor in the target language.

Interlanguage is not only something static, “there are various types of interlanguage though, a complete typology is lacking, e.g. “learner languages" which usually occur in classrooms, often with rapid development are the type most language teachers are concerned with” (Selinker, 2011 p. 3). The linguistics also mentions that the learners evolve into a so-called “fossilized interlanguages” (Selinker, 2011 p.4), associated with the linguistic forms in the interlanguage might continue for years with little or no change. At this point, it is necessary to highlight the fact that there exist many sorts of individual variations linked to interlanguage and there is a need for further research projects to produce an empirical typology. This phenomenon is best known are “transitional competence” where fossilization appears to be more dominant.

Importantly, unlike the productive output of native languages in a particular dialect area, one sees huge variation in the outputs of individual interlanguages (Tarone, 2004 eg). One hypothesis is that the variation is controlled by the learner first creating internally-created contexts or “discourse domains” (Selinker & Douglas, 1985). One certainty is that interlanguages are observed as a variable across many contexts and that accuracy may be stronger in one domain and weaker in another, and that this will vary by learner.

2.5 The Role of Pronunciation on Second Language Learners

There is no doubt that good pronunciation is the key for successful communication in a foreign language, especially English where it is important that the L2 learner set emphasis on the principal elements of pronunciation such as stress, rhythm and intonation. However, it has been observed that preservation of foreign accent is often considered as a phenomenon that persists even after years of L2 use. (Park, 2015. p.23) Pronunciation includes all those aspects of speech which make for an easily intelligible flow of speech, including segmental articulation, rhythm, intonation and peripherally gesture, body

language and eye contact, which is an essential component of oral communication, which includes grammar, vocabulary choice, and cultural considerations.

English-speaking listeners find it easier to understand someone whose pronunciation is basically low proficiency, but whose grammar remains weak than the reverse: excellent grammar can be completely veiled by poor pronunciation. In other words, learners who have better pronunciation will have more opportunities to communicate naturally and improve all aspects of language. In EFL the teaching of pronunciation should not merely focus on the production of sounds, but also on receptive skills, i.e. understanding when listening. Solé claims that "if an English sentence is pronounced without the appropriate weakening of unstressed syllables and unaccented grammatical words, a serious loss of intelligibility results" (Solé, 1991 p.145).

Taking into account that English pronunciation is different from its written form and inconsistent (e.g. though, thought, cough, bough), it is worthwhile to introduce and consolidate new material orally and only write up new words when students can pronounce them. Otherwise, there will be a constant interference of the mother tongue and students will tend to pronounce English as if it were written in their own language.

2.6 PHONETICS

According to Nolan, (2007) in his article for British Association of Academic Phoneticians (BAAP), Phonetics is "the systematic study of speech and the sounds of language".(p.1) The field of phonetics studies how they are made (articulator phonetics), transmitted (acoustic phonetics), and received (auditory phonetics). Phonetics has broad applications in a number of areas, including speech recognition, speech synthesis, and forensic linguistics, speech therapy, and language instruction.

In order to enhance the field of phonetics, is important to mention that there are two approaches addressing the mechanism of speech production: One is **Articulatory Phonetics,** focusing **"**on the organs of speech and their role in producing speech sounds,

which is predominantly based on data provided by other sciences, such as human anatomy and physiology" (Balčytytė-Kurtinienė, 2014 p.16). Thus, the production of speech sounds happens using the physiological organs involved in the process. The second one is **Acoustic Phonetics,** with "measuring and analyzing properties of the sound waves we produce when we speak" (Dobrovolsky, 1997). These two approaches are fundamentals for a deeper understanding of phonetics.

Estimating how speech is the result of neuromotor activity, thus the sound originates in the brain. When a new language learner hears for the very first time the sounds, has a difficult moment trying to decode the different segments (individual speech sounds) as individual units of linguistic structure and can be represented individually in a system of transcription. Another important piece of data according to Dobrovolsky (1997) is that it is impossible to represent all variants, because an individual cannot say the same sound exactly way twice. On the other hand, the smaller subunits are called **features,** which encloses segments.

Phonetics is a tool of paramount importance used in the teaching of pronunciation. For instance, in any description of the English sound system, speech sounds are categorized into consonants and vowels as well as voiceless and glides sounds which share articulatory and acoustic properties. The sounds of consonants can be described according to the movements of the mouth during the articulation (bilabial, dental, alveolar, palatal, velar) also whether the voice is used or not (voiced, voiceless, plosive, affricate, fricative, nasal, lateral). On the other hand, vowels are more sonorous than consonants, and are presented mainly in terms of the position of the tongue and lip rounding. These detailed phonetic descriptions of the sounds are not arbitrary since they are of paramount importance to the teaching of pronunciation.

A particular feature of phonetics is phonetic transcription to represent the actual sounds in terms of their acoustic and articulatory properties, which are placed between

[square brackets]. When we transcribe phonetically, we are representing not just abstract mental constructs, but rather, the goal of a phonetic transcription is to record the 'phonemes as mental categories' that a speaker uses, rather than the actual spoken variants of those phonemes that are produced in the context of a particular word. An English speaker has internalized a rule that says 'sounds like /t/ are always aspirated when word-initial', so they'll automatically make the /t/ in 'tenth' aspirated. Phonetic transcription on the other hand specifies the finer details of how sounds are actually made. So a non-English speaker trained in the IPA could look at a phonetic transcription like [tʰɛ̃n̪θ], and know how to pronounce it accurately without knowing the rules about English phonemes.

Suprasegmental, also called Prosodic Feature, in phonetics, is a speech feature such as stress, tone, or word juncture that go with or is added over consonants and vowels; these features are not limited to single sounds but often extend over syllables, words, or phrases. Following this line, all sounds have some degree of intrinsic loudness as well they could not be heard and sometimes requires a certain stretch of time (Dobrovolsky, 1997).

Consequently, Haycraft (1978, Pag. 58), mentions that, "Awareness of this is useful as many mistakes made by learners are due to slight differences in sound production". English learners of a second language, have to initiate the study of the phonetic sounds system of English, which could be complex if it is not taught properly, especially because English sound system has a rich vowel inventory; it consists of fourteen stressed vowels /i/, /ɪ/, /e/, /ɛ/, /æ/, /ɑ/, /ʌ/, /ə/, /u/, /ʊ/, /o/, and /ɔ/. There are three main diphthongs in American English: /aɪ/, /aʊ/, and /ɔɪ/ (Yavas, 2006 as cited by Luik, 2011 p.5). However, Spanish language only has five vowel phonetic sounds /a/, /e/, /i/, /o/ and /u/. Because it is crucial for L2 learners to speak without L1 accent in order to get an accurate pronunciation, it is necessary to establish if there is a strong correlation between phonetic awareness and the production of a native-like pronunciation.

2.6.1 The importance of phonetics

Any language can be written or recorded mechanically by computers or other electronic devices, however speech remains human encodes because only humans broadcast the language. Humans appear to have specialized neural mechanisms for the perception of speech sounds, in this context, Phonetics is the branch of linguistics that studies the inventory and structure of the sounds of speech (Dobrovolsky, 1997).

Another definition of Phonetics is proposed by Cristal "concerned with the physical manifestation of language in sound waves and how they are produced, transmitted, and perceived, and also "provides methods for their description, classification, and transcription" (2008, p. 363). The different sounds produced by humans are called phones that come from Greek "phone" which means 'sound, voice' or speech sounds. There are a great many speech sounds, but they do not exist in an infinite number. The class of possible speech sounds is finite, and a portion of a set of sound inventory can be found in any human language.

Considering the aforementioned definitions, Phonetics is an important element of pronunciation for English teachers since it provides a considerable amount of guidance in deciding the priorities and degrees in teaching of pronunciation. The aim of the transcription of the sounds of words helps the learners to achieve an accurate pronunciation. In other words, Phonetics is seminal in the teaching of pronunciation because it provides a clear idea of "how the sounds are actually produced" (Ball, 2009. p.2). The explicit instruction of phonetics may help learners to lessen the negative transference of L1 into the production of L2 sounds as was stated in the study of Fouz-González (2019) "This type of instruction can foster improvement in the learners' perception and production of aspects that tend to be fossilized in the interlanguage of advanced learners of English, even after only three hours of instruction" (p.165).

Nonetheless, it is important to highlight the data proportioned by Dobrovolsky (1997) that exist a very wide range of sounds found in human language, (an average of 600 consonants and 200 vowels). The production of any human speech can be done by any one, whether a child or an adult because all human speakers share similar vocal and perceptual capabilities.

2.6.2 The phonetic system of a language

In the field of linguistics, phonetics studies the properties of the sound system of a language as a set of units arranged in an orderly way to replace each other in a given framework (Vrabel, 2009). It contains two systems, or levels segmental and suprasegmental, or prosodic, each of which is a specially organized language system with a certain number of its units. Segmental units are elementary sounds, vowels and consonants, which form the vocalic and consonantal subsystems (Vrabel, 2009). Prosodic units are syllables, rhythmic units, and intonation groups, utterances, which form subsystems of pitch, stress, rhythm, tempo, and pauses.

The sound unit is a medium in which the whole system of language is embodied. Looking upon that segmental and prosodic units seems to form and differentiate units of other subsystems of language, the lexical and grammatical units. The modifications of words and their combination into utterances are the beginning of the sound phenomena. Considering that the grammatical form of a verb can be changed only also changing the sounds which compose them. Furthermore, if there is change of the prosodic structure (intonation) of an utterance then there is a change of the meaning of the utterance.

Because phonetics is a fundamental branch of linguistics, it encompasses the sound system of the language including segmental phonemes, word stress, syllabic structure and

intonation, and embodies the expression level. It occupies equal importance with grammar and lexicology. Phonetics “has two main divisions: on the one hand, phonology, the study of the sound patterns of the languages, of how a spoken language functions as a ”code”, and on the other, the study of substance, that carries the code” affirms Vrabel, (2009). It is necessary to give attention to the role of the linguistic function of phonetic units and how the vocal mechanism acts in producing oral speech including the material form of the languages that is substance.

Human speech is the result of a highly complex succession of events. Everything starts within the brain of the speaker, where the formation of the concepts takes place at a linguistic level; it is here at this stage where there is another field called a psychological area. The process begins when the message formed within the brain is transmitted along the nervous system to the speech organs. The human brain controls the behavior of the articulating organs which effects in a particular pattern of speech sounds. At this point these events are called physiological. The third stage may be called physical or acoustic, because, any communication requires a listener, as well as a speaker, so the last stages are the reception of the sound waves by the listener’s hearing apparatus, the diffusion of the spoken message through the nervous system to the brain and the linguistic interpretation of the information conveyed.

2.7 ENGLISH PHONETICS CHARACTERISTICS

Every language has its own unique phonetic system, where the speech sound is either a vowel or a consonant. English has unique phonetic characteristics. Its phonetic system has 44 sounds, which can be divided into two major categories, consonants and vowels.

In general, the articulation of any consonant sound happens when the air flow is cut off, either partially or completely, when the sound is produced. In contrast, a vowel sound is produced when the air flow is unobstructed when the sound is made. In phonetics, vowel

sounds are the music, or movement, of the language. Due to their articulation characteristics, sounds are produced in a manner called voiced sounds, in the case of English all the vowel sounds and consonants /v/m/n/z/ are voiced.

In the action of speaking, articulators transform the sound into intelligible speech. Depending on their actions, they can be active or passive such that a vocal cord is spread apart, the air from the lungs passes between them without any impediment, is when voiceless sounds are produced. There are different forms of articulation of consonants as it was described in the section of Phonetics*

In consonantal categories there is some restriction of the air flow e.g. :

Anteriors: [p] [b] [m] [f] [v] [θ] [ð] [t] [d] [n] [s] [z]

Are produced in the front part of the mouth (from the alveolar area forward)

Sibilants: [s] [z] [ʃ] [ʒ] [ʧ] [ʤ]

These sounds are produced with a lot of friction that causes a hissing sound, which is a mixture of high-frequency sounds.

For a better understanding of how Phonetics classify the consonant sounds according to what the mouth is doing when they are produced, (manner of articulation) to shed light on this field, Haycraft (1978 pag.57,58).

Bi-labial: When the airstream pushes open the closed lips to form a consonant like p in ‘pet’.

Dental: When the airstream pushes past tongue tip, placed against or between the teeth to form a consonant like th in ‘three’.

Alveolar: When the airstream pushes open a closure between the tongue tip and the teeth ridge to form consonants like t in ‘time’.

Palatal: When the airstream filters through between the raised centre of the tongue and the palate as with y in ‘yet’.

Velar: When the airstream pushes open a closure between the back of the tongue and the soft palate (or velum) as with k in ‘kick’.

Consonants vary depending on where and how the airstream gets through, the place of articulation and movement of the tongue, and also whether the voice is used or not.

Voiced Voiceless: These describe whether the voice is used, (i.e. whether the vocal cords vibrate) as it is in v in ‘vine’.

Plosive: Certain consonants are formed by blocking the air stream and then releasing it suddenly. e.g. with the back of the tongue as in /k/, /g/, with the tongue tip as in /t/, /d/, or with the lips as in /p / and /b/.

Affricate: Here, the airstream is blocked and then released slowly, as in /t and voiced partner /d3/ ‘chain’, ‘Jane’.

Fricative: This describes a sound produced through the friction of the air stream against partial obstructions in various parts of the mouth, as in s in ‘slim’ or th in ‘three’.

Nasal: This applies to consonants which are formed with the soft palate lowered so that the air stream passes through the nose: m as in ‘mat’, n as in ‘not’, and /g / as in ‘song’. Lateral: The only lateral consonant is /l/, as in ‘long’, so-called because the airstream passes at the side of the tongue.

Figure 2

Phonetic Symbols for American English Consonants

Manner of articulation	Place of Articulation						
	Bilabial	**Labiodental**	**Dental**	**Alveolar**	**Palatal**	**Velar**	**Glottal**
stop voiceless voiced	p b			t d		k g	
fricative voiceless voiced		f v	θ ð	s z	ʃ ʒ		h
affricate voiceless voiced					ʧ ʤ		
nasal voiced	m			n		ŋ	
Liquid voiced				l	r		
glide voiced	w				y		

Note: Adapted from Phonetics the Sounds of Language, by Szczegielniak, (n.d) Retrieved from: https://scholar.harvard.edu/files/adam/files/phonetics

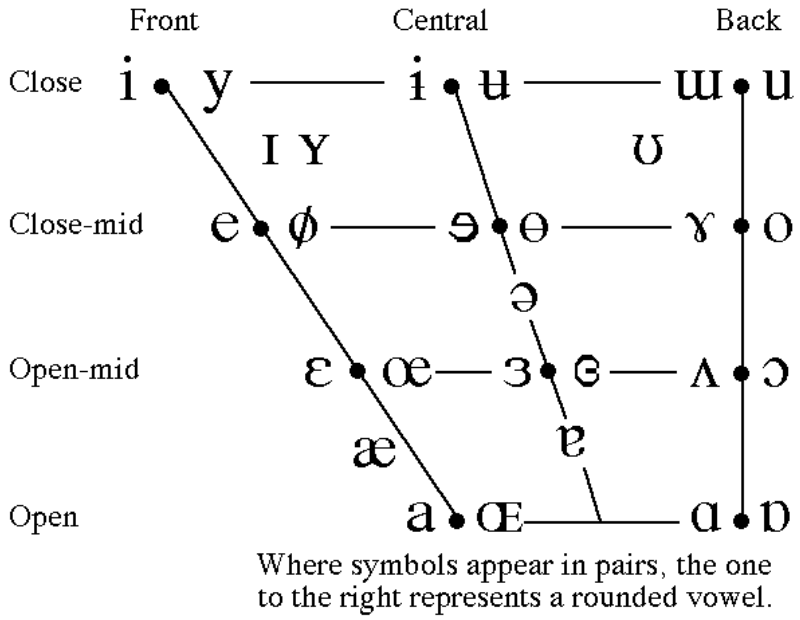
The consciousness-raising that an English learner must acquire is crucial, specially when referring to English vowels, because implies more than just naming the five orthographic vowels (a, e, i,o,u) but identify their phonetic properties, because in the production of vowel sounds there is no contact of the articulators as in the production of consonant sounds. A visible factor of vowels is that eleven of them are stressed (Celce-Murcia, Briton & Goodwing, 1996) and the authors mention that one characteristic of the remaining three vowels are considered diphthongs.

In phonetics vowel sounds can be distinguished from each other by which part of the tongue is involved for example: front, central or back). See table below describing the main manners of articulation of different vowel sounds, keeping in mind that the basic parameters illustrating the movement of the tongue from high front to a low back position,

also rounding the lips are the main articulations associated to vowel pronunciation (Dobrovolsky, 1997).

Figure 3

Tongue Position for English vowels (vowel quadrant)



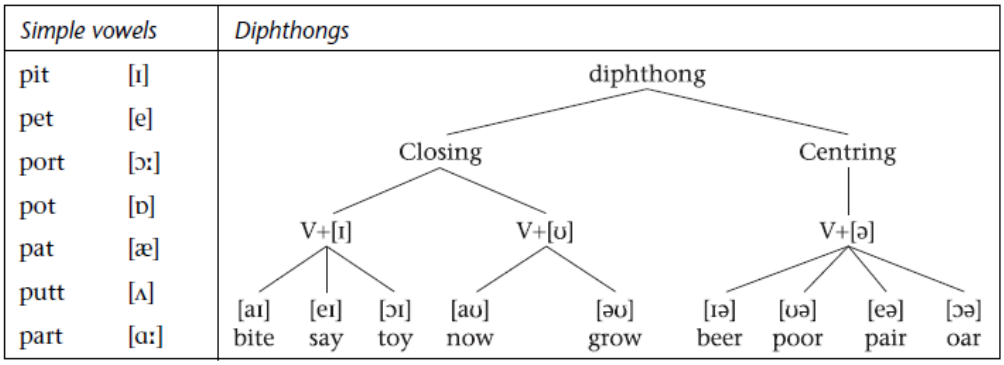
Note: Teaching pronunciation, a Reference for Teachers of English to Speakers of Other Languages by Celce-Murcia, (1996).

Figure 3 shows the position of tongue and its relation with the oral cavity indicating the successive opening of the jaw compared to the position of the tongue. The lip position is described as rounded or spread or neutral, outlining the basic differences between tense and lax vowels (Celce-Murcia, 1996). Another basic parameter of vowels are their major divisions; simple vowels and diphthongs. In the transcription diphthongs of English are considered as vowel glide sequences (Dobrovolsky, 1997).

The following Figure 4 indicates the classification of diphthongs in centring where the highest point of the tongue moves quickly to the center of the mouth combining the vowel schwa /ə/ such a beer /iə/. When closing the articulation of this type of diphthong, it starts with the tongue in a low position and ends up in a high position, either in the palatal area in front of the mouth or at the back of the mouth in the velar area. Words such as bite, "say" or "toy" /seɪ/, /tɔɪ/ . As was noticed in the previous chart words with simple vowels do not end in laxed vowels but sometimes schwa appears /ə/ as in the illustration "simple vowels" or monophthongs section /I/ in "pit" /pɑt/.

Figure 4

Simple vowels and diphthongs of American English



Note: The colon indicates length.

Note: Phonetics by Tasvulatoba, (2017). Retrieved from: https://www.slideshare.net/tleilas/phonetics

Another characteristic of diphthongs combining schwa /ə/ is that is unstressed, also is noticeable that the effect of environment and English regionalism affects the pronunciation of vowel sounds (Celce-Murcia, 1996).

2. 8 SPANISH PHONETIC CHARACTERISTICS

Phonetic System's Characteristics

Spanish has singular phonetic features, its parameters are explained in detail in chart 5, below:

Figure 5
Spanish Phonetic table

	Labial	Labio-Dental	Dental	Alveo-Palatal	Velar	Glottal
Stops	[p] [b]		[t] [d]		[k] [g]	
Affricates				[ʧ]		
Fricatives		[f] [v] [b]	[đ] [s] [z]	[ʃ]	[x] [ɣ]	[h]
Nasals	[m]	[ɱ]	[n]	[ñ]	[ŋ]	
Laterals			[l]			
Semi-Consonants	[w]		[y]			
Vibrants		Tap Trilled	[ɾ] [r̃]			
Spanish Vowels						
	Front		Central		Back	
High	[i]				[u]	
Mid	[e]				[o]	
Low			[a]			

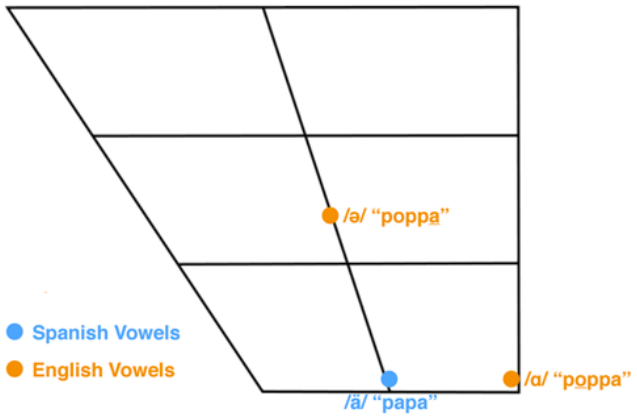
Note: Adapted from: Speech development in Spanish and English, Maez, (1985) Bilinguistics. Retrieved from: https://bilinguistics.com/speech-development-in-spanish.

Vowels

The phonetic inventory includes 5 vowels. In comparison to other languages such as English or Korean, the system does not include diaphones for the diphthongs. Instead, the system includes the respective glides or semivowels of the "weak" vowels ([i] and [u]) which allows it to perform the diphthongs when combined with the corresponding vowels.

Figure 6

The “a” Spanish vowel



Note: Spanish pronunciation: the ultimate guide, by Ness, (2017). Retrieved from: https://www.mimicmethod.com.

Glides

The Spanish phonetic system contains glide sounds that help to form other diphthongs of the Spanish. There are 2 types of glides:

The semivowels [I] and [U], used for the falling diphthongs (vowel+glide).

The approximants [j] and [w], used for the raising diphthongs (glide+vowel).

Weak Allophones

Lenition or weakening is a kind of sound change that alters the consonants, making them "softer" in some way. Lenition occurs especially often intervocalically between vowels, (Fox, 2006). In this position, lenition can be seen as a type of assimilation of the consonant to the surrounding vowels, in which features of the consonant that are not present in the surrounding vowels (e.g. obstruction, voicelessness) are gradually eliminated.

This phenomena affects the pronunciation of Spanish sounds and it is an important occurrence since the evolution from the Latin, and still continues affecting some consonants, particularly the voiced plosives /b/, /d/ and /g/. Those ones in intervowel context are realized as "softer" voiced fricative or approximant allophones.

Voiced stop	→	continuant (fricative)	↔	approximant (spirant)
[b] voiced bilabial plosive	→	[β] voiced bilabial fricative	↔	[β̞] bilabial approximant
[d̪] voiced dental plosive	→	[ð] voiced dental fricative	↔	[ð̞] dental approximant
[g] voiced velar plosive	→	[ɣ] voiced velar fricative	↔	[ɣ˞] velar approximant

/ɲ/ is the sound /ñ/ like in the word “muñeco” /muˈɲeko/.

Taking this into account, the Spanish phonetic system comprises individual phonemes for the softer allophones. Another characteristic of plosive sounds is that are commonly apparent at the beginning of the words, after a nasal consonant like [m] or [n].

Similar situations happen to the English language where aspirated allophones can be interchanged without alter the overall word meaning, varying only by the degree of stress and emphasis of the words. The slow speech pattern inclines to the “severer” plosives while the fast production when speaking tends to favor their “softer” allophones.

Rhotic Consonants

A singular consonant sound of Spanish language is a clear distinction of the rhotics consonants /ɾ/ alveolar tap similar to the “flapped D” in the American English, the consonant for this sound is known as “ere” in the Spanish) and /r/ alveolar vibrate (rolling /r/, known as “erre” in the Spanish).

The alveolar trill and the alveolar tap are in phonemic contrast word-internally between vowels but are otherwise in complementary distribution. In the Spanish orthography, for distinct an intervowel alveolar trill the double R (or ‘rr’) notation is used while a single intervowel “R” always is an alveolar tap.

2.9 SIMILARITIES AND DIFFERENCES BETWEEN SPANISH AND ENGLISH PHONEMES

The sound system of both languages differ according to the theory of speech learning model (SLM) (Fledge, 2005).

Vowels sounds have different articulatory features such as:

Height: It is the vertical position of the tongue with the roof of the mouth or the aperture of the jaw.

Backness: It refers to the position of the tongue during the articulation, relative to the back of the mouth.

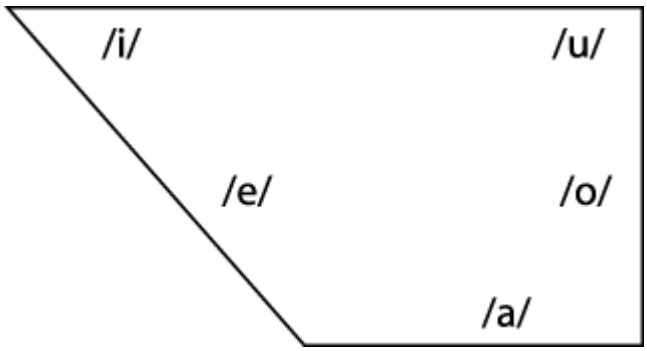
Roundedness: This term refers to whether the lips are rounded or not.

Tenseness: It is used to describe the opposition of tense vowels.

In the case of Spanish has 5 pure vowels and 5 diphthongs. The length of the vowel is not significant in distinguishing between words. Their articulatory feature are represented in the following figure:

Figure 7

Spanish Vowel Position Trapezoid



Note: Adapted from Vowels of Spanish, Social Science Libre text (2019). Retrieved from: https://socialsci.libretexts.org

The Figure 7 illustrates the unique features of Spanish vowel phonemes described above. In contrast with English, it has 12 pure vowel sounds and 8 diphthongs. Spanish vowels maintain two dimensions of height and backness. There is a further dimension that

is useful to understand how languages and dialects differ from one another. This is the degree of lip rounding that accompanies the vowel. In Spanish /u/ and /o/ are the only vowels accompanied by significant lip rounding. In the case of /i/ and /e/ the lips take the opposite position: they are spread.

Additionally, the length of the vowel sound plays an important role in the pronunciation of the phonemes. 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 ship/sheep (Coe, N., Swan, M. & Smith, B. et al, 1987).

Producing English consonant sounds is not so problematic for many Spanish learners, but some of them can be difficult enough, in general they may have problems in the following aspects:

- Failure to pronounce the end consonant accurately or strongly enough ; e.g. [cart] for the English word "card" or [brish] for bridge or [thin] for "think"
- Problems with the /v/, /b/ in words such as "vowel" or "vibe", or "television" because this phoneme differs from Spanish articulatory patterns.
- Difficulties in sufficiently distinguishing words such as see/she or jeep/sheep/cheap

Spanish is a syllable-timed language, therefore, when Spanish speakers transfer the intonation patterns of their mother tongue into English, which is a stress-timed language, the result may sometimes be scarcely 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.

Their length is also always the same, whether they appear at the beginning or end of a word, between consonants, before a double consonant or anywhere else in the word. For example, consider the following vowel sounds in the words:

a. agua (water), academia (academy), abanico (fan)

b. detergente (detergent), especie (species), elemento (element

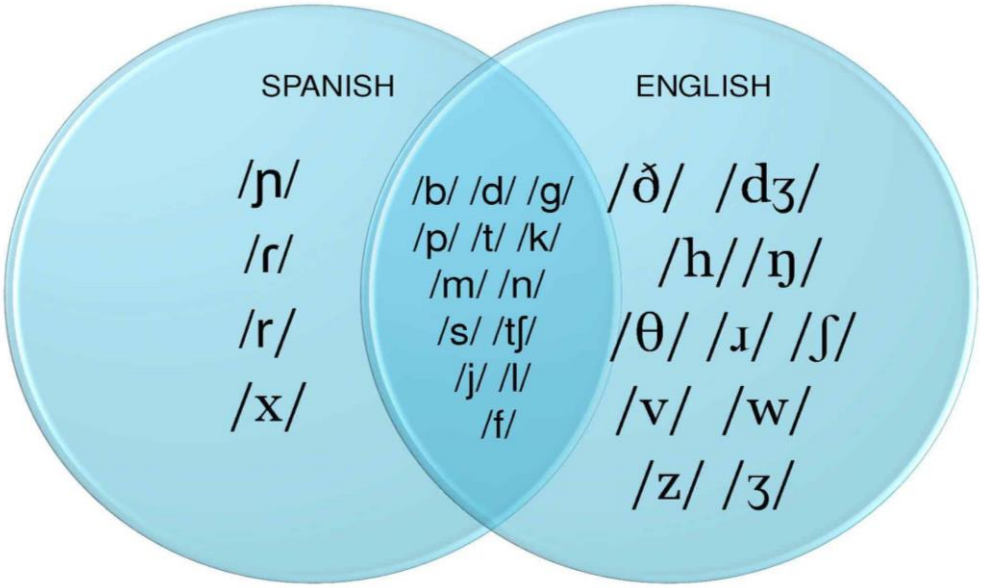
2.9.1. Similarities in the phonetic system of English and Spanish

The following list collects some consonant sounds that are comparable in both phonetic systems. Keeping in mind that when a person speaks a foreign language, they tend to transfer their own phonological system and produce sounds which they have accustomed from their native tongue (Mott, 2011).

- Spanish consonant sounds

Figure 8

Similar Consonant sounds between English and Spanish



Note: Adapted from Articulation Errors and Second-Language Learners, Bilinguistics (Prath, sf). Retrieved from: https://bilinguistics.com

The above graphic is helpful to describe some common or similar consonant sounds between English and Spanish. As result, the English speaker has a lot less to learn in order to produce all of the sounds of Spanish. Certain sounds are approximant, and some of them explained below:

1. /b/ - “veh”, if ‘b’ is located at the beginning of a word or after a consonant, it is pronounced like the letter ‘b’ in English. For all other instances, it is pronounced like a combination of ‘b’. e.g. “**b**arco”, **b**oat.

2. /ʧ /č/ - “che”, represented by the letter combination and pronounced the same in English and Spanish e.g. “**ch**ocolate”, “**ch**ild”.
3. /d/ - “deh”, is represented by the letter and pronounced the same in English and Spanish. Can also sound like the in “the” when it falls between two vowels, e.g. soft /d/ dos, caldo, like in “dog”.
4. /f/ - “effe”, represented by the symbol letter this fricative sound is pronounced the same in English and Spanish. “familia”, “fame”.
5. /g/ - “heh”, represented by the letter /g/. When is pronounced “hard” like in the English word “get.” “gordo”, “gusto”.
6. /k/ - “kah”, this sound is pronounced like in “kite.” , in words such as: king “casa”, “Cuba” que, quince and kilo.
7. /l/ - “elle”, this consonant sound is pronounced the same in English like in “less”. E.g. loco, leche, lobo

8. /m/ - “emeh”, is pronounced the same in English and Spanish at the beginning of words such as mother, e.g. ama, malo
9. /n/ - “eneh”, represented by the letter and pronounced the same in English and Spanish. E.g. no, nothing.
10. /r/ - “ere”, One characteristic of this sound is that when it does not begin a word nor follow a, then it is pronounced by making an /r/ sound while tapping the roof of your

mouth with your tongue. The /r/ sound is very similar to the /d/ sound made by the in "little." E.g. "Oro", "para", "pero".

11. /s/ - "ese", represented by the letter 's'. It is pronounced the same in English and Spanish like in the word "session", e.g. "salsa", and "cinco".
12. /t/ - "I", represented by the letter and is pronounced the same in English and Spanish. "telegram", and "tango".

2.10 SPANISH AND ENGLISH DIFFERENT CONSONANT PHONEMES

There is a big stock of English phonemes different from Spanish phonemes. These variations present difficulties for Spanish English speakers if a sound is not shared by two languages. The types of errors of pronunciation produced or expected by the learners might be 1) delete 2) distort or 3) replace the sound. Let's take a look at a few examples:

1. /v/ (vile) → /b/ (bill) in word initial position, because spelling of the letter /vi/ is pronounced as /b/ in Spanish. Because /v/ doesn't exist in Spanish. Note that Spanish /f/ is acoustically similar to English /v/ except for voicing
2. /z/ (zoo) → /s/ (sign), because /z/ doesn't exist in Spanish and is acoustically similar to /s/. Note that one allophone of Spanish /s/ is similar to /z/ due is a problematic sound for Spanish speakers.
3. /**ð**/ (the) → /d/ (desk). Although /ð/ doesn't exist in Spanish, it is similar to an allophone of /d/ in Spanish. Based on sound imitation and allophone distribution, Spanish speakers tend to use /d/ as a substitute for this sound.
4. / θ/ (**th**igh) → /t/ (till). The voiceless counterpart of /θ/, /th/, is often substituted using the voiceless counterpart of /d/, or /t/.
5. **/r/** (right) → /rr/ (rey in Spanish) in word initial position. Spanish /r/ has two allophones: an alveolar flap /r/, and a tongue tip trill /rr/. /rr/ occurs in Spanish at the beginning of a word.

6. **/s/** → /z/. One allophone in some Spanish dialect of /s/ is similar to English /z/. Moreover, it is common for Spanish speakers to add an /e/ vowel phoneme before the /s/ at the beginning of a word in combinations such /st/ and /sp/, leading to mispronouncing words that start with /s/,

7. **/j/** (you) → /ʤ/ (judge). One allophone of /j/ In Spanish, the letter /j/ is very common pronounced the same way English speakers pronounce the letter /y/. but, it is important to perceive the letter /j/ right, because you might just end up meaning something other than what you intended. For example, if you mispronounce "joke" using the /y/ sound, then people might think you are talking about the yellow part of an egg and have a difficult time understanding what you said /ʤ/.

8. /**ʤ**/ (judge) → /h/ (he), because spelling of the letter /ji/ is pronounced as /h/ in Spanish.

9. Unaspirated /p/ → (pill), might be pronounced like the Spanish sound /p/. Also the sound /t/ for the word (till), /k/ (kill) in word initial position, could be problematic due the difference in pronunciation in L1 (Spanish) phonetic system.

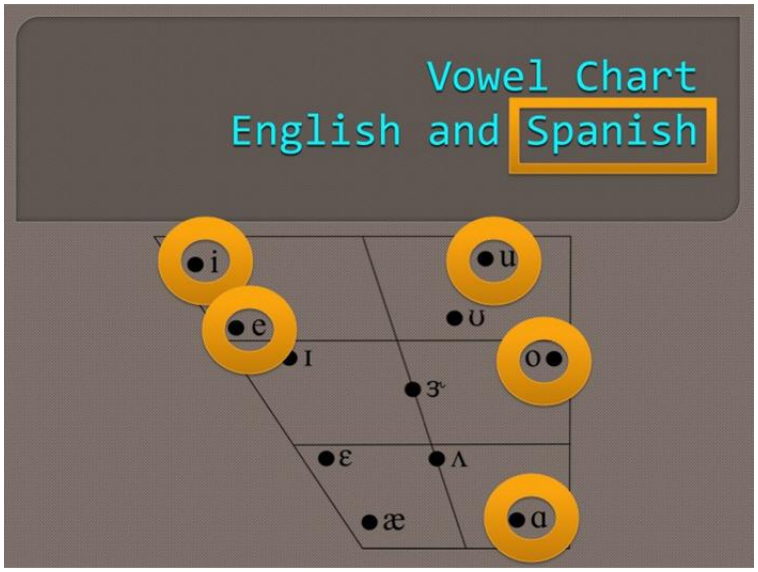
All these consonant phonemes that exist in English but not in Spanish are expected to be more difficult for Spanish speakers to learn, since there is no acoustic phonetic knowledge that can provide a good transfer. Besides difficulty, larger pronunciation variations are also expected. Specifically, these consonants in English have no good Spanish counterparts: /v/, /z/, /jh/, /sh/, /h/, /ð/.

2.11 SPANISH AND ENGLISH DIFFERENT VOWEL PHONEMES

The English sound system has a rich vowel inventory, it has approximately fourteen stressed vowels /i/, /ɪ/, /e/, /ɛ/, /æ/, /ɑ/, /ʌ/, /ə/, /u/, /ʊ/, /o/, and /ɔ/. And there are three main diphthongs in American English: /aɪ/, /aʊ/, and /ɔɪ/ (Celce-Murcia, 2011). On the other hand, Spanish only has 5 vowel sounds as is represented in the vowel chart of figure No7

Figure 9

Spanish and English Vowels



Note: Adapted from Vowel English and Spanish inventory in Bilinguistics. Retrieved from: https://bilinguistics.com/articulation-errors-second-language-learners/

According to Mott (2011) the articulation of English vowels implies that the vibration of the vocal folds begins abruptly and dies away slowly. On the contrary, in Spanish the opposite happens; vocal fold vibration begins gently and stops brusquely if no further voiced segments follow.

The implication is that there are English vowels, especially those syllable-initial ones that are preceded by a glottal stop. There are some errors in articulation speakers of a foreign language do.

2. 12 COMMON ERRORS TRANSFERRED WHEN SPANISH SPEAKERS PRONOUNCE ENGLISH

Pronunciation errors have multiple origins, but one of the most important according to several linguistics is interference or transfer from the first language. When a native

Spanish speaker listens to English, the acoustic signal is analyzed and articulated under the influence of the speaker's Spanish phonetic system. If a sound results similar to the English phoneme, this process is a phonetic level transfer. There are situations when the transfer from mother tongue phonetic realization to the target language's phonetic realization is helpful, but in other cases, the usage of mother tongue acoustic phonetics does not result in a close match to the canonical English phoneme.

This situation is when the production of the new sounds causes understanding difficulties. For example, there is no sound in Spanish that is similar to the short English vowel sound /ih/. When learning to pronounce English /ih/, Spanish /iy/ is usually used by Spanish speakers, spelling English words or writing them from the teacher's dictation, Spanish students may make mistakes with the English vowels a, e, i. For instance, the consonants h, j, r, y may also cause problems, since they have significantly different names in Spanish. In the following chart (Figure 10) there is a list of the phonemes where Spanish speakers have the tendency to make mistakes in their oral production.

Again, it is mandatory to know that a foreign language that is physically similar to that of the native tongue, will not be a problem for the speaker. But what is the case of English? Its phonetic system is diametrically different from Spanish especially in vowel sounds. The next section addresses the most common issues of Spanish speakers of English.

Figure 10

Common English pronunciation errors produced by Spanish speakers

phoneme	Word	Sound distortion	Similar sound
/ɪ/	"sit"	/i:/	"seat"
/æ/	"ran"	/ʌ/	"run"
/ʊ/	"full"	/u:/	"fool"

/ɔ:/	“bought”	/əʊ/	“boat”
/əʊ/	“note”	/ɒ/	“not”
/v/	“vet”	/b/	“bet”
/ð/	“clothe”	/θ/	“cloth”
/d/	“laid”	/ð/	“lathe”
/k/	“come”	/g/	“gum”
/k/	“could”	/w/	“would”
/s/	“rice”	/z/	“rise”
/s/	“mass”	/ʃ/	“mash”
/ʃ/	“sherry”	/ʧ/	“cherry”
/ʃ/	“push”	/s/	“puss”
/ŋk/	“think”	/ŋ/	“thing”
/ŋ/	“thing”	/ŋk/	“think”
silent	“survivor”	/r/	“Sir Ivor”
/j/	“yam”	/ʤ/	“Yan”

Note: Adapted from Common mistakes by language background. Spanish language background. Retrieved from: http://www.tedpower.co.uk/

The chart shows that Spanish speakers articulate the vowel sound /I/ and how it is changed by the /i:/ because the short vowel /I/ does not exist in Spanish, therefore learners struggle trying to produce it assertively. Mott (2011) affirms that even if a second language speaker “perceive some kind of difference, they will probably reproduce both of these phonemes with a variety of their native Spanish phoneme /i/”. Similar situations happen with the vowel sound /æ/, where Spanish speakers automatically distort it into “ran” replacing into /ʌ/ “run” vowel sound.

2.12.1 DELETION OR OMISSION

This error occurs when a sound is left out, because it is too hard to pronounce. The omission of consonants, vowels or diphthong phonemes by second language learners of English is one of the most salient speech errors produced by the students of English as second language. (Flege, Murray & Skelton, 1992).

E.g. “Don’t” becomes “Don”

Reason: No final /t/ because this final cluster is not found in Spanish phonetic system.

/oʊ/

This vowel is classified as a diphthong. This means that the learners have to produce two sounds at the same time, a vowel /ɔ/ and a consonant /w/.

Spanish speakers only pronounce the vowel and leave the consonant out. Their lips do not form a tight circle at the end of the sound as they should. Example: wrote; old; boat; coat; mode; road; showed.

/m/

It is necessary to recall that consonant /m/ is produced by closing the lips and pushing air through the nose at the same time.

Spanish speakers have no problem pronouncing this consonant sound when it's in the beginning of the word as in "**m**aster" or "**m**other" but when this sound occurs in the end of the word, they fail to close their lips. Instead, they only raise their tongue tip up towards the gum producing /n/, example: "cream" /crean/ .

Another big issue in pronunciation is when Spanish learners have to pronounce [th] after /m/ as this requires sticking the tip between the teeth immediately after closing the lips for /m/. Example: "Dream" ; "rhyme" ; "William; "some"; "rhythm" .

/ed/= /d/

The final sound /ed/ when is at the end of the past tense of regular verbs could be problematic for Spanish speakers, because they are habituated to pronouncing letters as they are spelled. However, in English letters can have multiple sounds, and those phonemes can be created in multiple ways (Mott, 2011). For example the past tense of "call" is spelled "called", and is pronounced /kɔld/ however Spanish pronounce "kɔlk" .

Final /s/

This allophone might be a problem because the combination of this fricative /s/ phoneme does not exist in Spanish sound inventory after an unvoiced or quiet consonant. This sound is pronounced as a /s/ in words such as: hats, tops, works, laughs, what's, moths.

2.12.2 DISTORTION

This type of error of pronunciation occurs when the sound is not left out or substituted but it does not sound native-like. The subcategory of speech pattern of distortion occurs when the sound produced by the speaker is not left out or is substituted but does not sound accurate in English. Based on the data from Mott (2011), the Spanish speakers present this sort of mistake in the following phonemes:

Vowel /ɑ:/

The vowel /**ɑ**:/ is also either replaced with /**ɔ**/ or /**ʌ**/ partially due to the learners' confusion with spelling. Spanish learners usually like to chop this vowel sound or shorten them considerably.

In general, Spanish learners fail to stretching long vowels for a better production of the English sounds, e.g. "Robot" /roʊbʌt/; caught /cɑt/ ; call /kɔl/; stop /stɑp/; etc.

/eɪ/ & /aɪ/

Both of these vowels are diphthongs, because neither exist in Spanish vowel sound stock and English learners might struggle to articulate them assertively. It is hard to perform when the vowel occurs between two consonants such as "name" or "wide".

These vowel sounds could be extremely difficult for Spanish speakers as it is for most English learners. E.g**./eɪ/:** Name; date; wait; train; great; same; wage etc. /**aɪ**/: right; fight;

2.12.3 PHONOLOGICAL AWARENESS (SUBSTITUTION)

The definition of *Phonological awareness* involves varied degrees of consciousness (Irnanda, 2018) in which the speaker develops awareness of linguistic dimensional skills, such as syllables or phonemes. This issue of articulation when pronouncing might happen when the learner substitutes one sound into another. Examples:

This /**ðɪs**/ becomes /dis/ Rationale: There is not /ð/ sound in Spanish, so the brain of the speaker chooses the most similar sound from the first language.

The schwa sound /ə/

According to the website Eslan.com (English Speak like a native), English learners "have the tendency to substitute the schwa sound (as in the case of most vowels) for another vowel based on spelling". Spanish learners pronounce the English letters as in Spanish phonetic system.

Unlike English, Spanish letters are written according to their pronunciation, so the learners find it not problematic, the spelling and sound of the language. Since, in spoken English, the schwa **/ə/** sound is the most common vowel phoneme in English, mispronouncing it has a severe effect on the learners' intelligibility.

For example in words such as "available", the first two schwa sounds are represented by letter [a], which is normally pronounced as vowel /a/ or /ɑː/ in Spanish. E.g. Responsible /riˈspɑnsəbəl/; Personality /pɜrsəˈnælɪti/; Vegetables /vɛʤtəbəlz/; stationary /steɪʃəˌnɛri/.

Vowel substitute vowel /æ/ for /a/ or /ɑː/.

These two vowel sounds could be problematic for Spanish speakers when learning English, because they might produce /æ/ as /e/ which is shorter and more relaxed sound (Flege, 1991).

Though **/æ/** is categorized as a short vowel, it sounds slightly longer than the Spanish vowel **/e/** especially before the voiced consonants /b/ and /d/ as the jaw opens

wider and the tongue drops lower inside the mouth. E.g. “and” [ænd], “have” hæv] and “natural” [nætʃɹəl].

Vowels /i/ and /ɪ/.

Spanish learners have the tendency to confuse the vowels /i/ and /ɪ/, because both do not exist in the Spanish phonetic system (Flege, 1991). Usually both vowels are pronounced as a short Spanish letter /i/, which somewhat sounds similar to the Australian vowel /ɪ/. The learners perceive the sound according to Spanish sounds, so they produce this sound when they see the letter [i] regardless of the differences in the target language. E.g. /i/: Need; read; treat; believe; meat; wheel; receipt etc./ɪ/: [Knit]; [rid]; [tit];.

Vowels /u:/ and /ʊ/

Similar situations to the case of /i/ and /ɪ/, Spanish learners confuse the vowels /u/ and /ʊ/ and have great difficulty when they need to identify and produce the long vowel /u:/ due it requires retracting the tongue backwards high inside the mouth.

What learners do automatically when they see the letter [u] is produced a tense /ʊ/ however, it is a lax vowel in English, a sound that is somewhat unusual in the native English inventory. E.g. /u:/ for example in words such as: Room; tooth /tuθ/; food; mood; rude; wooed etc./ʊ/: book /bʊk/; put /pʊt/.

Consonants /z/ and /s/

One of the most frequent errors for Spanish learners is voicing and devoicing to consonant. Quite a significant problem for them is to distinguish /z/ + vowel as in “zero” which is pronounced as /si:roʊ/ but also /s/ + consonant as in “sleep”, which is sometimes pronounced as /zli:p/. This example remains the difficulty for the learners to determine when listening and producing the voice on the final [s] in words such as “please”. Voicing and devoicing consonants is an issue that does not only affect /s/, it also affects /f/ and /v/, as in “of” /ʌv/. Moreover, the above consonants are also omitted from word endings

depending on what comes after them. E.g. /z/: please /pliz/; is /ɪz/; rise /raɪz/; hazard /hæzərd/ ; hazel /heɪzəl/.

Another example of common distortions in the production of English by learners are: /f/ and /v/: as in "five" could be mispronounced "fife" /k/ and /g/: as in "log" and "lock". /tʃ/ and /dʒ/ especially at word endings: "bridge" /brɪdʒ/ could be pronounced wrongly as "breach" /briʧ/, /ʃ/ and /ʒ/: usually ˈ/juʒəwəli/ could lead to "ushully", and phoneme /θ/ and /ð/ in words as "with" might be mispronounced as "width" /wɪdθ/.

2.12.4 ADDITION

Beginning /s/

Spaghetti becomes **E**spaghetti Reason: There is not initial /s/ cluster sound in Spanish.

The speaker adds the vowel /e/ sound at the beginning of the word, e.g. "student", "study". In Spanish these consonant clusters beginning with the letter "S" do not exist. Spanish speakers will often say "es" instead of "s", so we get words like "estop", "estreet", or "estart". Therefore, the learner needs to practice words starting with the fricative consonant sound "s" in English.

2.13 TEACHING PHONETICS

Phonetics is among the most experimental linguistic subjects. The field of study of phonetics uses different branches such as articulatory, acoustic and perceptual; On the other hand, the applicability of phonetic knowledge in the theoretical and experimental areas of our everyday life is obviously a fact and that presence places the phonetics in a prominent place in teaching and learning language process. The didactic considerations of applying phonetics enables the correction of sound production and pronunciation of the language itself, speech therapy and the rehabilitation of speech disorders (Planas, 2007).

The interest in teaching phonetics and its relation with pedagogical issues currently has increased the demand of second language teachers well trained in the field of teaching pronunciation. Following this interest, it is suggested to give importance on practical phonetic skills such as discrimination production, or transcription. Phonetics provides help when it is not easy for adults to distinguish or look for acoustic categories that exist in our language and unintentionally, they do not pay attention to distinctions that are part of the target language, as it was demonstrated with the experiments of the so-called categorical perception (Plana, 2007). However, children are more sensitive to multiple phonic differences, but this capacity disappears as they consolidate their own first language.

Additionally, phonetics sheds light related to pronunciation variation when each word is pronounced with a fixed string of phones, which pronounces the same in all contexts and by all speakers, this area of linguistics explores the knowledge on speech recognition and speech synthesis tasks. Unfortunately, the realization of words and phones varies massively depending on many factors. How can we model and predict this extensive variation? One useful tool is the assumption that what is mentally represented in the speaker's mind are abstract categories.

2.14 ENGLISH TEACHING PROGRAM

The **Universidad Pedagógica Nacional Francisco Morazán** of Honduras is a national institution that governs the training of teachers at the level of higher education, that currently offers a wide range of specialty teaching programs, whose purpose is to train teachers who will contribute to the development and quality of education in the country.

Among these programs is the field of teaching English in the undergraduate degree. It emerged in response to the high level of empiricism among teachers who taught English language in the national education system around 1980. Added to this situation was a high percentage of English-speaking tourists and business flow into the country, which forced UPNFM to use the teaching of English in its national education system. Regarding this

context, the National Pedagogical University Francisco Morazán had the vision that this English Teaching Program was reoriented to respond to the demand of society (UPNFM, 2008).

Through the implementation of the new curricular proposal, the English program will provide each student with the knowledge and tools that will allow him or her to understand his/her present, own social reality, and know himself more and be able to act autonomously and responsible in his daily life. The learner will be motivated to carry out activities related not only to the cognitive (traditional thematic content), but also to the logical and mathematical (schematic or graphic representations), physical (dramatizations). Additionally the visual-spatial (creation of collages), interpersonal (group activities) which imply listening learning experiences, would help the learner to show respect and understanding each other), including intrapersonal (exercises of reflection on themselves) and naturalistic activities that lead to a reflection on the environment and nature.

All this will be addressed through transversal axes. It is expected that in connection with the acquisition and mastery of English, the student will develop critical and reflective skills on how to approach the teaching of English within a monolingual, bilingual and multicultural culture, as is the case of Honduras.

2.14.1 UPNFM Model of Teaching: Competency Based Education

The new globalized times of this twenty-first century, make it imperative that educational institutions aspire to higher quality in higher education. This is the key to governmental and private institutions in achieving competitiveness and individual success. Subsequently, public policymakers, students and business leaders all express a sense of urgency with regard to college policy and practice. This is reflected in the concern over college graduate skills and labor-market demand.

At this point, it is necessary to know the definition of "model of education" which is a synthesis of different theories and philosophical approaches that support the studies program. The models are proposals that explain in an explicit form how the teaching learning-learning process will be developed. The elements of this particular model influences are basically the competencies that the students are going to develop self-conscious about the type of person or professional to be formed.

The challenges that characterize the nature of societies currently emphasize to acquire the elemental abilities so survive in everyday life, hence in the present century the increasing changes requires an education model that develops the capacities of the individuals not just a mechanized instruction. The persons formed by the new instructive approach should be autonomous so they take in the tasks from an innovative view to solve them and go beyond the boundaries of student certification. This autonomy could give insight into how and when to use such competencies.

In talking about capacities, this implies that the learners can use their knowledge in different contexts and develop learning capacities along their life. Even if the knowledge is no longer useful or practical, they must be able to adapt to the changes and solve the problems as an integral aspect of their personality. Students should be able to learn at a variable pace and are supported in their learning. Spady (1978 p.17) mentions that "these capacities represent the essential building blocks of foundation on which competencies rest. Some of these are quite apparent and measurable; others are extremely subtle or even invisible to many people". Thus, teachers, stakeholders and authorities must work together in order to integrate into the curricula different strategies and pedagogical activities so the learners can become a competent professional.

Consequently, this path of educational theory has influence in teaching-learning and assessment methodology. There is another model where the role performed by the teachers

and students is focused on the reflection and the construction of knowledge based on the principles of constructivism.

It considers the model of Education adopted by the UPNFM (Modelo Educativo de la UPNFM, 2014) and is based on competency because currently the demands of the changing societies require creative, proactive and flexible people. In addition, the new professionals should promote the culture of productivity, and leadership among their field of work. Meaning, educationally they should insert in their community with responsibility and moral values. It is a model centered in meaningful and autonomous learning where the student is responsible for their own learning, guided by the teacher as a tutor of the knowledge construction processes, which is related to the contents covered in the subjects.

The foundations of competency-based approaches are grounded on constructivism which integrates current competency approaches. In the words of Serrano (2003) it was initiated in France; it was formed from the nineties and has had wide circulation in Australia, providing great value to formal education and context. This model integrates the contributions of the various schools (functionalist and behaviorist): incorporating the complexity in the combination of knowledge, skills and abilities that come into play in performance; therefore, considers the tasks performed, and attributes that enable a successful performance in different work contexts.

Effective learning resources are available any time and are reusable, according to Block (1978 as cited by Spady, 1978 p. 16) He pointed out that competencies mean “to both succeeding in existing structures and having the ability to create new roles for oneself in response to changing social conditions”. Hence, under a skill based approach, the aim is to provide comprehensive training to the person as a citizen of a country and the world, through new approaches as meaningful learning. In this sense the competencies are not reduced to simple professional performance, not a single appropriation of knowledge to

know-how, but involves a whole set of skills that are developed through processes that lead to the person to be competent in multiple areas: cognitive, social, cultural, emotional, values and professionals.

2.14.2 Pedagogical and philosophical foundation of the teaching of English Program

The transformations of the educational system through the new policies are demanding important advances according to international standards. Based on the National Constitution "*Título III de las Declaraciones, Derechos y Garantías, Capítulo VIII, de la Educación y Cultura,* the Article 151 declares that it is a function of the Honduran Constitution that promotes and guarantee the education, diffusion the culture without any discrimination, laic and based on democracy principles. In this line, the Art. 162. points out the teaching profession has a human and social function determined by the moral and scientific responsibilities. Following this argument, Article.163 declares that it is an exclusive obligation of the government the teaching formation, promoting for educators foundations of management, organization, teach or supervise the educational field and holds the educational profession.

2.14.3 Pedagogic basis of the English teaching Program.

The pedagogic vision of the UPNFM as teacher Trainer College (Curriculum of English Teaching Program, UPNFM, 2008) is to enhance the students' potentials to develop and strengthen their abilities and knowledge, learning to be critical and proactive professionals that can provide solutions to the multiple educational and social problems. In this educational model, the pedagogic structure has been adapted from constructivism because it is a theory that attempts to explain the nature of human knowledge. It assumes prior knowledge is fundamental to the creation of new knowledge and learning is

essentially active so in order for a person to learn something new, he/she must incorporate previous experiences in his/her own mental structures.

From this psychological conception, the teacher of UPNFM, must give his/her prominent role to foster the student-centered education, promoting the learning from experiences, knowledge and interests of learners, enabling new forms of relationship with himself/herself, with the environment, in a process of reflection - action and where both the individual and the social context are transformed.

In this sense, orientation and development of teaching and learning processes are based on learning strategies, teaching and assessment supported in the constructivist teaching method. Trans-disciplinary methods in which scientific criteria are applied and the nature of previous cognitive conditions, along with the human and professional nature including learning theories, psychological and philosophical approaches consistent with the vision and mission of the UPNFM. In the same disposition, when the interdisciplinary approach is implemented, the boundaries are eliminated of work and the constraints of traditional knowledge disciplines towards the organization of cores or blocks of contents.

The relationship between theory-practice in teacher training within the curricular competency model, it must be characterized by a dialectical relationship and should discuss and get feedback in an atmosphere of mutual indissoluble and developed collaboration. Social bonding in teacher training, involves the insertion of the university in society, to promote the creation of spaces for the construction of new knowledge and to strengthen the social function of the university. This is achieved through communication and ongoing interaction with communities. The established extension must come from the curriculum and its implementation should be complemented by research and teaching.

CHAPTER 3

3.1 RESEARCH METHODOLOGY

TYPE OF STUDY

Taking into account that qualitative methods mainly have as goals the "use of a theoretical lens, and the study of research problems inquiring into the meaning individuals or groups ascribe to a social or human problem" (Creswell, 2007, p. 37). This research is a qualitative study since it describes in depth what English phonemes are affected by Spanish sounds in listening and speech production in students of the undergraduate English Teaching Program at the UPNFM campus, Santa Rosa de Copán.

Another element of this qualitative study is gaining insight and discovering the depth, richness, and complexity of the situation (Guba, & Lincoln, 1998) of a particular interlanguage context in this western region of Honduras. Thus, this study explores the intricate elements of learners of English when producing in an intelligible way the sound system patterns of this language, as Latorre (1996) explains qualitative studies contribute to the "...understanding of the complex world of human experience: how people live, experience, interpret and construct the meanings of the social world, and how they are integrated into the culture, language and actions", (p.197).

3. 2 METHOD OF STUDY

The primary purpose of this study is to describe the reality and relationship with the particular phonetic and phonological characteristics of the students from the undergraduate English Program that are affected by Spanish sounds in their English listening and speech production. This is in accordance with intrinsic case studies research exposed by Stake (1995) "…such vivid experiences related to language is a unique understanding that are properly studied by research case approaches" (p.16).

Describing language interference phenomenon, Spanish L1 affects the phonological awareness on English students. It is also a characteristic that is associated to case studies (Yin, 2008) exposing evidence of the effects in their communicative competencies. Our purpose is to make a reflexive appropriation of that significant experience. Moreover, this research describes in depth the unique and complex situation related to the phonological production of English phonemes experienced by a group of students that are studying English at UPNFM at Santa Rosa de Copán Campus. The aspects mentioned above are congruent with the purposes of this research method (Stake, 1995).

Conventionally, case studies allow a way of reaching true meaning through penetrating deeper into reality, (Yin, 2008), as we do in this context related to the phonetic situation. It was necessary to undertake the steps arising from the established procedures, considering that the results of this study have not the intention to be generalized (Maikut & Morehouse, 1994).

3. 3 CONTEXT OF THE STUDY

A study of the transfer of Spanish sounds onto English phonemes in students of English was conducted at the Universidad Pedagógica Nacional Francisco Morazán, Santa Rosa de Copán campus. This teaching university is in charge of teachers´ training. The regional UPNFM opened its educational services in 1986, starting with the modality of distance program (Centro Universitario de Educación a Distancia CUED). Currently, this university campus offers a wide selection of programs intended to train teachers in different fields of knowledge.

The undergraduate English Program started in Santa Rosa de Copán in 2014 in the on-campus modality aimed to provide an advanced level of English. It is also combined with theories and methods to teach a second language including innovative pedagogic

strategies to strengthen the professional competences of the graduates of the UPNFM. Many students are well motivated through the use of these teaching techniques.

The study took place between the third quarter of 2018 and the first quarter of 2019. It started in September of 2018 and lasted around 6 months just for the data collection. It is important to mention that this research may provide the bases for future research projects related to this important component of foreign language acquisition process in the context of Spanish speakers of the western region of Honduras.

3. 4 SUBJECTS AND PARTICIPANTS

The subjects who participated in this study were chosen from the group of students of the advanced levels of the undergraduate English Program. In order to selected for the study, the participants must comply with the following criteria:

1. The participants would be in the advanced cohort because it is obvious they have already achieved a high level in English.
2. The subjects should have taken the phonetics and phonology courses, so that they were conscious about the existence of the different English phoneme's patterns.

Besides the criteria mentioned above, the participants were invited to be part of the study voluntarily. According to the criteria of case studies, this investigation study was conducted with 10 advanced students of the undergraduate English Teaching Program.

Their academic background is diverse as well, and three of them are elementary school teachers with previous teaching skills and the rest are not related to the teaching field. Most of the participants came from the rural area of the Departments of Lempira, Copán, and Ocotepeque and the border with El Salvador.

A unique characteristic of all the participants is that they were part of the most advanced cohort registered in the English Program at UPNFM. Additionally, they had already taken courses such as linguistics, phonetics, and phonology.

3.5 ETHICS OF THE STUDY

The information collected by means of the different instruments during the study was used exclusively for the research purposes and was not disclosed without the authorization of the participants.

3. 6 RESEARCH INSTRUMENTS AND TECHNIQUES

This section of the research provides a detailed description of the instruments used to collect the data and how they were created to accomplish the objectives established for the study. The design of the instruments followed the criteria for case studies methodology, to match the proposed theoretical categories in order to obtain effective results.

A panel of experts collaborated in the process of validation of the design of the rubrics for the video and interviews. These instruments were created by the researcher in May of 2018. They were validated using the expert judgement and tested with a group of 15 students by the month of June of the same year. Changes and adaptations were made after the test and gave the rubrics the final format. Validation process ended in November, 2018.

Documental Analysis

The application of documental analysis as methodological strategy for qualitative research data source in qualitative is targeted because it requires the examination and interpretation of books, brochures, diaries, journals and videos in order to elicit meaning with the purpose to develop empirical meaning (Bowen, 2009). Within this broad it was appropriate to use interviews, the video recordings used were specifically recorded while students read a selected text. Furthermore, video recordings were selected, because they suit the needs of case studies design as is mentioned by Stake (1996). Video allows

recording the exact words expressed by the participant to detect with image and sounds the unique characteristics of phonetics articulation of each individual (Flege, 1995).

For the purpose of this study, the main instrument was the video, for the processing of the video we used Prism, a video software. The researcher recorded the participants while they read the text designed by Celce-Murcia, Brinton, and Goodwin, (1996), in order to assess speaking skills and phonological transfer when producing English sounds. This research instrument had many benefits as opposed to traditional observations, because it captured much of the data allowing a retrospective and in depth analysis, compared to the use of old-style research tools.

The researcher designed a set of rubrics to analyze the videos. This complementary tool allowed to identify the elements collected during the reading sessions. These rubrics contain a textual transcription of the reading text; additionally, the expert, a native speaker, transcribed the phonetic production of the participants. Once all transcribed, we analyzed them using the categorization defined in the study trying to record the unique pronunciation errors.

This tool facilitated assessing a student's reading and speaking performance by systematically evaluating their oral reading and pronunciation competencies, (Ross, 2004). We compared the results of the rubric to the IPA (International Phonetic Alphabet), gathering participant's articulation of a wide variety of English sounds and the respective pronunciation made by the participants.

Interviews:

To accomplish the objectives of this study, we administered an interview assisted with open ended questions guide. By this means, we collected information to study the phonological awareness of English phonemes. The interviews were conducted along with

the videos to facilitate the constant comparison between the student pronunciation and phonetic articulation of the texts used for this purpose (Yin, 1994). The interview was conducted addressing the knowledge of phonetics.

3. 7 ORGANIZATION OF THE DATA

Matrices

The information from the instruments prepared to collect data from the students is written down and organized in matrices (LeCompte, 1990) according to each category and their subcategories making a comparison and analysis in order to reach the objectives of the study.

According to the researchers Leech & Onwuegbuzie, (2007) Comparison and Contrast using codes is a technique that works by identifying the themes, "arguments, or assertions developed from the codes [which] are accurately describing their statements" (p. 565). In this triangulation procedure, the expert native speaker could identify the most common Spanish phonemes that affect the oral production of English phonemes and fulfill the second specific objective of this research. To analyze the data from the video recording followed a process of making a comparison and contrast of the students' pronunciation to the accurate pronunciation using a rubric from the IPA (International Phonetic Alphabet) of the written text. This method of phonetic articulation analysis was performed with the aid of a native speaker expert who listened to the audio component of the footage.

Coding

Coding is a way of indexing or categorizing the text in order to establish a framework of thematic ideas about it Gibbs (2007). In this study, the researcher codified the data according to the main categories expressed in the objectives of the study. The information from the interview was organized and classified in codes within matrices, doing a triangulation through a constant comparison with the data of the video recordings.

Categories

The broad categories of the present study are described below to facilitate the analysis of the English linguistic patterns produced by the students of the English Program from the UPNFM campus Santa Rosa:

- Phonetic discrimination
- Phonetic contrast
- Student's phonemes production
- Consonant phonemes symbols (IPA)
- Vowel phonemes symbols (IPA)
- Speech sounds symbols of
- Spanish (IPA)
- Phonetic knowledge

These elements were used to classify some common pronunciation errors done by the students, and they were displayed using the IPA transcription in each column of the matrix. Their IPA knowledge in the interview was revealed and connected to their accurate pronunciation in the reading record.

CATEGORIES OF ANALYSIS

This table 1 helped to organize the categories and sub categories to collect the data and results found in the study. This table helped the analysis of the findings between the different elements of the oral productions of the students and their pronunciation and how the transfer of Spanish phonemes occurs when they produce English phonemes.

Table 1

CATEGORIES OF ANALYSIS

THEME	CATEGORY	SUB-CATEGORIES	INSTRUMENTS
PHONOLOGICAL AWARENESS	Phonetic discrimination Phonetic contrast	English phonemes -Substitution	Video Reading text Rubric
STUDENTS' PHONOLOGICAL TRANSFER	Student's phonemes production	-Deletion -Distortion -Addition -Place of articulation -Manner of articulation	Reading text (Celce-Murcia) Rubric Video
STUDENTS' KNOWLEDGE OF THE PHONETICS OF BOTH LANGUAGES	Consonant phonemes symbols (IPA) Vowel phonemes symbols (IPA) Speech sounds symbols of Spanish (IPA) Phonetic knowledge	IPA (International Phonetic Alphabet)	Interview

Matrices to show the data collected

To analyze the textual information from two instruments, the data was transcribed from the text of the rubrics and organized into tables, codified according to the categories and subcategories, providing a reliable procedure comparing each category proposed and the new ones that could emerge during the process. Each category included is grounded on the principles and theories of interlanguage and phonetic discrimination.

A matrix is defined as "a set of numbers or terms arranged in rows and columns; that within which, or within and from which, something originates, takes form, or develops" (Averill, 2002, p.856). In this qualitative data analysis, a matrix involves the search for relationships among categories and examining how they are related to particular theoretical concepts e.g. phonetic patterns, and language acquisition.

3.8 STRATEGIES OF DATA ANALYSIS

The process of analyzing the data collected was conducted using constant comparisons and triangulations concentrating specifically on the three main categories: phonological awareness, students' phonological transfer and students' knowledge of the phonetics of both languages and the subcategories: Substitution, addition deletion, Distortion, Place of articulation, Manner of articulation Additionally, the important emergent elements were added to the study and analyzed as due. This organization of the data facilitated the comparison and contrast between and among participants and instruments.

Constant Comparisons

Their pronunciation, the phonemes and their manner of articulation were compared according to the International Pronunciation Alphabet (IPA), also the students' pronunciation was contrasted along with the chart of phonemes, plus the analysis of a native speaker.

Triangulations

The researcher analyzed the videos and the interview in order to identify those English phonemes according to International Phonetic Alphabet (IPA) where students have difficulties pronouncing assertively.

The information resulted from the interview was compared with the effectiveness and accurate pronunciation recorded in the rubric created for each participant. During the comparison, we considered their knowledge in phonetics in association with phonological awareness skills. This meant that the interviews were conducted to collect data related to student´s pronunciation and phonetic articulation. At the end of the data collection process, all of them: the video of the assigned text, participants' phonetics articulation, and

interviews about phonetics knowledge were integrated to obtain effective data that is joined to the purposes of this investigation (Stake, 1995).

CHAPTER 4

ANALYSIS

The organization and analysis of the information gathered from the different instruments are presented according to the order they were applied to the students. First, the analysis of the video reading record for overall degree of perceived foreign accent (FA) by native English-speaking listeners making a transcription of the phonetic production of the students following phonetics patterns:

4.1 STUDENTS' PHONOLOGICAL PATTERNS FROM THE VIDEO

The students' phonological patterns were identified after an exhaustive analysis of their pronunciation. Therefore, students were asked to read a selection retrieved and adapted from the text by Celce Murcia (2011) in order to identify issues in students' pronunciation. The reading recording text was exclusively prepared to provide a playback that includes the smallest details in pronunciation patterns, accuracy, and understanding. The text was divided into 19 lines to facilitate the identification of each phonological pattern per participant. The information collected from the video recordings was accurately classified along with the objectives of this study considering the acoustic examination to verify students' accurate pronunciation in English it was classified according to:

Deletion: Considering that a learner intends to produce a sound that does not exist in the native language, it could occur that the learner deletes or replaces the sound with another similar sound from the L1 language repertoire, causing considerable strain for the listener (Gildersleeve-Neumann, C. , Peña, E. , Davis, B. & Kester, E., 2009).

Distortion: This situation happens when the learner could not pronounce assertively, they attempted to make the sound, but it was misarticulated producing an overlapped, distorted or added sound which does not belong to English (Preston & Seki, 2011) but are sounds borrowed from the Spanish phonetic system, or pseudo words that are non-existent words which bear some resemblance to English.

Substitution or Phonological Awareness: This mispronunciation pattern leads the learners to constrain the ability to pronounce assertively the sounds of English. The non-native speakers or English change or substitute one English phoneme into another one, changing the assertive pronunciation of words (Selinker, 2011).

4.1.2 ANALYSIS OF DELETION ERRORS PRONUNCIATION

Table 2

Interpretation and Analysis of Participant's common deletion errors

COMMON DELETION ERRORS											
WORDS	IPA TRANSCRIPTION	STUDENT'S PRONUNCIATION	AFFECTED PHONEME	PARTICIPANTS									
				(P)1	(P)2	(P)3	(P)4	(P)5	(P)6	(P)7	(P)8	(P)9	(P)10
recognize	/rɛkəg˛naɪz/	[rɛkənaɪz]	/g/	●	●	●	●	●	●	●	●	●	●
Accent	æksɛnt	æsɛnt	/k/	●	●	●			●	●		●	●
Just, lot, can't, won't	/dʒʌst/	[ʒʌs]	/t/	●	●	●	●	●	●			●	●
mastered, hard,	/mæstərd/,/hɑrd/	[hɑr], [mæstər]	/d/		●	●	●		●	●			
linguistics,	/lɪŋˈgwɪstɪks/	[lɪŋgwɪstɪk]	/s/	●	●				●	●	●	●	●

The results for the subjects under the sub category of *Deletion* errors, in the case of participant 1, shows that the most salient issue is the omission of the consonant sound /**g/** in the word "recognize" /rɛkə**g**naɪz/, producing a wrong pronunciation such as [rɛkənaɪz]. This sound was also deleted by 8 of the participants in that word. The possible explanation for this salient omission is that this sound is not very common in the inventory sounds of Spanish. Another stop ending consonant phoneme **/t/** is consistently omitted by participant 1 in words such as "not" and "accent" saying [æsɛn] instead. This is one of the major

issues of pronunciation patterns of Participant **2** in words such as "won't" and "accent" which were mispronounced as [woʊn] and [æksɛŋ].

Undoubtedly this may occur because this phoneme does not exist as an ending sound in the Spanish phonetic system. This phonetic error was also done by participant 3, in words "lot", /lɑ**t**/ saying [lo], and "can't" /kæn**t**/. Participants 4 and 5 omitted the final consonant sound /t/ in the word "just" /ʤʌs**t**/. In addition, many participants (P1, P2, P6, P7, P8, P9, P10) deleted the fricative alveolar sound /s/ in words such as "linguistics" and "accents" saying in its place /lɪŋgwɪstɪk/. Similarly, participant 7 mispronounced the word "address" /ædrɛs/ deleting the final fricative consonant sound /**s**/, saying [ædrɛ] instead of /ædrɛs/.

Another pertinent deletion error is in the case of the word "accent" where the tendency of seven participants who made an elision of the phoneme /**k**/ /æ**k**sɛnt/. The explanation for this phonetic issue is maybe due to the rare existence of this consonant sound in Spanish. It is interesting to observe in the tables that another common deleted sound is the ending sound /d/ in the words such as "old" and "hard", where these subjects did not pronounce this phoneme; this pattern in speech production arises because these sounds do not exist in Spanish and the end of the words, so students transfer their innate pronunciation pattern into English phonemes (Gorman & Stubbe, n.d.). It was noticed that student 2 and participant 3, P4, P6 and P7, did not pronounce the ending /**d**/ phoneme in the words /riˈpɔrtəd/, /hɑrd/ /mæstərd/, and some omitted the ending sound /ed/ in the word /riˈpɔrtəd/. These two sounds belong to the formation of the English past tense revealing that this verb tense is still an issue for these participants. The *Deletion* errors made by these participants are due to the influence of the Spanish phonetic system as is noted in the table above because those sounds do not exist in the mother tongue. Therefore, the learners are unable to produce them if there is not excellent phonetic training.

4.1.3 UNIQUE DELETION ERRORS PER PARTICIPANT

The unique deletion errors done by the participants are many. The following data reveals those words that were affected with the deletion of phonemes.

Table 3

Participant 1 unique deletion errors (P1)

Words	IPA Transcription	Student's pronunciation	L2 affected phoneme
Change	ʧeɪnʤ	[ʃeɪn]	/ʤ/
Theories	θiəriz	[tiəri]	/z/
And	ænd		[and]

(See complete table on annexes section Table 1 p.125)

In the case of Participant 1 (P1) analysis of recording shows that consonants sounds were affected the most. This table exhibits the particular and unique deleted errors of subject 1 who did the omission of the fricative consonant sound **/ʤ/,** in the word "change" because this is also a unique sound that belongs exclusively to English intonations**.** This participant also omitted complete words during the reading, for example, the word **"and."** However, it is important to mention that vowel phonemes were not omitted by this participant.

Table 4

Participant 2 unique deletion errors (P2)

words	IPA Transcription	Student's pronunciation	L2 affected phoneme
to	tu	[ʌv] (of)	/tu/
without	wɪθaʊt	wɪaʊt]	/θ/
mastered	/mæstərd/	mɪster	/æ/,/ərd/
another	/ənʌðər/	[**ʌðər**]	/ən/

(See table on annexes section, Table No.2 p.126)

This table shows the unique sub category of *Deletion phonemes* of Participant 2. The audio video revealed that she deleted completely the word "to" and said "of" [ʌv] "of" instead. In the case of the fricative sound /θ/ inside of the word "without", this student omitted that sound, saying [wɪaʊt]. This student also deleted the vowel sound /æ/, producing instead the vowel /I/, saying a different word "mister".

Table 5

Participant 3 unique deletion errors (P3)

Words	IPA Transcription	Student's pronunciation	L2 affected phoneme
Young	/jʌŋ/	[ʤʌ]	/n/
recognize	/rɛkəgnaɪz/	[rɛkəneɪns]	/eɪns/
Noticed	/noʊtəst/	[notɪs]	/oʊ/

(See table on annexes section Table 3. p.127)

In the case of Participant 3 (P3) are found in the word "recognize" /rɛkəgnaɪz/, where he made a weird pronunciation saying [rɛkəneɪns], changing completely the ending sound of the word /eɪns/. Another salient pattern of pronunciation of this participant is that did not pronounce the middle /k/ sound in the word /accent/ the 6 times the word appears in the text, generating an erroneous pronunciation of [æsɛnts]. Is interesting to notice another unique deletion error of this participant in the sound "young", /jʌŋ/ eliminating completely the sound /n/, which resulted in a wrong [ʤʌ], demonstrating the tendency to transfer the phonetic system of Spanish into English sound system.

Table 6

Participant 4 unique deletion errors (P4)

words	IPA Transcription	Student's pronunciation	L2 affected phoneme
learning	/lɜrnɪŋ/	[lɜrn]	/ɪŋ/

(See table on annexes section, Table 4. p.128)

The unique and significant results of participant 4 in Deletion errors of pronunciation patterns is that this student omitted the ending sound **/ɪŋ/** in the word, "learning", **/lɜrnɪŋ/** pronouncing another word **[lɜrn].** Displaying problems to reproduce those phonemes that are different from Spanish sound system. However, this student only made 6 deletion errors in English production.

Table 7

Participant 5 unique deleted errors (P5)

Words	IPA Transcription	Student's pronunciation	L2 affected phoneme
just	/ʤʌst/	[ʤos]	/ʌ/ /t/

(See complete table on annexes section, Table 5 p.129)

In the sub category of *Deletion errors*, participant **5** made few errors of this type. Participant 5 did show omission of the vowel phoneme /ʌ/ in the word "just" /[ʤos] producing the Spanish vowel /o/ and deleted the ending stop /t/ sound in the same word. It's evident that is necessary to keep teaching phonological awareness to the students due they transfer vowel sounds into English pronunciation.

Table 8

Participant 6 unique deletion errors (P6)

words	IPA Transcription	Student's pronunciation	L2 affected phoneme
learn	/lɜrn/	[lɜ:r]	/n/
linguistics	/lɪŋgwɪstɪks/	[lɪgwɪstɪk]	/ŋ/

their	/ðɛr/	[ðɛɪ]	/r/
will	/wɪl/	[wɪ]	/l/

(See table on annexes section Table 6. p.130)

The unique acoustic analysis from the category of *Deletion errors* for participant **6** brings out another set of phoneme articulation that is frequent among Spanish speaker, as is noticed in table 8, the deletion of the ending sound /n/, in words such as "learn" was done exclusively by this student in this word. Additionally this speaker omitted the middle consonant nasal sound /ŋ/ in the word "linguistics." It was observed through the acoustic analysis that this student omitted the rhotic consonant phoneme /r/ in words such as "their" and "speaker," producing mispronounced words ([ðɛɪ] and [spikɑ]). The sound of verbs in past tense was also a problem, for example, in the word "reported" the participant omitted the phoneme for /əd/, indicating a case of lack of knowledge of how to pronounce English phonemes, however the deletion of the same sound was done by other participant in another word.

Table 9

Participant 7 unique deletion errors (P7)

words	IPA Transcription	Student's pronunciation	L2 affected phoneme
most	/moʊst/	[most]	/ʊ/
native	/neɪtɪv/	[naɪtɪv]	/eɪ/
influences	/ɪnfluənsɪz/	[ɪnfluənsɪ]	/z/

(See the complete table on annexes section, Table 7 p.131)

The acoustic analysis under the category of *Deletion errors of phonemes,* the table from participant 7, illustrates that the prominent pronunciation errors are in the vowel sound /ʊ/ in the word "most" saying [most] which is an Spanish accented English pronunciation. In addition to this error, this participant changes the vowel sound /eɪ/ in the

word “native” /neɪtɪv/ changing into [naɪtɪv]. In the word “influences” this participant omitted the fricative consonant sound /z/, revealing the necessity of developing awareness on English pronunciation.

Table 10

Participant 8 unique deletion errors (P8)

words	IPA Transcription	Student's pronunciation	L2 affected phoneme
habits	/hæbəts/	[æbət]	/h/, /s/

(See table on annexes section Table 8. p.132)

The outcomes in the category of *Deletion errors* show a detailed analysis of the audio and videos for participant 8. They revealed one unique deleted error in the pronunciation of the word “habits” the student omitted the beginning fricative glottal consonant sound /h/ and the ending sound /s/. These two deleted sounds reveal interference, since these sounds do not exist in the Spanish phonetic system.

Table 11

Participant 9 unique deletion errors (P9)

words	IPA Transcription	Student's pronunciation	L2 affected phoneme
Identify	/aɪdɛntəfaɪ/	[ɪdɛntəfaɪ]	/a/
a	/ə/		/ə/
accurate	ækjərət	[æku:rət]	/j/

(See the complete table on annexes section Table 9. p.133)

The marks that emerged from the acoustic analysis in the category of *Deletion* of the student's phonological transfer indicate that this student still has the same deletion error in the pronunciation of the word "accent", as other participants. The article "a" was omitted during the reading. The glide /j/ sound also was not pronounced in the word "accurate." This is a remarkable problem from this speaker. The deletion of these phonemes hides the interference of Spanish phonetics, because these sounds are difficult to be produced by several learners of English as in the case of participant 9.

Table 12

Participant 10 unique deletion errors (P10)

words	IPA Transcription	Student's pronunciation	L2 affected phoneme
influences	ɪnfluənsɪz	[ɪnfluəns]	/ɪz/

(See the complete table on annexes section Table 10, p.134)

The data from participant 10 in the category of *Deletion errors* mainly reveals that this participant only did the omission of the phoneme /ɪz/ in the word "influences." This situation may happen because this sound attempts to be confused with the ending sound of the phoneme /s/.

4.2 DISTORTION AND ADDITION PRONUNCIATION ERRORS

The acoustic analysis under this category emerged when the native speaker listened while making an exhaustive examination of the videos. The common distortion and added phonemes are when the students could not pronounce assertively, they attempted to make the sound, but it was misarticulated producing a distorted or added sound which does not belong to English but are sounds borrowed from the Spanish phonetic system, or pseudo words that are non-existent words which bear some resemblance to English.

Table 13

COMMON ADDITION OR DISTORTION ERRORS

COMMON ADDITION OR DISTORTION ERRORS												
WORDS	IPA TRANSCRIPTION	STUDENT'S PRONUNCIATION	AFFECTED PHONEME	ADDED PHONEME	PARTICIPANTS									
					(P)1	(P)2	(P)3	(P)4	(P)5	(P)6	(P)7	(P)8	(P)9	(P)10
Arabic	/ærəbɪk/	[arəbɪk]	/æ/		●		●	●	●	●	●	●	●	●
the, that	/ði/	[di]	/ð/		●	●	●				●	●	●	●
they	/ðeɪ/	[deɪ]	/ð/		●	●	●					●	●	●
pronunciation	/prənʌnsieɪʃən/	prənunsieɪʃən	/ʌ/		●	●	●	●	●	●	●	●		●
just	/ʤʌst/	[ʤos]	/ʌ/		●	●	●	●	●	●	●	●		●
native	neɪtɪv	[natɪv]	/eɪ/		●						●	●	●	●
Spanish	spænɪʃ	[espænɪʃ]		/e/	●	●	●				●			●
theories	/θiəriz/	[tiəriz]	/θ/		●	●	●				●			●
learn	/lɜrn/	[ler]	/ə/			●	●		●		●	●		
notice	noʊtəst	nɑtəst	/oʊ/		●		●						●	●
country	/kʌntri/	[kʌuntri]		/u/				●		●	●			
individuals	/ɪndəˈvɪʤəwəlz	ɪndəˈvɪduəlz]	/ʤ/ /əw/				●	●	●	●		●	●	●
accurate	ækjərət	[ækjurei]	/ərət/									●	●	●
theories	/θiəriz/	[θioriz]		[o]					●	●				
of		[ʌf]		[ʌf]			●						●	
their	/ðɛr/	ðɛɪr]		[ɪ]				●	●	●			●	

In the sub category of *Distortion or addition* errors, the acoustic analysis made by the native speaker based on the video record of the 10 participants indicates that the vowel sound /**æ**/ was misarticulated in words such as "Arabic" /**æ**rəbɪk/. It is interesting that 9 of the10 participants articulated the Spanish vowel sound /a/, instead of the unstressed vowel sound /**æ**/ producing a distorted articulation of the word represented in the table as [**a**rəbɪk]. This same vowel sound was affected in the pronunciation of the word "France" /fr**æ**ns/ mispronounced as [fr**ei**ns] (P3, P4). Another vowel sound that was mispronounced was the short vowel /**ʌ/**, found in words such as "pronunciation" /prənʌnsieɪʃən/., The result proves that 9 of 10 participants could not articulate assertively that vowel, instead they produced a sort of the Spanish vowel /u/ or /o/ as is described in the phonetic transcription under the column Student's pronunciation [prən**u**nsieɪʃən].

In the case of the consonant sound /ð/ which is found in the word “that”, the” /ði/ [di] “they” /ðeɪ/ the speakers said [deɪ] /ð/. The outstanding distortion error occurs in the fricative dental consonant phoneme /ð/ from the words “they” /ðeɪ/ and “the” /ði/. These were pronounced with a borrowed sound /d/, from Spanish. The same situation was reproduced with the consonant /θ/ from the word “they” /ðeɪ/. That consonant was changed also to the /d/ Spanish consonant sound.

Also the majority of the subjects mispronounced the same vowel sound in the word “just” /ʤʌst/ where the vowel sound /ʌ/ was distorted into /o/ producing a weird result [ʤos]. This error is due to the difficulties students have in their listening perception and production of this English vowel phoneme, because these sounds do not exist in the phonemic system of Spanish. Related to this issue, Helman (2004) mentions that Spanish vowel system is much simpler than the English one. This difference makes more difficult for language students to perceive or pronounce new phonemes of a foreign language.

There is also another salient distorted sound pronunciation that has an influence of Spanish phoneme in the word “their” in which 6 participants changed the dental consonant /ð/ into the Spanish phoneme /d/ mispronouncing it as [deir]. This situation is explored by Flege asserting that Spanish native speakers present perceptual basis (1995). A salient mispronunciation was found in the word “native”, in which 5 students changed the correct pronunciation, of the diphthong /eɪ/ /neɪtɪv/ saying different pronunciations such as [natɪv] (P1), (P7), (9), [naɪtɪv] (P10) and (P7), resulting in a wrong pronunciation of that English sound.

The commonalities of table 13 show another persistent error done by 5 participants: The addition of phonemes, for example, in those words that begin with the fricative consonant /s/ such as “Spanish” /spænɪʃ/ “the participant added the Spanish vowel /e/ before the consonant /s/. This resulted that words such as “speak” /spik/ were pronounced as [espik] (P1, P2, P3, P7, P10) “Spanish” [espænɪʃ], and “speakers” /spikərz/ as [espikərz] leading to a fossilized Spanish sound like speech pattern. Regarding this issue,

Best and Tyler (2007) have mentioned that speech perception and therefore production of a language is affected substantially by the phonological inventory of the native language (L1).

Concerning to the sound /θ/ which is found in words such as “theories” /θiəriz/ it was pronounced by changing the phoneme into the Spanish stop consonant sound /t/ saying [tiəriz], in the case of the word “without” /wɪˈθaʊt/ the participants changed into a Spanish dental sound /**d**/ [wɪdoʊt] was distorted by 5 participants (P1, P2, P3, P7,P10) . The common error found in the vowel sound /**ɜ**/ learn /lɜrn/ was that many participants confused this phoneme with the Spanish vowel /e/ so they said [ler] (P2, P3, P5, P7 and P8). This issue is explained by Boomershine (2013) suggesting that exist a cross-language speech perception and this leads to pattern English sounds in a sort of Spanish vowel sound.

Vowel sounds were a common salient pronunciation issue in this sub category, because some participants mispronounced the vowel sound /ʌ/ in words such as “country”/kʌntri/ producing a wrong phoneme transcribed as [kʌuntri] adding a new phoneme that it does not exist in the English pronunciation of that word, the phoneme was a /u/ a Spanish like vowel sound.

The analysis of table 13 reveals that vowels were a persistent problem for many of the participants, because in the case of the diphthong sound /oʊ/ found in the word “notice” /noʊtəst/ they produced a distorted pronunciation transcribed as [nɑtəst] (P1, P3, P9, P10). Why did they change it? Selinker mentions that the learner “has thus created a new construction in his interlanguage English” (2011, p.2).

The acoustic analysis of the video recordings addresses that the affricate consonant /ʤ/ which is found in words such as “individuals” /ɪndəˈvɪʤəwəlz/ is not according to the incorrect pronunciation [ɪndəˈvɪduəlz]. This error was done by most of the participants (P3, P4, P5, P6, P8, P9, P10) as it is noticed the learners substitute the phoneme /**ʤ**/ into the Spanish consonant phoneme /d/ and in the case of the word “changed” /ʧeɪnʤd/ the

participants deleted that consonant sound as it is represented in the transcription [ʃeɪnəd] (P8).

Similar characteristics of pronunciation were found with the phoneme /ərət/ in the word “accurate” /ækjərət/ [ækjur**ei**] (P9), (P10) the speakers changed the phonemes into [ækjər**eti**] (P8), these phonemes do not exist in English, the participants did a cross-language articulation of those phonemes and are not an assertive pronunciation (Boomershine, 2013).

Something unique was done by 2 participants in the word “theories” /θiəriz/ in which they added the vowel phoneme [o] causing a not assertive pronunciation [θiə**o**riz] (P5, P6) this vowel sound belongs to the phonological system of Spanish. It is also interesting that 2 participants changed completely the pronunciation of the word “of”, because they switched into the fricative labiodental consonant sound /f/ as is described in the transcription [ʌf]. This error is due to pronunciation of the consonant in Spanish of the letter /f/ but in English this word is pronounced /**ʌv**/. In the case of the word “their” /ðɛr/ some participants added the Spanish vowel sound [**ɪ**] resulting in a not accurate pronunciation [ðɛ**ɪ**r].

In conclusion, the results of table 13 shows how difficult is for the native speakers of Spanish to produce the English sounds accurately. The preservation of foreign accent is often considered as a phenomenon that persists even after years of L2 use (Park, 2015. p.23).

4.2.1 UNIQUE DISTORTION AND ADDITION PRONUNCIATION ERRORS

Table 14

Participant 1 unique distortion or addition errors (P1)

words	IPA Transcription	Student's pronunciation	L2 affected phoneme	Added Phoneme
mastered	/mæstərd/	[mæsterɪd]	/ərd/	
good	/gʊd/	gud]	/ʊ/	
to		[tu]		[tu]

(See the complete table on annexes section Table 1, p.125)

The results for participant 1 indicate that this subject added the word "to" **[tu]** that it was not in the original text. Adding words may indicate that the student still struggles when reading in English (Grabe, 2009). It is interesting the transfer of sounds that this participant did when she pronounced the word "good" /gʊd/ because this subject said [gud] affecting the articulation of the vowel sound **/ʊ/** presenting a feature of articulation as near-close near-back vowel (Mott, 2011). Considering that Spanish has only 5 vowels sounds, Spanish speakers may pronounce this vowel /**ʊ**/ sound as the Spanish vowel /**u/.** Therefore, the duration differences of English vowels are an important element of articulation to be considered when learning English phonetic system (Garita, Gonzáles & Perez, 2019).

Table 15

Participant 2 unique distortion or addition errors (P 2)

words	IPA Transcription	Student's pronunciation	L2 affected phoneme	Added Phoneme
foreign	/fɔrən/	[fɔrti]	/ən/	
ear	/ir/	[hear],	/i/	/h/
desire	/dɪˈzaɪər/	[dɪˈzai]	/ɪər/	
sounds	/saʊnd/	[saums]	/ʊnd/	
without	/wɪθaʊt/	[gɪθaʊt]	/w/	
issue	/ɪʃu/	ɪʃus		[s]
to	/tu/	[ʌv] (of)		/ʌv/
of	/ʌv/	[fɔr] (for)		/fɔr/

(See the complete table on annexes section Table 1, p.126)

As to the results of the acoustic analysis from the video recording of participant **2** in the subcategory of *Distortion and added phonemes* in L2 pronunciation, the table indicates several errors in consonant sounds produced by this student. The native expert highlighted specially the word "ear", it was pronounced as the word [**h**ear] adding the phoneme /h/. Another problematic sound for this participant was found in the word "desire" /dɪˈzaɪ**ər**/ the subject changed the ending phonemes **/ɪər**/ pronouncing an awkward [dɪˈz**ai**]. This may be because this student does not know how to pronounce it assertively. In the word "sounds", the problem with pronunciation was interesting because this participant changed completely the English pronunciation, producing sounds that do not belong to none of the phonetic system of both languages e.g. [saums]. In the case of "issue" the student added the phoneme /s/, [ɪʃu**s**]. Adding phonemes is a case of lacking awareness in pronunciation as is stated by Celce-Murcia, (2011).

There were unique cases where the student completely changed the pronunciation of words like in the case " to" /tu/ which was pronounced as (of) [ʌv] and the word "of" was confused with the word "for" [**fɔr**]. This is the category where this participant made the major changes in the phonetic articulation of English. These last errors of confusing words are evidence of reading and pronunciation issues (Kelly, 2007).

Table 16

Participant 3 unique distortion or addition errors (P3)

words	IPA Transcription	Student's pronunciation	L2 affected phoneme	Added Phoneme
lot	/lɑt/	[lo]	/ɑ/	
lots	/lɑts/	[lots]	/ɑ/	
mastered	/mæstərərd/	[mæstərɪd]	/ərd/	
recognize	/rɛkəgnaɪz/	[rɛkəneɪns]	[aɪz]	
when	/wɛn/	[gwɛn]		[**g**]
accent	/æksɛnt/	[ænsɛnt]		[**n**]

The table 16 of *Distortion and added phonemes* for participant 3 exhibits unique errors patterns, for example: in vowels the most problematic was schwa /**æ/**, from words

"lot," she changes in the pronunciation of these words where different results create wrong sounds like [l**o**] omitting the phoneme /t/ and changing the vowel sound /ɑ/. The participant is speaking Spanish vowel sounds to overcome the lack of knowledge of how to pronounce those phonemes correctly, maybe due her perception of the English sounds (Flege, 1995).

Changing completely the pronunciation of certain word is another unique problem for this participant e.g. the word "mastered" and "recognize" were mispronounced as [mæstə**rɪd**] and [rɛkən**eɪns**], indicating that this participant displays the characteristic Spanish transfer because attempts to pronounce following Spanish phonetic system. This is an example how the influence of Spanish phonetic system is affecting the proper pronunciation of English (L2) phonemes. Similarly, changing the sound /**w**/ for Spanish /**g**/ in the word "when" resulted in [**g**wɛn], is an indication of the occurrence of L1 transference as was demonstrated by Selinker in the Interlingua theory (2011).

Table 17

Participant 4 unique distortion or addition errors (P4)

words	IPA Transcription	Student's pronunciation	L2 affected phoneme	Added Phoneme
children	ʧɪldrən	[ʃɪldrən]	/ʧ/	
theories	θiəriz	θioriz	/ə/	

The results for participant 4 indicate major issues in production of the vowels /**ə/**, in "theories" and the consonant phoneme /**ʧ/** in the word "children" /**ʧ**ɪldrən/ the student changed those phonemes resulting in the mispronunciation [**ʃ**ɪldrən] because the words with these vowels were changed into a kind of Spanish sounds. These errors in pronunciation demonstrate that L1 Spanish speakers present difficulties recognizing the slight differences among English vowel sounds and try to substitute what they hear using a vowel sound in the range of the 5 Spanish vowel sounds.

Table 18

Participant 5 unique distortion or addition errors (P5)

words	IPA Transcription	Student's pronunciation	L2 affected phoneme	Added Phoneme
ear	ir	[er]	/i/	
children	/ʧɪldrən/	[ʃɪldrən]	/ʧ/	

The pronunciation issues found on the acoustic analysis of participant 5 confirm the tendency to substitute vowel sounds of English with Spanish sounds. For example in the word "ear" /ir/ the vowel /**i**/ was changed into [**e**r]. Also, this subject substituted the initial consonant /**ʧ/** into one similar /**ʃ**/ sound. Probably because this sound is more similar to the /ch/ sound that exist in the phonetic system of Spanish, which was mentioned in the study by Morrison in 2006 "Since L1-Spanish listeners already have L1 vowel [consonant] categories in the spectral dimension, this impedes their ability to form L2 categories on the basis of the distribution of the spectral properties in the L2 input" (p.14).

Table 19

Participant 6 unique distortion or addition errors (P6)

words	IPA Transcription	Student's pronunciation	L2 affected phoneme	Added Phoneme
speaker	/spikər/	[spikɑ]	/ə/	

In the sub category of *Distortion of added phonemes*, the data collected from the video recording of participant 6, reveals her problems with both consonant and vowel sounds. This participant distorted the changing the pronunciation of both words completely. Another interesting thing happened in the word "individuals", which marks the evidence of the interference of L1 sounds in the production of L2 phonemes. The rest of the words were

mispronounced by adding Spanish vowel sounds as is displayed in the chart (Morrison, 2006).

Table 20

Participant 7 unique distortion or addition errors (P7)

words	IPA Transcription	Student's pronunciation	L2 affected phoneme	Added Phoneme
without	/wɪθaʊt/	[wɪθoʊt	/a/	
desire	/dɪˈzaɪər/	dɪzeɪər	/a/	
sound	/saʊnd/	[sond]	/aʊ/	
an	/ən/	[an]	/ə/	
theories	/θiəriz/	[θioriz]	/ə/	
when	/wɛn/	[gwɛn]		[g]

The evidence shown in the table 20 for Participant 7 indicates a wide range of errors in pronunciation of vowels and consonants. It was noticeable that the student changed the following vowels /**ə**/, in the words "theories" and the word "an" /**ə**n/ pronouncing them as [**a**n] and [θi**o**riz]. In the case of the diphthong /**aʊ**/ from the word "without" /wɪθ**a**ʊt/ the vowel phoneme /**a**/ was changed as [wɪθ**o**ʊt] and "sound" /s**aʊ**nd/ was mispronounced as [s**o**nd]. This pattern is prevalent in the word "desire" /dɪˈz**aɪə**r/ where this participant changed the pronunciation into a wrong [dɪz**eɪə**r]. This phenomenon was hypothesized in past studies such as Boersma & Escudero, (2004) Flege, (1995) & Morrison, (2006), that it happens due to the spectral vowel sounds of English that are perceived as Spanish vowels by English L2 learners. All in all, this indicates serious deficiencies in vowel recognition at the moment of producing English phonemes.

PARTICIPANT 8

Participant 8 displayed different common errors of distortion, but she did not make particular errors of the addition or distortion category.

Table 21

Participant 9 unique distortion or addition errors (P9)

words	IPA Transcription	Student's pronunciation	L2 affected phoneme
from	frʌm	[fɔr]	/frʌm/
theories	θiəriz	[θeoriz]	/iə/
exposure	ɪkspoʊʒər	[ɪkspuʒər]	/oʊ/
mastered	mæstərd	[mæstəred	/rd/
to		[da]	/tu/
does	dʌz	[dʌd]	/z/
desire	/dɪˈzaɪər/	[desire]	/zaɪər/

The acoustic analysis of participant **9**, in the sub category of *Distortion and added phonemes* reveals constraints in the pronunciations of combination of phoneme sounds in English, as is indicated in the words: "from"/frʌm/ because it was changed into [f**ɔr**]. In the word "theories" /θiəriz/, the phoneme /iə/ was switched into the Spanish vowel sound, /**o**/ [θe**o**riz] because this subject read the word in within the Spanish phonological system.

Additionally, there exists the propensity to add the vowel sounds /rd/ to the word "mastered", which results in a wrong articulation of the ending /**ed**/ phoneme. Another particular distortion occurred with participant **9;** she added a word that was not in the original text, as is highlighted in the table with the word "to" that were articulated erratically as [**da**]. It's relevant to say that many words were pronounced following Spanish patterns, like in the case of "does," and "desire" that was read according to the Spanish phonetic system [de**sire**] as is described in the table above. This empirical evidence shows that Spanish speakers of English may assimilate the peripheral English sounds into the range phonetic group of Spanish phonological system (Morrison, 2006).

Table 22

Participant 10 unique distortion or addition errors (P10)

words	IPA Transcription	Student's pronunciation	L2 affected phoneme	Added Phoneme
can't	/kæn/	[ken]	/æ/	
mastered	/mæstərd/	[mæstered]	/ərd/	
the	/ði/	[ðɛi]	/i/	
why	/waɪ/	[gwaɪ]		[g]
a		[ə]		/ə/
exposure	/ɪkspoʊʒər/	[esporʊʒər]		/e/

The outcomes from the acoustic analysis of participant 10 indicate a range of errors in articulation of the words graphed on the table. The vowel sounds /**æ**/ in the word can't /k**æ**n/ pronouncing instead [k**e**n]. This subject also failed in the pronunciation of the word "mastered" because the transcription reveals that it was pronounced following the phonetic system of Spanish [mæste**red**]. In the addition sub category, this student added the consonant /g/ in its Spanish pronunciation with the word "why" producing a wrong articulation with Spanish interference [**g**waɪ]. Another unique error was the addition of the phoneme /a/ [ə] because this word was not in the assigned text. This poor performance in pronunciation of English is connected to the results of other similar studies in Venezuela and Canada where Spanish learners of English have difficulties perceiving and producing English sounds (Hernández, Gonzáles & Algara, 2011; Morrison, 2006).

4.3. SUBSTITUTED ERRORS OR PHONOLOGICAL AWARENESS

This sub category is considered one of those elemental components applicable for all language learners because it implies the ability to pronounce assertively the sounds of English. The following charts expose the data collected related to the category of *phonological awareness* as evidence of how these participants changed or substituted one English phoneme into another one, changing the assertive pronunciation of the words.

Table 23

COMMON PHONOLOGICAL AWARENESS ERRORS

words	IPA Transcription	Student's pronunciation	Affected phoneme	PARTICIPANTS									
				(P)1	(P)2	(P)3	(P)4	(P)5	(P)6	(P)7	(P)8	(P)9	(P)10
you, young	/ju/	[ʤu]	/j/	●	●	●	●			●	●	●	●
accent, is	/æksɛnt/	æksɛŋ]	/n/		●								
in	/ɪn/	[ɪs]	/n/										●
children	/ʧɪldrən/	[ʃɪldrən]	/tʃ/				●				●		

Analyzing the commonalities within the type of *Substitution errors or phonological awareness*, this sub category is important to highlight the changes in sounds a speaker makes, for example, in the word "young" /**j**ʌŋ/ and "your" /**j**ɔr/ where the majority of the participants changed the English phoneme /**j**/ into [ʤ] resulting in a mispronunciation [ʤʌŋ] and [**ʤ**ɔr].

The students changed the phoneme **/j/** into [**ʤ**], because the letter /**y**/ in Spanish has an affricate sound so they pronounce as if were a Spanish sound. This is a clear example of the negative effects of interlingua on learners of English (Selinker, 2011). However, the letter /**y**/ (IPA symbol **/j**/) is a semivowel palatal sound but in Spanish the letter /**y/ (**IPA symbol **/y/)** has an affricate velar sound.

However, there are few similarities in the pronunciation of English sounds that the participants mispronounced. In the case of the phoneme /**n**/ was changed by participant 10 in the word "in" was changed completely into [ɪs], and the same phoneme was affected in the word "accent" /æksɛ**n**t/, [æksɛ**ŋ**]because it was changed by another similar English phoneme.

4.3.1 UNIQUE ERRORS OF SUBSTITUTION OR LACK OF PHONOLOGICAL AWARENESS

Table 24

Participant 1 unique phonological awareness errors

words	IPA Transcription	Student's pronunciation	L2 affected phoneme
noticed	/noʊtəst/	[nɑtaɪz]	/əst/
this	/ðɪs/	[ðis]	/ɪ/
is	/ɪz/	[ɪv]	/v/
first	/fɜrst/	[fɪərt]	/ɜ/
just	/dʒʌst/	[ʒʌs]	/dʒ/
accurate	/ækjərət/	[əkwaɪər]	[aɪər]

The Substitution errors or phonological awareness of Participant No.1 indicates the substituted phonemes that the speaker changed in the word "notice." The change of the phoneme /ai/ resulting in a wrong [nɑtaɪz] and the phoneme in color blue indicates that it was pronounced incorrectly according to the IPA pronunciation. There is one interesting situation because this participant completely changed the pronunciation of the word "accurate" into [əkwaɪər]. This is a common distorted sound that requires special attention by the teachers.

The lack of phonological awareness of this participant comes out in the constraint in pronunciation of the words "is" by changing the ending consonant sound /z/ into /v/ producing a wrong [ɪv] which may happen because there is a lack of perception of English sounds, this situation is mentioned by Cutler as a poor "sensitive of phonetic contrast" (2002, p.3). Similar situation happened with the word "this", where the speaker 1 changed the vowel sound /ɪ/ into /i/, this situation is mentioned by Morrison "L1-Spanish listeners had a greater preference for using vowel duration differences to perceptually distinguish English /i/ and /ɪ/ (2006 p.38). This result was also replicated by Escudero & Boersma (2004). The same phenomena happened in the word "first" with the substitution of the vowel /ɜ/ emerging a non-assertive [fɪərt].

In conclusion, this participant did several errors of substitution because she still needs to develop her capacity to discriminate the slight range of variation in the perception and production of English phonetic system (Park, 2015).

Table 25

Participant 2 unique phonological awareness errors (P2)

words	IPA Transcription	Student's pronunciation	L2 affected phoneme
another	/ənʌðər/	[ʌðər]	[ʌðər]
older	/oʊldər/	[ʌðər]	[ʌðər]
influences	/ɪnfluənsɪz/	[lɪn fluəns]	/z/
sound	/saʊnd/	[sɔŋ]	/nd/ /aʊ/
system	/sɪstəm/	[sɪstəɳ]	/m/
applied	/əplaɪd/	[əˈplais]	/ɪd/
the	/ði/	[de]	/i/
belief	/bɪˈlif/	bɪˈlis]	/f/
their	/ðɛr/	[ʌðərs]	/ðɛr/
French	/fræns/	[frɛnʧ]	/æns/

The sub category of *Phonological awareness* of participant **2**, exhibited several phonemes changed in the words from the reading record. One phoneme that is problematic is in the words "older" and "another" because both words were mispronounced as [ʌðər] causing a misunderstanding in communication. There were many words where this participant changed the last or middle sound for example in the word "influences" /ɪn fluənsɪz/, the speaker changed the consonant phoneme /z/ into /s/, maybe because this is the most common ending sound in Spanish for the grapheme /s/, instead of being aware of the proper pronunciation of the word.

On the other hand, we have the word "accent" where the phoneme /n/ is changed into [ŋ]. A similar situation happened with the word "sound" where the student substitutes the /n/ into /ŋ/. Similar substitution happened with the word "system" and its ending sound /m/ being replaced by [n]. Another example of sound that was transferred is in the word "the" **/ð/** being substituted with the sound **[d].** The velar nasal /ŋ/ phoneme was replaced by the Spanish **/n/** in the words "system" and "young". This particular pronunciation is due to

the influence of Spanish (L1) consonant sounds into English (L2) phonemes. This case reveals that probably this speaker is not quite well trained in phonological awareness to be able to produce English phonemes accurately (Park, 2015).

Table 26

Participant 3 unique phonological awareness errors (P3)

words	IPA Transcription	Student's pronunciation	L2 affected phoneme
noticed	/noʊtəst/	[notɪs]	[ɪ]
learn	/lɜrn/	[lær]	[æ]
individuals	/ɪndəvɪʤəwəlz/	[ɪndəvɪduwəls]	[s]
changed	/ʧeɪnʤd/	[ʃeɪns]	[s]

In the data analysis for *Phonological awareness* belonging to participant 3, it shows that this student has problems with vowel sound in words such as "noticed". The participant changed completely the pronunciation of that word to [n**o**t**ɪ**s]. In this word, the student changed the vowel sound ***/ə***/ into the sound /**ɪ/** . There was also a significant change in the word "learn" because the vowel ***/ɜ***/ was changed into the vowel [**æ**]. Another relevant error of lack of phonological awareness by this participant was the substitution of consonant sounds like in the word "changed" that was replaced by [**ʃ**eɪn**s**] affecting the consonants /**ʧ/, /ʤ/,** and **/d**/ as is observed in the table. In that word alone, this speaker made three phoneme changes, emphasizing a poor knowledge of phonetic articulation.

Table 27

Participant 4 unique phonological awareness errors (P4)

words	IPA Transcription	Student's pronunciation	L2 affected phoneme
of		[ʌv]	/tu/

This participant made few substitutions or *Phonological awareness* on English sounds, however, substituted the word "of". In this case, the participant changed the sound completely into an inexistent word "too" /tu/. This data indicates that this student changed words completely nor only vowel or consonant sounds as is exhibited in the chart.

PARTICIPANT 5

This participant only made one substitution sounds similar to the rest of the participants and these ones were described on table 23. This is also an evidence of how difficult it is for the students to discriminate vowel sounds in English. This is because they have not developed phonological awareness yet.

Table 28

Participant 6 unique phonological awareness errors (P6)

words	IPA Transcription	Student's pronunciation	L2 affected phoneme
individuals	/ɪndəˈvɪʤəwəlz/	[ɪndəvɪdəu:əlz]	/w/
or	/ɔr/	[ɔf]	/r/
at	/æt/	[ær]	/t/

The analysis of pronunciation from participant 6 shows flaws in vowels in one single word: "individuals". Another important error in the articulation is the complete change of the word "or" turning it into [ɔf]. Also this speaker failed when changing the ending sound /t/ of the word "at" /æt/ resulting in a wrong [ær]. Even though this participant made very few errors of substitution, still it is proof how difficult it is for learners of English to be aware of the intricate phonetic system of English.

Table 29

Participant 7 unique phonological awareness errors (P7)

words	IPA Transcription	Student's pronunciation	L2 affected phoneme
several	/sɛvrəl/	[siverəl]	/ɛ/
native	/neɪtɪv/	[nɑtɪv]	/eɪ/
system	/sɪstəm/	[sɪstəŋ]	/m/

In the sub category of Phonological Awareness, the data shown in the table reveals that this student's major issue is in the word "native." There was a substitution of the vowel phoneme /eɪ/ for [ɑ] as is exhibited in the table. The change to vowel sounds continue with the word "several" where the phoneme /ɛ/ was substituted with the Spanish vowel phoneme /i/. This participant definitely showed a high transference of L1 (Spanish) in the production of L2 (English) phonemes.

PARTICIPANT 8

The data from Participant 8 indicates errors of substitution shared with the other participants particularly with /ʧ/ in the words such as "change" and "changed." These consonant phonemes were substituted for the [ʃ] consonant sound. This happens because of a lack of phonological awareness of the learner. Following this pattern, the student also changed the beginning sound in the word "you" /j/ into to English the palatal voiced consonant sound [ʤ].

PARTICIPANT 9

The most remarkable sound error of this student in the sub category of *Phonological awareness* is the substitution of the consonant /j/ with the [ʤ] in the words "your," "young" and "you". This error of pronunciation reveals that the real cause of this error in pronunciation is the transfer of Spanish because the sound of the letter "y" is pronounced

similarly to English the palatal voiced ***/ʤ/***, which is a consonant sound that it does not exist in Spanish.

PARTICIPANT 10

In the case of **participant 10,** the major error of substitution is in the words that begin with "y" such as in the words "you", "young" and "your". As it was explained before, this error is due to a transfer from L1, Spanish consonant palatal sound /y/ being substituted by the affricate voiced consonant sound ***/ʤ/***.

In conclusion, the analysis of the video recordings revealed that the most salient subcategory was the distortion and addition phonemes, because the majority of the participant modified an English phoneme or added a phoneme like in the Spanish phoneme /e/ before the initial consonant /s/ e.g. Spanish, Speaker. These elements may happen because the students need to develop phonological awareness because syllable and word shapes differ markedly between Spanish and English (Gildersleeve-Neumann, C. ; Peña, E. Davis, B. & Kester, E., 2009).

4.4 ANALYSIS OF THE INTERVIEW ABOUT PHONETIC KNOWLEDGE

The category of *Phonetic knowledge* was done through an interview to assess participants' phonetic awareness. In each question students had to provide phonetic transcription of both vowel and consonant in English. The findings revealed in the table have shown that the participants have low knowledge of how to distinguish the articulation of English phonemes and they do not understand the importance of the English phonetic system in assertive pronunciation. This instrument is very valuable because it makes a connection of the student's knowledge about phonetics with the video reading records and the results presented in the charts. These findings highlight the following outcomes represented on table No.2:

Table 30

Students Phonetics' knowledge

Students phonetics' knowledge

Rubric Interview

		PARTICIPANTS									
CATEGORY	**ITEM NO.**	**P-1**	**P-2**	**P-3**	**P-4**	**P-5**	**P-6**	**P-7**	**P-8**	**P-9**	**P-10**
Phonetic Knowledge	**1**	C	PC	C	PC	C	C	C	I	I	I
Consonant Phonetic knowledge	**2**	PC	I	I	I	C	I	I	I	I	I
Vowel Phonetic knowledge	**3**	PC	PC	PC	PC	C	PC	C	C	PC	I
Vowel Phonetic knowledge	**4**	I	PC	I	PC	C	I	PC	I	PC	I
Consonant Phonetic knowledge	**5**	I	I	PC	C	C	I	I	C	PC	I
Consonant Phonetic knowledge	**6**	C	PC	I	I	PC	I	C	C	PC	C
Vowel Phonetic knowledge	**7**	I	I	C	I	C	I	C	I	PC	PC
Consonant Phonetic knowledge	**8**	C	C	I	C	PC	C	C	C	I	PC
Consonant Phonetic knowledge	**9**	PC	C	I	PC	C	I	C	PC	PC	I
Phonetic Knowledge	**10**	C	I	PC	I	I	I	I	I	I	PC
Phonetic Knowledge	**11**	PC	PC	C	C	C	C	I	C	C	I
Phonetic Knowledge	**12**	C	C	C	C	C	C	I	C	I	PC
Results in Total	**PK**	C3, PC1, I-0	C1, PC1, I1	C3, PC1	C2, PC1, I1	C3, I1,	C3, I1	C1, I3	C2, I2	C1, I3	C1, PC2, I2
	CPK	C2, PC3, I1	C2, PC2, I2	C0, PC2, I4	C2, PC2, I2	C4, PC2	C1, PC1, I4	C3, I3	C4, PC1,I1	PC4, I2	C1, PC1, I4
	VPK	C0, PC0, I2	PC1, I1	C1, I1	PC1, I1	C2	I2	C1, PC1,	I2	PC2,	PC1, I1

CODES	
(TC)	Totally Correct
(PC)	Partially Correct
(I)	Incorrect

The interpretation of this Table reveals the 12 questions and the codes that are assigned according to their answers. If the participant's reply is correct, the code (c). If the answer is partially correct, the code is (PC). But in the case that the participant provided an incorrect answer the code is (I). Each color facilitates the location of the total of their answers.

Participant **No.10** has the least knowledge about consonant and vowel transcription because he only correctly answered 2 out of 12 questions. At the same time this participant had one of the highest occurrences of errors of pronunciation in the category of *Distortion* and *Added phonemes* in the video recording; he made 19 faults and omitted 12 consonant phonemes.

Participant **No.9** was also one of the lowest scoring in assertiveness when answering the questions of the interview because she only gave one correct response. These results are associated with the outcomes of the video recordings, where this participant exhibited many occurrences especially in the category of *Distortion* and *Added phonemes* (Spanish interference) with 19 occurrences. This indicates a correlation between low knowledge of phonetics and problems with pronunciation of English phonemes.

Participant No. 2 also had poor outcomes in the category of phonetics knowledge, because this student only had four correct answers out the twelve questions. Problems arose especially in the subcategories of vowel and consonant transcription and describing elements of phonetics and their correlation to the proper articulation of English phonemes. These findings are closely correlated to the outcomes of the video recording due to the high rate of occurrences of errors in all of the three categories. But these faults show up especially in *Distortion* and *Added phonemes* where she presented 25 errors of pronunciation linked to the interference of L1 Spanish in the production of English (L2).

The ending results for **Participant No.3** also revealed a poor level of knowledge of phonetics because this participant only correctly answered four questions out of twelve interventions associated with consonant and vowel transcription. Therefore, this speaker made several errors of pronunciation especially in the areas of *Deletion*, *Distortion*, and *Added phonemes* with a prevalence of 39 mistakes under these categories according to the graphics of reading records presented above. This evidence is a corroboration of the Spanish phonemes influence on the production of English phonemes.

The analysis of the results for **Participant No. 6** show a low knowledge of phonetics and the transcription of both consonant and vowel phonemes. This subject answered only four questions in the correct way. This has strong effects on her incorrect pronunciation of the video reading record instrument. Consequently, the mistakes made were many, especially in the category of *Deletion* error (see table3 on annex)

About participant five, four, and eight, these were the participants with the best performance in phonetics knowledge because they answered more than six questions out of twelve correctly. Hence, their results in the video reading record were also better because they made less than ten mistakes in each category.

4. 5 MOST FREQUENT L2 PHONEMES AFFECTED BY L1 PHONEMES

The variations of different pronunciation issues produced by the participants reveal that all of them have a strong prevalence of Spanish sound interference in the production of English phonemes. The following chart attempts to show the most affected phonemes from the video recording.

Table 31

Most affected English phonemes

L2 most affected phoneme			
vowel	**Occurrences**	**Consonant**	**Occurrences**
/ə/	22	/k/	33
/æ/	15	/t/	18
/ʌ/	14	/j/	18
/e/	10	/s/	12
/ɛ/	10	/**d**/	11
/eɪ/	9	/ʤ/	12
/ɪ/	8	/**g**/	10
/e/	7	/tʃ/	8
/a/	6	/ð/	8

The statistics on the chart indicate that the participants made more errors in the production of consonant /**k**/ with 33 occurrences. This is because this sound appears many times in the text. This phoneme is located in the middle of the word “accent” /æksɛnt/ and most of the students omitted this phoneme in the pronunciation of that word. This has been

demonstrated in other studies for example, Flege and Davidian (1984, as cited by Fledge, Munro & Skelton 1992). In this work, they recorded the final stops in minimally paired English words ending in/b d g/ and /p t k/ that had been spoken by native speakers of English, Spanish and Taiwanese. It showed that our Spanish speakers also presented problems pronouncing those sounds that do not exist in the phonetic repertoire sound system of L1.

In the category of vowel sounds, the most prevalent mispronounced phoneme was /ə/, found in words such as "individual" /ɪndəˈvɪʤəwəlz/, likewise, the vowel phoneme /æ/ with 15 occurrences, and the consonant phoneme /**t**/ presents eighteen occurrences.

Another important datum revealed that consonants presented the highest rate of mispronounced phonemes among the learners of English from the English program. From the moment of the reading in contrast to the vowel sounds that presented a slight difference in the rate of mispronounced phonemes.

In this section of the current study, it was analyzed what phonemes were more affected in L2 (English) by the interference of the L1 (Spanish) phonological system. The researcher analyzed vowels, consonants, and syllable and word shapes produced by the participants. The more frequent occurrences of vowels /ə/,/æ/ and /ɪ/ may happen because English is more complex in vowel (5 vs. 11) and syllable structure relative to Spanish. There are fewer consonant phonemes in Spanish (18 vs. 24) and these phonemic and phonetic differences are found for example, in the consonants /t/ and /d/ which are produced using dental placement in Spanish but are produced on the alveolar ridge in English. In Spanish, voiced stops are frequently produced as a homorganic approximant (/b d g/ as [b / ø]) (Escudero & Boersma (2004); Morrison, 2006).

5. CONCLUSIONS

The analysis of the data collected from the video recording and the rubric of interviews applied to the participants exhibited the outcomes according to the general objective to determine the Spanish phonemes (L1) that affect English phonemes (L2) in

speaking skills that interfere with an assertive pronunciation among students from UPNFM, revealed that:

- The Spanish phoneme that affected the articulatory production of English phonemes was the consonant velar sound /y/ because it was transferred into the pronunciation of /j/ which is a semivowel palatal sound in words such as “you”, “young” /jʌŋ/but in Spanish the letter /**y/ (**IPA symbol **/y/) [ʝ]** has palatal fricative sound.

- The addition of the Spanish vowel sound /e/ as initial cluster sounds (/sp, st/), in English words e.g. “speaker”, “speak” affected the accurate pronunciation, producing **[e**spikərz], [**e**spik]. Corroborating the results of in previous studies by Morrison (2006).

- The frequent assimilation of English vowel sounds which have different articulatory properties e.g. (/ɪ/, /ʌ/, /æ/, /ɛ/ into the spectrum of the only five vowel sounds of Spanish (/a/, /e/,/i/,/o/, /u/), showed that, these Spanish phonemes had strong interference in an assertive pronunciation of English phonemes.

- The findings regarding the specific objectives of this research shows that:

- The results revealed that velar consonant phoneme /**k/** was omitted in words such as “accent” /ˈæksɛnt/ because this sound is located in the middle of the word and these phonemes are not common in Spanish. Therefore, students presented problems in producing the correct sounds.

- The most affected vowel phoneme was the mid central vowel /ə/ with 22 occurrences because it was changed into the Spanish vowel /a/ in words such as: “speaker” /spikər/ resulting in a wrong [spikɑ].

- The prevalent deletion of the stop **/t/** consonant sound located by many participants because this phoneme articulation does not exist at the end or in the middle of some words in Spanish consonant system.

- The glide consonant sound **/j/** was substituted several times for the phoneme /j/ to [ʤ, such as in the word “you” or young. The reason is because /**ʤ/** phoneme is similar to the Spanish /y/ sound.

- Students could not pronounce the fricative consonant /**ð/** phoneme found in words such as “their” and “they”, because the articulation of this consonant phoneme is not found in Spanish phonetic articulatory system, so they substitute this sound with a similar consonant sound from Spanish such as /d/.

- The participant’s production of L2 sounds classified as similar to Spanish sound system such as the vowel sound /æ/ found in words such as “Arabic” /ærəbık/, but the participants changed it into /a/ [arəbık] a Spanish vowel sound. So, most of them could not master the pronunciation because they identified it perceptually in terms of a phonetically distinct counterpart in the L1.

- Most of the students produced many L2 phonemes transferring the articulatory characteristics of Spanish phonemes such as: /e/ which was added at the beginning in words such as: “speak,” “Spanish,” and “study”

- Students pronounced new vowel sounds distorting those L2 vowels and consonants that learners of an L2 encounter falling outside the L1 (Spanish) phonetic inventory. For example, substituting /ʌ/ into Spanish /u/.

6. LIMITATIONS

The limits of this research project is exclusively centered to determine the interference of Spanish sounds that affect the pronunciation of English sounds. However, due to the limits of the time and the selected population it does not include other suprasegmental features of English pronunciation such as intonation and stress tone among others that related to understand the learners’ perception, production and intelligibility (Celce-Murcia, Brinton & Goodwin, 1996). Another restraining element that was not considered, was the prior home experience in English pronunciation of the participants.

Moreover, this research opens the door for future studies related to age, aptitude or the learner’s attitude toward the learning of pronunciation of English as a foreign language in the Western region of Honduras.

6.1 RECOMMENDATIONS

The recommendations extracted from the findings obtained from a profound analysis of the text collected in the rubrics. These findings will be used according to the purpose of this research.

- To the teachers of English, to implement more activities of phonological awareness to prevent high level of Spanish transfer into English phoneme production among students.
- In each English level, it has to be a priority to dedicate more hours focused to apply didactic using phonological awareness activities so they can discriminate the slight differences among English sounds.
- Teachers must induce an equivalence classification as is said to prevent L2 learners from establishing phonetic categories or similar 2 vowel sound consonants which limits the accuracy with which these L2 sounds can be produced (Flege, 1987).
- To implement a transversal axe, the teaching of phonetic symbols, so they can be totally empowered of the phonetic sound system of English.
- To the Students: To apply listening and speaking strategies to develop their own listening competence and avoid pronunciation errors.
- Apply phonological awareness activities using online resources as strategy to improve pronunciation, and listening comprehension.

5. BIBLIOGRAPHY

Averill, J. (2002). Matrix Analysis as a Complementary Analytic Strategy in Qualitative Inquiry. Health Research DOI: 10.1177/104973230201200611 http://qhr.sage pub.com

Atkielski, A. (2005). *Using Phonetic Transcription in Class*. Rev 3. Academia.edu. Retrievedfrom:https://www.academia.edu/9750926/Phonetics_Using_PhoneticTranscription_in_Class

Alexopoulou, A. (2010). *La función de la interlengua en el aprendizaje de lenguas extranjeras*. Revista Nebrija de Lingüística. Universidad Nacional y Kapodistríaca de Atenas. Retrieved from; www.nebrija.com

Archival, J. (1998). *Second Language Phonology*. John Benjamin Publishing Company. Retrieved from: https://books.google.hn/books?id=5D68DoLQ100C&pg

Asan, O. (2015). *Using video-based observation research methods in primary care health encounters to evaluate complex interactions.* US National Library of Medicine. National Institutes of Health. Retrieved from: https:www.ncbi.nlm. nih.gov

Ball, R. (2009). *Introduction to Phonetics for Students of English, French, German and Spanish*. University of Southampton. Retrieved from: http://humbox.ac.uk/62/

Balčytytė-Kurtinienė, G. (2014). *A Course in English Phonetics for EFL University Students*. Vilniaus universitetas. Retrieved from: https://www.flf.vu.lt/dokumentai/mokslas

Barlow, J. & Gierut, J. (2002). *Minimal Pair Approaches to Phonological Remediation.* Seminars in speech and language/volume 23, number 1. Retrieved from: https://www.academia.edu/24685768/Minimal_Pair_pproaches_to_Phonological_ Remediation

Barrera, I. (2009). *Importancia de enseñar fonética en el aula de inglés*. Digital Magazine Digital: Innovación y Experiencias Educativas No. 23. Retrieved from: https://archivos.csif.es/archivos/andalucia/ensenanza/revistas

Best, C. & Tyler, D. (2007). Nonnative and second language speech perception: Commonalities and complementarities. Retrieved from: https://www.researchgate.net/publication

Bhela, B. (1997). *Native language interference in learning a second language: Exploratory case studies of native language interference with target language usage*. Flinders University School of Education. International Education Journal Vol 1, No 1, 1999. Retrieved from: http://iej.cjb.net 22

Maez, (1985). Bilinguistics, *Speech development in Spanish and English*. Retrieved from: https://bilinguistics.com/speech-development-in-spanish.

Bradshaw, A. (2003). *Effects of presentation interference in learning with visuals*. Journal of Visual Literacy. Retrieved from: https://www.researchgate.net/ publication/268230437_Effects_of_Presentatio_Interference_in_Learning_with_Visuals

Breitkreutz, J., Derwing, T. & Rossiter, M.(2001). Pronunciation Teaching Practices in Canada. ESL Canada Journaurevue TESL Du Canada. Vol. 19, No.1.Retrieved from: https://teslcanadajournal.ca.

Bowen, G. (2009). *Document Analysis as a Qualitative Research Method*. Western Carolina University. Retrieved from: https://www.researchgate.net/publication

Brown,D. (1994). *Principles of Language Learning and Teaching* (3rd Ed.). Prentice Hall.

Dobrovolsky, M. (1997) *Chapter 2: Phonetics: The Sounds of Language*. Contemporary Linguistics. Retrieved from: http://catalogue.pearsoned.co.uk/assets

Bodorík, M. (2017). Teaching English pronunciation by non-native teachers as seen by Slovak teachers. Trnava University, Slovakia. Journal of Language and Cultural Education. Retrieved from: www.researchgate.net

Boersma, P. & Escudero,P. (2004). *Bridging the Gap between L2 Speech Perception Research and Phonological Theory*. Cambrige University Press. Retrieved from: https://www.researchgate.net/

Celce-Murcia, M. (2001). *Teaching English as Second or Foreign Language*. Boston, MA. USA. Heinle & Heinle Thompson Learning.

Celce-Murcia, M. Brinton, D. & Goodwin, J. (1996) *Teaching Pronunciation: A Reference for Teachers of English to Speakers of other Languages*. New York, USA. Cambridge University Press.

Coe, N., Swan, M. & Smith, B. (1987) *Learner English: A teacher's guide to interference and other problems*. Cambridge University Press.

Cook, V. (1996). *Second Language Learning and Language Teaching.* Fourth Edition. Hodder Education a Hachette Uk. Education. Retrieved from: https://www.academia.edu/7674409/Second_Language_Learning_and_Language_Teaching

Creswell, J. (2007). Qualitative inquiry & Research Design, Second Edition Choosing Among Five Approaches Sage Publications, Inc. Retrieved from: https://www.academia.edu/ /33813052/Second_Edition_qualitative_inquiry

Crystal, D. (2008). *A Dictionary of Linguistics and Phonetics*. 6th edition. Oxford: Blackwell Publishers

Gildersleeve-Neumann, C., Peña, E. , Davis, B. & Kester, E., (2009). *Effects on L1 During Early Acquisition of L2: Speech Changes in Spanish at First English Contact*. doi:10.1017/S1366728908003994

Gorman, B. & E. Kester (2013). *Spanish-influenced English: Typical phonological patterns in the English language learne*r. Bilinguistics and ASHA. Retrieved from: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.497.5106.

Guba, & Lincoln, (1998). *Competing paradigms in qualitative research.* In N. K. Denzin & Y. Retrieved from: https://www.sfu.ca/ cmns/courses/

Flege, J. (2005). *Origins and development of the Speech Learning Model,* Keynote lecture presented at the 1st ASA Workshop on L2 Speech Learning Simon Fraser University, Vancouver, BC. University of Alabama at Birmingham.

Flege, J. Munro, M. & Skelton, L. (1992). *Production of the word-final English/t/-/d/contrast by native speakers of English, Mandarin, and Spanish.* Department of Biocommunication, University of Alabama. Retrieved from: https://pdfs.semantic scholar.org

Flege, J. (1995). Second Language Speech Learning, Theories, findings and problems. Retrieved from: http://jimflege.com/files/Flege_in_Strange_1995

Flege, J. (1991). *The Interlingual Identification of Spanish and English Vowels: Orthographic Evidence*. The Quarterly Journal of Experimental Psychology, 1991, (3) 701-731. University of Alabama at Birmingham, Alabama, U.S.A.

Fouz-González, J. (2019). *Podcast-based pronunciation training: Enhancing FL learners' perception and production of fossilised segmental features*. ReCALL, 31(2), 150-169. doi:10.1017/S0958344018000174

Fox, M. (2006). *Usage-based effects in Latin American Spanish syllable-final /s/ lenition*. University of Pennsylvania. PhD. Thesis. Retrieved from: http://languagelog.ldc.upenn.edu

Garita, M. Gonzáles, M. & Solíz, N. (2019). *English vowel sounds: Pronunciation issues and student and faculty perception.* Universidad de Costa Rica. Retrieved from: https://search.scielo.org/

Gibbs, G. (2007). *Analyzing qualitative Data*. 2007. Sage Publications. Retrieved from: www.academia.edu.

Gorman, B. & Kester, E. (2001). *Spanish Influenced English: Typical phonological patterns in the English language learner*. In Seminar offered by Bilinguistics at ASHA. Retrieved from: www.academia.edu

Grabe, William. (2009). *Reading in a Second Language*. New York: Cambridge University Press. Retrieved from: https://books.google.hn/

Jam & Adibpourb, (2014). *Intuitive-imitative Approach versus Analytic-linguistic Approach toward Teaching /7/, /'/, and /w/ to Iranian Students*. Procedia, social and Behavior Science. Retrieved from: https://pdf.sciencedirectassets.com

Jenkins, J. (2001). *The phonology of English as an International Language*. Oxford University Press. Retrieved from: https://books.google.hn/

Haycraft, J. (1978) *An Introduction to English Language Teaching*. Essex, England. Longman.

Helman, L. (2004). *Building on the Sound System of Spanish: Insights from the Alphabetic Spellings of English Language Learners*. The Reading Teacher, Vol. 57, No. 5. pp. 452-460. International Reading Association. Retrieved from: http://www.jstor.org/stable/20205383

Hernández, G. González, J. & Algara, A. (2010). *Modelos teórico-metodológicos sobre la adquisición de la fonología de la L2: Descripción, validez y vigencia.* Retrieved from: https://dialnet.unirioja.es/servlet/articulo?codigo=4003819

Hismanoglu, M. & Hismanoglu, S.(2010). *Language teachers' preferences of pronunciation teaching techniques: traditional or modern?* European University of Lefke, Faculty of Arts and Sciences, Gemikonagi-Lefke. Retrieved from: https://www. researchgate.net

Husserl, E. (1970). *The idea of phenomenology*. The Hague. Retrieved from: https://babel.hathitrust.org/

Kelly, G. (2007). *How to Teach Pronunciation*. Essex, England. Pearson Education Limited 2000

Kenworthy, J. (1987). *Teaching English Pronunciation*. Essex. England. Longman Group UK Limited. Retrieved from https://zourpri.files.wordpress.com

Kochaksaraie & Makiabadi (2018). *Second Language Learners' Phonological Awareness and Perception of Foreign Accentedness and Comprehensibility by Native and Non-*

native English Speaking EFL Teachers. Journal of Teaching Language Skills (JTLS) 36(4), Winter 2018, pp. 103-140- ISSN: 2008-8191. DOI: 10.22099/jtls.2018.29899.2538

Larsen-Freeman, D. (2011). *Techniques and Principles in Language Teaching*. New York, EUA. Oxford University Press.

Leech, N. & Onwuegbuzie, A. (2007). An Array of Qualitative Data Analysis Tools: A Call for Data Analysis Triangulation. University of Colorado at Denver and Health Sciences Center. Sam Houston State University. Retrieved from: https://www.semanticscholar.org/

Levis, J. (2005). *Changing Contexts and Shifting Paradigms in Pronunciation Teaching*. Iowa State University. Retrieved from: http://resourcesfortefl teachers.pbworks.com

Levis, Sonsaat, Link & Barriuso (2016). Native and Nonnative Teachers of L2Pronunciation: Effects on Learner Performance. Retrieved from: https://www.researchgate.net/publication/294730070_Native_and_Nonnative_Teachers_of_L2_Pronunciation_Effects_on_Learner_Performance

Mahapatra, (2014). *New man international journal of multidisciplinary studies* (issn: 2348-1390) vol. 1 issue 11 nov. 2014. Retrieved from: www.newmanpublication.com 112

Maikut, P. & Morehouse, R. (1994). *Beginning Qualitative Research: A Philosophic and practical guide*. The Falmer's Press Teacher Library: 6. London. Retrieved from: www.researchgate.net

Merriam & Webster Dictionary (2019). *Definition of Pronunciation*. Retrieved from: https://www.merriam-webster.com

Morrison, G. (2006). *L1 & L2 Production and Perception of English and Spanish Vowels: A Statistical Modelling Approach*. University of Alberta. Retrieved from: https://geoff-morrison.net/

Mott, B. (2011) *English Phonetics and Phonology for Spanish Speakers*. Universitat de Barcelona. Spain. Gráficas Rey, S. L.

Nolan, F. (2007). *What is phonetics?*. British Association of Academic Phoneticians (BAAP). Retrieved from*:* https://www.baap.ac.uk/phonetics.html

Nunan, D. (1996). *The Learned Centred Curriculum. A study in Second Language Teaching.* Cambridge University Press. Retrieved from: https://books.google.hn

Otlowski, M. (1998). Pronunciation: What Are the Expectations? The Internet TESL Journal. Retrieved From: http://www.iteslj.org./Article/Otlowskipronunci ation.html

Planas, A. (2007). ¿*Para Sirve la Fonética?* Universitat de Barcelona. Retrieved from: http://onomazein.letras.uc.cl

Park, M. (2015). *Phonological Awareness and Degree of Foreign Accent: An Exploratory Study*. Vol. 70, No. 3. Retrieved from: http://journal.kate.or.kr/

Pourhosein, A. (2016). *English Pronunciation Instruction: A Literature Review*. Lahijan Branch, Islamic Azad University, Lahijan, Iran. Retrieved from: http://ijreeonline.com

Preston, J. & Seki, A. (2011). Identifying Residual Speech Sound Disorders in Bilingual Children: A Japanese-English Case Study. Retrieved from: https://www.ncbi.nlm.nih.gov/pmc/articles

Rasier,L & Hilignmann, P. (2009) *Exploring the L1-L2 Relationship in the L2 Acquisition of Prosody*. (p.2). Université catholique de Louvain. Retrieved from: https://www.academia.edu

Ravin, J. (2012). *Why is English Pronunciation Hard?* Retrieved from: https://www.lessaccent.com/blog/why-is-english-pronunciation-hard-spelleen-sirtinlee-duhzint-help/

Richards, J. & Rodgers, T. (1986) *Approaches and Methods in Language Teaching A description and analysis.* Cambridge University Press. UK. Retrieved from: https://www.novaconcursos.com.br/blog/pdf/richards-jack-c.-&-rodgers.pdf

Roberts, J. (2004). *The Communicative Approach to Language Teaching: The King is dead! Long live the King*! University of Essex. https://eric.ed.gov

Rogers, C., Dalby, J., & Nishi, K. (2004). *Effects of Noise and Proficiency on Intelligibility of Chinese-Accented English*. Retrieved from: https://doi.org/10.1177/002383090404 70020201

Ross, J. (2004). *Effects on Early Literacy Achievement of Running Records Assessment: Results of a Controlled Experiment*. Ontario Institute for Studies in Education University of Toronto. Retrieved from: https://www.researchgate. net/publication/254345625

Ryu, Y. (2002) *Pronunciation of English as a Second or Foreign Language Learners: The reexamination of Teaching Pronunciation. Thesis on B.A. The prefectural university*

of Kumamoto, Japan. The University of Montana. Retrieved from: https://pdfs.semanticscholar.org

Selinker, L. (2011). *Some Unresolved Issues in an ELT New Media Age: Towards building an interlanguage semantics*. 1st International Conference on Foreign Language Teaching and Applied Linguistics May 5-7 2011 Sarajevo740. NYU & Research Production Association. Retrieved from: https://www.academia.edu/4757862/ Selinker_journal

Selinker, L. (2014). *Interlanguage 40 years on. Three themes from here*. Chapter 10. New York University and Research Production Associates. Retrieved from: https://www.researchgate.net/publication/300821179

Solé M. (1991). *Stress and Rhythm in English*. Revista Alicantina de Estudios Ingleses p. 145. Universidad Autónoma de Barcelona. Retrieved from: https://rua.ua.es

Social Science Libre Text (2019). *Vowels of Spanish*. Retrieved from: https://socialsci.libretexts.org

Spady, W. (1978). *The Concept and Implications of Competency-based Education.* Educational Leadership. (p.16) Association for Supervision and Curriculum Development. Retrieved from www.ascd.org

Stake, R. (1995). *The art of case study research* (pp. 49-68). Thousand Oaks, CA: Sage. Retrieved from: https://www.uv.mx/rmipe/

Szczegielniak, A. (n.d). *Phonetics the Sounds of Language.* Retrieved from: https://scholar.harvard.edu/files/adam/files/phonetics

Tamura, E. (2006). *Concepts on the Methodology of Teaching English*. The Economic Journal of Takasaki City University of Economics vol.48 No.3. Retrieved from: https://www.coursehero.com

Tarone, E. (2006). *Interlanguage.* Elsevier Ltd. Volume 4. pp. 1715–1719. Retrieved from: https://www.academia.edu/24906214/Interlanguage_Tarone_PDF

Tedpower (2019). S*panish Language Background. Common English Pronunciation Problems.* Retrieved from: http://www.tedpower.co.uk/l1spanish.html.

University of Missouri, (n.d), *Qualitative Research Designs*. Retrieved from: http://www.umsl.edu/~lindquists/qualdsgn.html

Universidad Pedagógica Nacional Francisco Morazán, UPNFM (2014). *Modelo Educativo*. Tegucigalpa. Retrieved from: www.upnfm.edu.hn

Universidad Pedagógica Nacional Francisco Morazán, UPNFM (2008). *Plan de Estudios de la Carrera De Profesorado en la Enseñanza del Inglés en el Grado de Licenciatura.* Tegucigalpa, Honduras.

Vrabel, T. (2009). *Lectures in theoretical phonetics of the English language and method-guides for seminars*. Ukraine. Retrieved from: http://www.kmf.uz.ua/hun114

Waters, J. (2017). *Phenomenological Research Guidelines. Research Method*. Retrieved from: https://www.capilanou.ca file:///C:/Users/Dell/Downloads/Dialnet-TheCommunicativeApproachToLanguageTeaching-9194

Waters, J. (2017). *Phenomenological Research Guidelines. Research Method.* Retrieved from: https://www.capilanou.ca file:///C:/Users/Dell/Downloads/Dialnet-TheCommunicativeApproachToLanguageTeaching-9194

Yates, L., & Zielinski, B. (2009). *Give It a Go: Teaching Pronunciation to Adults*. Sydney, Australia: AMEPRC. Retrieved from: http://www.ameprc.mq.edu.au/resources /classroom_ resources/give_it_a_go

7. ANNEX

Annex table 1

CRONOGRAM

CRONOGRAM OF ACTIVITIES OF THE RESEARCH PROJECT										
Activity	**March-April 2018**	**April 2018**	**May-June 2018**	**July 2018**	**August 2018**	**September 2018**	**September-October 2018**	**November-December 2018**	**January-February 2018**	
• **Writing proposal**	X									
• **Proposal presentation**		X	X							
• **Recolección Bibliográfica y Marco Teórico**	X	X	X	X	X					
• **Elaboration of the instruments for data collection**			X							
• **Validatión of instruments for data collection**				X						
• **Selection of the participants**					X					
• **Organization of the information**						X				
• **Transcription of the information**							X			
• **Analysis of the data**								X		
• **Writing the research report**									X	

7.1. ANNEX 1 TABLES OF PHONETICS PATTERNS

Annex table 2

Participant 1

Participant 1: Deletion errors				**Distortion and Added phonemes**					**Phonological awareness**			
Words	**IPA Transcription**	**Student's pronunciation**	**Deleted phoneme**	**words**	**IPA Transcription**	**Student's pronunciation**	**L2 Affected Phoneme**	**Addition**	**words**	**IPA Transcription**	**Student's pronunciation**	**Substitution**
Change	ʧeɪnʤ	**[**ʃeɪn]	**/ʤ/**	Arabic	/ærəbɪk/	[arəbɪk]	/æ/		noticed	/noʊtəst/	[nɑtaɪz]	/əst/
Reported	riˈpɔrtəd	riˈpɔrt	**/əd/**	They	/ðeɪ/	**[**deɪ]	/ð/		of	/ʌv/	[ʌf**]**	/v/
Recognize	rɛkəgˌnaɪz	[rɛkənaɪz]	/**g**/	they	/ðeɪ/	**[**deɪ]	**/ð/**		they	ðeɪ	**[**θeɪ]	/ð/
Accent	æksɛnt	[æsɛnt]	/k/	the	/ði/	**[**di]	**/ð/**		this	ðɪs	**[**ðis]	/ɪ/
Accent	æksɛnt	æsɛnt	/k**/**	language	/læŋgwəʤ/	[læŋgwi**g]**	/əʤ/		young	jʌŋ	**[**dʒʌŋ]	/j/
Accent	æksɛn	[æsɛnt]	/k/	language	/læŋgwəʤ/	[læŋgwi**g]**	/əʤ/		is	ɪz	[ɪ**v]**	/v/
Accents	ˈæksɛnts	[æsɛnts]	/k/	native	/neɪtɪv/	[nətɪv]	/eɪ/		your	jɔr	**[**dʒɔr]	/j/
Accent	æksɛnt	[æsɛn]	/k/ , /t/	native	/neɪtɪv/	[natɪv]	/**eɪ**/		first	fɜrst	[f**ɪə**rt]	/ɜ/
Linguistics	lɪŋˈgwɪstɪks	lɪŋgwɪstɪk	**/s/**	mastered	/mæstərd/	[mæste**rɪd]**	/ərd/		France	fræns	[frens]	**/æ/**
First	fɜrst	[f**ɪə**rt]	/s/	issue	/ɪʃu/	**[**iʃu]	/ɪ/		just	ʤʌst	**[**ʒʌs**]**	/dʒ/
Not	/nɑt/	[nɑ],	/t/	influences	/ɪnfluənsɪz/	**[**influənsɪz]	/ɪ/		change	ʧeɪnʤ	**[**ʃeɪn]	**/ʧ/**
Just	/ʤʌst/	**[**ʒʌs**]**	**/t/**	noticed	/noʊtəst/	[nɑtaɪz]	/oʊ/		desire	dɪˈzaɪər	[dɪˈzer]	/aɪə/
can't	kænt	[kæn]	/**t**/	good	/gʊd/	g**u**d]	/**ʊ**/		you	ju	**[**dʒu]	/j/
Habits	hæbəts	[hæbəs]	/**t**/	pronunciation	/prənʌnsieɪʃən/	prən**u**nsieɪʃən	/ʌ/		accurate	ækjərət	**[əkwaɪər]**	**[əkwaɪər]**
Theories	θiəriz	**[**tiəri]	/z/	teories	/θiəriz/	**[**tiəri]	**/θ/**		Total			14
And	ænd		[and]	speak	/spik/	[**e**spik		/**e**/				
Total			18	speakers	/spikərz/	**[**espikərz]		**/e/**				
				Spanish	/spænɪʃ/	[espænɪʃ]		/**e**/				
				Speakers	/spikərz/	[espikərz]		/**e**/				
				speak	/spik/	[espik]		[**e**]				
				to	------	**[tu]**		[**tu**]				

Annex Table 3

Participant 2. Analysis of pronunciation patterns

Participant No.2 Deletion Errors			
words	**IPA Transcription**	**Student's pronunciation**	**Affected Phoneme**
won't	/woʊnt/	[woʊn]	/t/
accent	/æksɛnt/	[æksɛŋ]	/t/
accent	/æksɛnt/	[æsɛnt]"	/k/
accent	æksɛnt	æsɛnt	/k/
accent	æksɛnt	[æsɛnt]	/k/
accents	/æksɛnts/	[æsɛnts]	/k/
accents	æksɛnts	[æsɛnt]	k/, /s/
another	/ənʌðər/	[ʌðər]	/ən/
common	kɑmən	[kɑm]	/ən/
exposure	ɪkˈspoʊʒər	[ɪkˈspoʊʒ]	/ər/
hard	hɑrd	[hɑr]	[d]
influences	ɪnfluənsɪz	[lɪn¸fluənz]	/ɪ/
mastered	/mæstərd/	mɪster	/ərd/
of	ʌv	[fɔr] (for)	/ʌv/
old	/oʊld/	[oʊl]	/d/
recognize	rɛkəg¸naɪz	[rɛkənaɪz]	/g/
reported	/riˈpɔrtəd/	[riˈpɔrt]	/əd/
to	tu	[ʌv] (of)	/tu/
without	wɪθaʊt	wɪaʊt]	/θ/
TOTAL			20

Distortion error and added phonemes				
words	***IPA Transcription***	**Student's pronunciation**	**L2 affected phoneme**	**Added Phoneme**
Arabic	*/ærəbɪk/*	[ɑrəbɪk]	/æ/	
mastered	/mæstərd/	mɪster	/æ/	
The	/ði/	[de]	/ð/	
The	/ði/	[da]	/ð/, /i/	
foreign	/fɔrən/	[fɔrti]	/ən/	
accurate	/ækjərət/	[ækjərein]	/ət/	
learn	/lɜrn/	[ler]	/ɜ/	
Ear	/ir/	[hear],	/i/	/h/
believe	/bɪˈliv/	beliv	/ɪ/	
This	/ðɪs/	[ðis]	/ɪ/	
applied	/əplaɪd/	əˈplais]	/ɪ/	
desire	/dɪˈzaɪər/	[dɪˈzai]	/ɪər/	
sounds	/saʊnd/	[saums]	/ʊnd/	
country	/kʌntri/	kontri	/ʌ/	
pronunciation	/prənʌnsieɪʃən/	[prənunsieɪʃən]	/ʌ/	
without	/wɪθaʊt/	[gɪθaʊt]	/w/	
without	/wɪˈθaʊt/	[wɪdaʊt]	/θ/	
theories	/θiəriz/	[tiəriz]	/θ/	
issue	/ɪʃu/	ɪʃus		[s]
Spanish	/spænɪʃ/	[espænɪʃ]		/e/
speakers	/spikərz/	[espikərz]		/e/
To	/tu/	[ʌv] (of)		/ʌv/
Of	/ʌv/	[fɔr] (for)		/fɔr/
TOTAL			19	6

Phonological Awareness			
words	**IPA Transcription**	**Student's pronunciation**	**Substitution**
another	ənʌðər	[ʌðər]	[ʌðər]
older	oʊldər ¸	[ʌðər]	[ʌðər]
influences	ɪnfluənsɪz	[lɪn¸fluənz]	/z/
sound	saʊnd	[sɔŋ]	/nd/ /aʊ/
young	jʌŋ	[dʒʌŋ]	/ŋ/
accent	æksɛnt	æksɛŋ]	/ŋ/
system	sɪstəm	[sɪstən]	/m/
your	jʊər	[dʒʊər]	/j/
applied	əplaɪd	əˈplais]	/ɪd/
the	ði	[de]	/i/
belief	bɪˈlif	bɪˈlis]	/f/
their	ðɛr	[ʌðərs]	/ðɛr/
the	ðə	[də]	/ð/
French	fræns	[frɛnʧ]	/æns/
TOTAL			15

Annex table 4

Participant 3. Analysis of pronunciation patterns

Participant 3: Deletion errors			
Words	**IPA Transcription**	**Student's pronunciation**	**L2 deleted phonem**
old	/oʊld/	[oʊl]	/d/
hard	/hɑrd/	[hɑr]	/d/
hard	/hɑrd/	[hɑr]	/d/
reported	/riˈpɔrtəd/	[riˈpɔrt]	/əd/
recognize	/rɛkəgnaɪz/	[rɛkəneɪns]	/g/
Accent	/æksɛnt/	[æsɛnt]	/k/
Accent	/æksɛnt/	[ænsɛnt]	/k/
Accent	/æksɛnt/	[æsɛnt]	/k/
Accents	/æksɛnts/	[æsɛnts]	/k/
Accents	/æksɛnts/	[æsɛnts]	/k/
accent	/æksɛnt/	[æsɛnt]	/k/
Young	/jʌŋ/	[ʤʌ]	/n/
Noticed	/noʊtəst/	[notɪs]	/t/
Lot	/lɑt/	[lo]	/t/
can't	/kænt/	[kæn]	/t/
Total			15

Distortion and added phonemes				
Words	**IPA Transcription**	**Student's pronunciation**	**L2 Affected Phonem**	**Addition**
lot	/lɑt/	[lo]	/ɑ/	
lots	/lɑts/	[lots]	/ɑ/	
France	/fræns/	[freins]	/æ/	
Arabic	/ærəbɪk/	[ɑrəbɪk]	/æ/	
can	/kæn/	[ken]	/æ/	
they	ðeɪ	[deɪ]	/ð/	
individuals	/ɪndəvɪʤəwəlz/	[ɪndəvɪduwəls]	/ə/ /ʤ/	
mastered	/mæstərərd/	[mæstərɪd]	/ərd/	
accurate	/ækjərət/	[ækjəřeit]	/ət/	
French	/frɛnʧ/	[freinʧ]	/ɛ/	
their	/ðɛr/	[ðei]	/ɛ/	
work	/wɜrk/	[work]	/ɜ/	
noticed	/noʊtəst/	[notɪs]	/oʊ/	
Does	/dʌz/	[doz]	/ʌ/	
of	/ʌv/	[of]	/ʌv/	
theories	/θɪriz/	[teoriz]	/θ/ /ɪ/	[o]
recognize	/rɛkəgnaɪz/	[rɛkəneɪns]	[aɪz]	
when	/wɛn/	[gwɛn]		[g]
speak	/spik/	[espik]		[e]
accent	/æksɛnt/	[ænsɛnt]		[n]
speakers	/spikərz/	[espikərz]		[e]
Spanish	/spænɪʃ/	[espænɪʃ]		[e]
speakers	/spikərz/	[espikərz]		[e]
speak	/spik/	[espik]		[e]
strong	/strɔŋ/	[estrɔŋ]		[e]
speaker	/spikər/	[espikər]		[e]
Total			19	10

Phonological Awareness			
Words	**IPA Transcription**	**Student's pronunciation**	**Substitution**
noticed	/noʊtəst/	[notɪs]	[ɪ]
country	/kʌntri/	[kʊntri]	[ʊ]
young	/jʌŋ/	[ʤʌ]	[ʤ]
learn	/lɜrn/	[lær]	[æ]
individuals	/ɪndəvɪʤəwəlz/	[ɪndəvɪduwəls]	[s]
changed	/ʧeɪnʤd/	[ʃeɪns]	[s]
You	/ju/	[ʤu]	[ʤ]
Total		7	7

Annex table 5

Participant 4. Analysis of pronunciation patterns

Participant 4: Deletion errors				Distortion and added phonemes					Phonological Awareness			
words	**IPA Transcription**	**Student's pronunciation**	**L2 deleted phoneme**	**words**	**IPA Transcription**	**Student's pronunciation**	**L2 Affected phoneme**	**Addition**	**words**	**IPA Transcription**	**Student's pronunciation**	**Substitution**
mastered	/mæstərd	[mæstər]	**/d/**	children	ʧɪldrən	[ʃɪldrən]	/ʧ/		childre n	/ʧɪldrən/	[ʃɪldrən]	/ʧ/
hard	/hɑrd/	[hɑr]	**/d/**	Arabic	/ærəbɪk/	[arəbɪk]	/æ/		of		**[ʌv]**	/tu/
hard	/hɑrd/	[hɑr]	**/d/**	France	/fræns/	[frens]	/æ/		ear	/ir/	[ɛ]	/i/
recognize	/rɛkəgnaɪz/	[rɛkənaɪz]	**/g/**	individuals	/ɪndəˈvɪʤəwəlz/	ɪndəˈvɪduəlz]	/ʤ/ /əw/		Total			3
learning	/lɜrnɪŋ/	[lɜrn]	**/ɪŋ/**	theories	θiəriz	θioriz	/ə/					
just	/ʤʌst/	**[**ʤos]	/t/	country	/kʌntri/	[kountri]	/ʌ/	[u]				
Total			**6**	pronunciation	prənʌnsieɪʃən	[prənunsieɪʃən]	/ʌ/					
				just	ʤʌst	**[**ʤos]	**/ʌ/**					
				pronunciation	prəˌnʌnsiˈeɪʃən	[prənunsiˈeɪʃən]	/ʌ/					
				their	ðɛr	ðɛɪr]		[ɪ]				
				their	ðɛr	[ðɛɪr]		[ɪ]				
				Total			**10**	**3**				

Annex table 6

Participant 5. Analysis of pronunciation patterns

Participant 5: Deletion errors				Distortion and added phonemes					Phonological Awareness			
words	**IPA Transcription**	**Student's pronunciation**	**L2 deleted phoneme**	**words**	**IPA Transcription**	**Student's pronunciation**	**L2 Affected phoneme**	**Addition**	**words**	**IPA Transcription**	**Student's pronunciation**	**Substitution**
mastered	/mæstərd/	[mæstər]	/**d**/	Arabic	/ærəbɪk/	[**ɑ**rəbɪk]	/æ/		France	/fræns/	[fr**ɛ**ns]	/æ/
hard	/hɑrd/	[hɑr]	/**d**/	individuals	/ɪndəvɪʤəwəlz/	[ɪndəvɪ**duals**]	/ʤ/ /əwəlz/					
recognize	/rɛkəgnaɪz/	[rɛkənaɪz]	/**g**/	ear	ir	[**e**r]	/i/					
learn	/lɜrn/	[lɜr]	/**n**/	children	/ʧɪldrən/	[ʃɪldrən]	/ʧ/					
just	/ʤʌst/	[ʤ**o**s]	/**t**/	country	/kʌntri/	[k**ou**ntri]	/ʌ/					
Total			5	pronunciation	/prənʌnsiˈeɪʃən/	[prən**u**nsieɪʃən]	/ʌ/					
				just	/ʤʌst/	[ʤ**o**s]	/ʌ/					
				theories	/θiəriz/	[θi**o**riz]		[**o**]				
				their	/ðɛr/	[ðɛ**i**r]		**[i]**				
				Total			8	2				

Annex table 7

Participant 6. Analysis of pronunciation patterns

PARTICIPANT 6: Deletion errors				Distortion and Added Phonemes					Phonological Awareness			
words	**IPA Transcription**	**Student's pronunciation**	**L2 affected phoneme**	**words**	**IPA Transcription**	**Student's pronunciation**	**L2 affected phoneme**	**Addition**	**words**	**IPA Transcription**	**Student's pronunciation**	**Substitution**
mastered	/mæstərd/	[mæstər]	/d/	individuals	/ɪndəˈvɪʤəwəlz/	[ɪndəvɪdəu:əlz]	/ʤ/	[d]	individuals	/ɪndəˈvɪʤəwəlz/	[ɪndəvɪdəu:əlz]	/w/
reported	/riˈpɔrtəd/	[ripɔrt]	/əd/	speaker	/spikər/	[spikɑ]	/ə/		France	/fræns/	[frɛnʧ]	/fræns/
recognize	/rɛkəgnaɪz/	[rɛkənaɪz]	/g/	noticed	/noʊtəst/	[noʊtaɪ]	/əst/		or	/ɔr/	[ɔf]	/r/
accent	/æksɛnt/	[æsɛnt]	/k/	learn	/lɜrn/	[lɜ:r]	/ɜ/		at	/æt/	[ær]	/t/
accent	/æksɛnt/	[æsɛnt]	/k/	does	/dʌz/	[doz]	/ʌ/	[o]	**Total**			4
accent	/æksɛnt/	[æsɛnt]	/k/	theories	/θiəriz/	[θioriz]		[o]				
accent	/æksɛnt/	[æsɛnt]	/k/	country	/kʌntri/	[kʌuntri]		/u/				
accents	/æksɛnts/	[æsɛnt]	/k/ /s/	their	/ðɛr/	[ðɛɪ]		[ɪ]				
will	/wɪl/	[wɪ]	/l/	**Total**			5	5				
learn	/lɜrn/	[lɜ:r]	/n/									
linguistics	/lɪŋgwɪstɪks/	[lɪgwɪstɪk]	/ŋ/									
their	/ðɛr/	[ðɛɪ]	/r/									
speaker	/spikər/	[spikɑ]	/r/									
not	/nɑt/	[nɑ]	/t/									
just	/ʤʌst/	[ʤʌs]	/t/									
can't	/kænt/	[kæn]	/t/									
Not	/nɑt/	[nɑ]	/t/									
habits	/hæbəts/	[hæbəs]	/t/									
Total			19									

Annex table 8

Participant 7. Analysis of pronunciation patterns

Participant: 7 Deletion errors				Distortion and added phonemes					Phonological Awareness			
words	**IPA Transcription**	**Student's pronunciation**	**L2 Deleted Phoneme**	**Words**	**IPA Transcription**	**Student's pronunciation**	**L2 affected phoneme**	**Addition**	**words**	**IPA Transcription**	**Student's pronunciation**	**Substitution**
native	/neɪtɪv/	[naɪtɪv]	/eɪ/	without	/wɪθaʊt/	[wɪθoʊt	/a/		you	/ju/	[ʤu]	/j/
mastered	/mæstərd/	[mæstər]	/d/	desire	/dɪˈzaɪər/	dɪzeɪər	/a/		several	/sɛvrəl/	[siverəl]	/ɛ/
reported	/riˈpɔrtəd/	[riˈpɔrt]	/ed/	Arabic	/ærəbɪk/	[arəbɪk]	/æ/		young	/jʌŋ/	[ʤʌŋ]	/j/
accent	/æksɛnt/	[æsɛnt]	/k/	without	/wɪˈθaʊt/	wɪθout	/aʊ/		your	/jɔr/	[ʤɔr]	/j/
accent	/æksɛnt/	[æsɛnt	/k/	sound	/saʊnd/	[sond]	/aʊ/		your	/jɔr/	[ʤɔr]	/j/
accent	/æksɛnt/	[æsɛnt],	/k/	an	/ən/	[an]	/ə/		native	/neɪtɪv/	[nɑtɪv]	/eɪ/
accents	/æksɛnts/	[æsɛnts]	/k/	theories	/θiəriz/	[θioriz]	/ə/		system	/sɪstəm/	[sɪstəŋ]	/m/
accent	/æksɛnts/	[æsɛnt]	/k/	native	/neɪtɪv/	[naɪtɪv]	/eɪ/		Total			7
accent	/æksɛnt/	[æsɛnt]	/k/	native	/neɪtɪv/	[natɪv]	/eɪ/					
address	/ædrɛs/	[ædrɛ]	/s/	their	/ðɛr/	[del]	/ɛr/	/el/				
linguistics	/lɪŋgwɪstɪks/	lɪŋgwɪstɪk	/s/	they	/ðeɪ/	[deɪ	/θ/					
most	/moʊst/	[most]	/ʊ/	without	/wɪˈθaʊt/	[wɪdoʊt]	/θ/ /a/					
influences	/ɪnfluənsɪz/	[ɪnfluənsɪ]	/z/	country	/kʌntri/	[kʌuntri		/u/				
individuals	/ɪndəvɪʤəwəlz/	[ɪndəvɪdəwəl]	/z/	when	/wɛn/	[gwɛn]		[g]				
Total			13	several	/sɛvrəl/	[siverəl]		[e]				
				speakers	/spikərz/	[espikərz]		/e/				
				Spanish	/spænɪʃ/	[espænɪʃ]		/e/				
				speakers	/spikərz/	[espikərz]		/e/				
				Total			13	6				

Annex table 9

Participant 8. Analysis of pronunciation patterns

Participant: 8 Deletion errors				Distortion and added phonemes					Phonological Awareness			
words	**IPA Transcription**	**Student's pronunciation**	**Deleted Phoneme**	**words**	**IPA Transcription**	**Student's pronunciation**	**L2 affected phoneme**	**Addition**	**words**	**IPA Transcription**	**Student's pronunciation**	**Substitution**
recognize	/rɛkəgnaɪz/	[rɛkənaɪz]	/g/	Arabic	ærəbɪk	[arəbɪk]	/æ/		your	jʊər	[ʤʊər]	/j/
habits	/hæbəts/	[æbət]	/h/, /s/	individuals	ɪndəvɪʤəwəlz	[ɪndəvɪduwəlz]	/ʤ/		children	ʧɪldrən	[ʃɪldrən]	/tʃ/
linguistics	/lɪŋgwɪstɪks	lɪŋˈgwɪstɪk]	/s/	changed	ʧeɪnʤd	[ʃeɪnəd]	/ʤ/		changed	ʧeɪnʤd	[ʃeɪnəd]	/ʧ/
Total			4	their	ðɛr	[deir]	/ð/ /ɛ/		change	ʧeɪnʤ	[ʃeɪnʤ	/tʃ/
				accurate	ækjərət	[ækjəreti]	/rət/		you	ju	[ʤu]	/j/
				Country	kʌntri	[koʊntri]	/ʌ/		**Total**			**5**
				Total			**7**					

Annex table 10

Participant 9. Analysis of pronunciation patterns

Participant 9: Deletion errors				Distortion and added phonemes					Phonological Awareness			
words	**IPA Transcription**	**Student's pronunciation**	**Deleted Phoneme**	**Words**	**IPA Transcription**	**Student's pronunciation**	**L2 Affected Phoneme**	**Addition**	**words**	**IPA Transcription**	**Student's pronunciation**	**Substitution**
accent	æksɛn	[æsɛn]	/k/	Arabic	ærəbɪk	[arəbɪk]	/æ/		your	jʊər	[ʤʊər]	/j/
accent	æksɛn	[æsɛnt]	/k/	sound	saʊnd	[sond]	/aʊ/		young	jʌŋ	[ʤʌŋ]	/j/
accent	æksɛn	[æsɛnt]	/k/	they	ðeɪ	[deɪ]	/ð/		of	ʌv	ʌf	/v
accent	æksɛn	[æsɛn]	/k/	individuals	ɪndəˈvɪʤəwəlz	[ɪndəˈvɪduwəlz]	/ʤə/		you	ju	[ʤu]	/j/
recognize	rɛkəgnaɪz	[rɛkənaɪz]	/g/	accurate	ækjərət	[æku:rət]	/ə/		**Total**			4
accents	æksɛnts	[æsɛnts]	/k/	native	neɪtɪv	[natɪv]	/eɪ/					
identify	aɪdɛntəfaɪ	[ɪdɛntəfaɪ]	/a/	native	neɪtɪv	[natɪv]	/eɪ/					
just	ʤʌst	[ʤʌs]	/t/	native	neɪtɪv	[natɪv]	/eɪ/					
accents	æksɛnts	[æsɛnt	/s/, /k/	from	frʌm	[fɔr]	/frʌm/					
a	/ə/		/ə/	theories	θiəriz	[θeoriz]	/iə/					
accurate	ækjərət	[æku:rət]	/j/	exposure	ɪkspoʊʒər	[ɪkspuʒər]	/oʊ/					
Total			12	notice	noʊtəst	[notist	/oʊ/ /ə/					
				mastered	mæstərd	[mæstəred	/rd/					
				to		[da]	/tu/					
				does	dʌz	[dʌd]	/z/					
				desire	/dɪˈzaɪər/	[desire]	/zaɪər/					
				their	ðɛr	[ðɛir]		/i/				
				of		[ʌf]		[ʌf]				
				Total			17	2				

Annex table 11

Participant 10. Analysis of pronunciation patterns

Participant 10: Deletion errors			
Words	**IPA Transcription**	**Student's pronunciation**	**Deleted Phoneme**
recognize	rɛkəgnaɪz	[rɛkənaɪz]	/g/
influences	ɪnfluənsɪz	[ɪnfluəns]	/ɪz/
accent	ˈæksɛnt"	[æsɛnt]"	/k/
accent	ˈæksɛnt	[æsɛnt]	/k/
accents	æksɛnts	[æsɛnt]	/k/
accents	æksɛnts	[æsɛnts]	/k/
accent	ˈæksɛnt	[æsɛnts]	/k/
accent	æksɛnt	[æsɛnt]	/k/
linguistics	lɪŋgwɪstɪks	[lɪŋʊɪstɪk]	/s/
Total			9

Distortion and added phonemes				
Words	**IPA Transcription**	**Student's pronunciation**	**Affected Phoneme**	**Added phoneme**
can't	kæn	[ken]	/æ/	
Arabic	ærəbɪk	[arəbɪk]	/æ/	
that	ðæt	[dæt]	/ð/	
individuals	ɪndəvɪʤəwəlz	[ɪndəvɪdəwəlz]	/ʤ/	
native	neɪtɪv	[naitɪv]	/eɪ/	
mastered	mæstərd	[mæstered]	/ərd/	
accurate	ækjərət	[ækjureɪ]	/ərət/	
the	ði	[ðɛi]	/i/	
notice	noʊtəst	nɑtəst	/oʊ/	
just	ʤʌst	[ʤoɪ]	/ʌst/	
linguistics	lɪŋgwɪstɪks	[lɪŋgʊɪstɪk]	/w/	
theories	θiəriz	[tiəriz]	/θ/	
their	ðɛr	[dɛr]	/θ/	
why	waɪ	[gwaɪ]		[g]
Spanish	spænɪʃ	[espænɪʃ]		/e/
a		[ə]		/ə/
strong	strɔŋ	[estrɔŋ]		/e
exposure	ɪkspoʊʒər	[esporʊʒər]		/e/ /r/
Total		18	13	6

Phonological Awareness			
words	**IPA Transcription**	**Student's pronunciation**	**Substitution**
you	ju	[ʤu]	/j/
young	jʌŋ	[ʤʌŋ]	/j/
your	jɔr	[ʤɔr]	/j/
your	jɔr	[ʤɔr]	/j/
is	ɪn	[ɪs]	/n/
you	ju	[ʤu]	/j/
Total		6	6

Students phonetics' knowledge

Annex table 12

CATEGORY	ITEM NO.	PARTICIPANTS									
		P-1	**P-2**	**P-3**	**P-4**	**P-5**	**P-6**	**P-7**	**P-8**	**P-9**	**P-10**
Phonetic Knowledge	**1**	C	PC	C	PC	C	C	C	I	I	I
Consonant Phonetic knowledge	**2**	PC	I	I	I	C	I	I	I	I	I
Vowel Phonetic knowledge	**3**	PC	PC	PC	PC	C	PC	C	C	PC	I
Vowel Phonetic knowledge	**4**	I	PC	I	PC	C	I	PC	I	PC	I
Consonant Phonetic knowledge	**5**	I	I	PC	C	C	I	I	C	PC	I
Consonant Phonetic knowledge	**6**	C	PC	I	I	PC	I	C	C	PC	C
Vowel Phonetic knowledge	**7**	I	I	C	I	C	I	C	I	PC	PC
Consonant Phonetic knowledge	**8**	C	C	I	C	PC	C	C	C	I	PC
Consonant Phonetic knowledge	**9**	PC	C	I	PC	C	I	C	PC	PC	I
Phonetic Knowledge	**10**	C	I	PC	I	I	I	I	I	I	PC
Phonetic Knowledge	**11**	PC	PC	C	C	C	C	I	C	C	I
Phonetic Knowledge	**12**	C	C	C	C	C	C	I	C	I	PC
Results in Total	**PK**	C3, PC1, I-0	C1, PC1, I1	C3, PC1	C2, PC1, I1	C3, I1,	C3, I1	C1, I3	C2, I2	C1, I3	C1, PC2, I2
	CPK	C2, PC3, I1	C2, PC2, I2	C0, PC2, I4	C2, PC2, I2	C4, PC2	C1, PC1, I4	C3, I3	C4, PC1,I1	PC4, I2	C1, PC1, I4
	VPK	C0, PC0, I2	PC1, I1	C1, I1	PC1, I1	C2	I2	C1, PC1,	I2	PC2,	PC1, I1

CODES	
(TC)	Totally Correct
(PC)	Partially Correct
(I)	Incorrect

7.2 ANNEX No. 2. INSTRUMENTS

READING RECORD

UNIVERSIDAD PEDAGOGICA NACIONAL
FRANCISCO MORAZÁN
VICERRECTORIA DE INVESTIGACIÓN Y POSTGRADO

READING RECORD
FOR STUDENTS

General Data: Students' production of English phonemes
Objectives: To identify the students' production of English phonemes

Instructions: Read the following text aloud, while reading your voice will be recorded**.**

If English is not your native language, people may have noticed that you come from another country because of your "foreign accent". Why do people usually have an accent when they speak a second language? Several theories address this issue. Many people believe that only young children can learn a second language without an accent, but applied linguistics have reported cases of older individuals who have mastered a second language without an accent. Another common belief is that your first language influences your pronunciation in a second language. Most native speakers of English can, for example, recognize people from France by their French accents. They may also be able to identify Spanish or Arabic speakers over the telephone, just by listening carefully to their pronunciation. Does this mean that accents can't be change? Not at all! But old habits won't change without a lot of hard work, will they? In the end, the path to learning to speak a second language without an accent appears to be a combination of hard work, a good ear, and a strong desire to sound like a native speaker. You also need accurate information about the English sound system and lots of exposure to the spoken language.

Text taken from Celce-Murcia, M., Brinton, D., & Goodwin, J. M. (1996). Teaching pronunciation: A reference for teachers of English to speakers of other languages. Cambridge: Cambridge University Press.

ANNEX No. 2. READING RUBRIC

RUBRIC READING RECORD FOR ENGLISH LEARNERS

Name of the Researcher:_____Lee Ann _ _____
Participant: 1
Instruction:

1. Listen to the recording according to the given coding.
2. Use the phonetic transcription to record on the pronunciation errors section, the English phonetics features students present.
3. Use the Phonetic chart provided at the bottom of the pronunciation error chart.

		Pronunciation errors				
	DIAGNOSTIC PASSAGE	**Deletion**	**Distortion**	**Substitution**	**Addition**	**APA Symbol**
		D	**DI**	**S**	**A**	
1	If English is not your native language, people may have noticed that	/t/		**oʊ/ɑ** **əst/aɪz**	**/e/** =[æ]	
IPA Transcript	ɪf ˈɪŋglɪʃ ɪz nɑt jʊər ˈneɪtɪv ˈlæŋgwəʤ, ˈpipəl meɪ hæv ˈnoʊtəst ðæt					
P1	ɪf ˈɪŋglɪʃ ɪz [nɑt] jʊər ˈ[nætɪv] ˈpipəl meɪ hæv ˈ[nɑtaɪz] ðæt					
2	you come from another country because of your “foreign accent”. ju kʌm frʌm əˈnʌðər ˈkʌntri bɪˈkɔz ʌv jʊər “ˈfɔrən ˈæksɛnt”	/k/		**/ʌ/=ou** /s/=/ʒ/ /v/=/f/		
P1	ju kʌm frʌm əˈnʌðər ˈkountri bɪˈkɔz ʌf jʊər “ˈfɔrən ˈæʒɛnt”		**DI**	**S**	A	
3	Why do people usually have an accent when they speak a second waɪ du ˈpipəl ˈjuʒəwəli hæv ən ˈæksɛnt wɛn ðeɪ spik ə ˈsɛkənd	/K/		**/ð/=/θ/**	/e/	
	waɪ du pipəl ˈjuʒəwəli hæv ən ˈ[æsɛnt] wɛn [θeɪ] [espik] ə ˈsɛk ənd		**DI**	**S**	A	
4	language? Several theories address this issue. Many people believe ˈlæŋgwəʤ? ˈsɛvrəl ˈθiəriz ˈæˌdrɛs ðɪs ˈɪʃu. ˈmɛni ˈpipəl bɪˈliv	/z/	/i/=ɪ	**/θ/=**[t]		

P1	ˈlæŋgwədʒ? ˈsɛvrəl [tiəri] ˈæˌdrɛs ðis [iʃu]. ˈmɛni ˈpipəl bɪˈliv	D	DI	S	A	
5	that only young children can learn a second language without an ðæt ˈoʊnli jʌŋ ˈʧɪldrən kæn lɜrn ə ˈsɛkənd ˈlæŋgwədʒ wi wɪˈθaʊt æn		/j/=[dʒ] /ədʒ/=[ig]			
P1	ðæt ˈoʊnli [dʒʌŋ] ˈʧɪldrən kæn lɜrn ə ˈsɛkənd [læŋgwig] wɪˈθaʊt æn	D	DI	S	A	
6	accent, but applied linguistics have reported cases of older individuals æksɛnt, bʌt əˈplaɪd lɪŋˈgwɪstɪks hæv riˈpɔrtəd ˈkeɪsəz ʌv ˈoʊldər ˌ ɪndəˈvɪdʒəwəlz	/k/ /əd/ /s/		/dʒ/=d		
P1	[æsɛnt], bʌt əˈplaɪd [lɪŋgwɪstɪk] hæv [riˈpɔrt] ˈkeɪsəz ʌv ˈoʊldər ˌ ɪndəˈvɪdəwəlz	D	DI	S	A	
7	who have mastered a second language without an accent. Another hu hæv ˈmæstərd ə ˈsɛkənd ˈlæŋgwədʒ wɪˈθaʊt ən ˈæksɛnt. əˈnʌðər	/K/		/ə/=ɪ		
P1	hu hæv ˈ[mæstɪrd] ə ˈsɛkənd ˈlæŋgwədʒ wɪˈθaʊt ən ˈ[æsɛnt]. əˈnʌðər	D	DI	S	A	
8	common belief is that your first language influences your ˈkɑmən bɪˈlif ɪz ðæt jɔr fɜrst ˈlæŋgwədʒ ˈɪnˌfluənsɪz jɔr	/s/	j=dʒ ɪ=i	v=z ɜ=ɪə		
P1	ˈkɑmən bɪˈlif ɪv ðæt [dʒɔr] fɪərt ˈlæŋgwədʒ ˈinˌfluənsɪz dʒɔr	D	DI	S	A	
9	pronunciation in a second language. Most native speakers of English prəˌnʌnsiˈeɪʃən ɪn ə ˈsɛkənd ˈlæŋgwədʒ. moʊst ˈneɪtɪv ˈspikərz ʌv ˈɪŋglɪʃ		ʌ=u eɪ=ə		/e/	
P1	prəˌnunsiˈeɪʃən ɪn ə ˈsɛkənd ˈlæŋgwədʒ. moʊst ˈnətɪv espikərz ʌv ˈɪŋglɪʃ	D	DI	S	A	
10	can, for example, recognize people from France by their French kæn, fɔr ɪgˈzæmpəl, ˈrɛkəgˌnaɪz ˈpipəl frʌm fræns baɪ ðɛr frɛnʧ	/g/		æ=ɛ		

P1	kæn, fɔr ɪgˈzæmpəl, ˈ[rɛkənaɪz] ˈpipəl frʌm [frɛns] baɪ ðɛr frɛnʧ	D	DI	S	A	
11	accents. They may also be able to identify Spanish or Arabic speakers ˈæksɛnts. ðeɪ meɪ ˈɔlsoʊ bi ˈeɪbəl tu aɪˈdɛntəˌfaɪ ˈspænɪʃ ɔr ˈærəbɪk ˈspikərz	/k/	ð=d æ=a		/e/ /e/	
P1	ˈ[æsɛnts]. [deɪ] meɪ ˈɔlsoʊ bi ˈeɪbəl tu aɪˈdɛntəˌfaɪ ˈ[espænɪʃ] ɔr ˈ[arəbɪk] ˈ[espikərz]					
12	over the telephone, just by listening carefully to their pronunciation. ˈoʊvər ðə ˈtɛləˌfoʊn, ʤʌst baɪ ˈlɪsənɪŋ ˈkɛrfəli tu ðɛr prənʌnsiˈeɪʃ ən	/t/		/dʒ/=ʒ		
P1	ˈoʊvər ðə ˈtɛləfoʊn, [ʒʌs] baɪ ˈlɪsənɪŋ ˈkɛrfəli tu ðɛr prənʌnsieɪʃ ən	D	DI	S	A	
13	Does this mean that accents can't be change? Not at all! But old habits dʌz ðɪs min ðæt ˈæksɛnts kænt bi ʧeɪnʤ? nɑt æt ɔl! bʌt oʊld hæbəts	/k/ /t/				
P1	dʌz ðɪs min ðæt ˈ[æsɛnts] [kæn] bi ʧeɪnʤ? nɑt æt ɔl! bʌt oʊld [hæbəs]	D	DI	S	A	
14	won't change without a lot of hard work, will they? In the end, the woʊnt ʧeɪnʤ wɪˈθaʊt ə lɑt ʌv hɑrd wɜrk, wɪl ðeɪ? ɪn ði ɛnd, ði	/ʤ/	d=ð	/ʧ/=[ʃ]		
P1	woʊnt [ʃeɪn] wɪˈθaʊt ə lɑt ʌv hɑrd wɜrk, wɪl [deɪ]? ɪn [di] ɛnd, [di]	D	DI	S	A	
15	path to learning to speak a second language without an accent pæθ tu ˈlɜrnɪŋ tu spik ə ˈsɛkənd ˈlæŋgwəʤ wɪˈθaʊt ən ˈæksɛnt	/k/ /t/	/əʤ/=[ig]		[e]	
P1	pæθ tu ˈlɜrnɪŋ tu [espik] ə ˈsɛkənd [læŋgwig] wɪˈθaʊt [n] [æsɛn]	D	DI	S	A	
16	appears to be a combination of hard work, a good ear, and a strong əˈpɪrz tu bi ə ˌkɑmbəˈneɪʃən ʌv hɑrd wɜrk, ə gʊd ir, ænd ə strɔŋ	[and	/ʊ/=u			

P1	əˈpɪrz tu bi ə ˌkʌmbəˈneɪʃən ʌv hɑrd wɜrk, ə [gud] ir, ə strɔŋ	D	DI	S	A	
17	desire to sound like a native speaker. You also need accurate dɪˈzaɪər tu saʊnd laɪk ə ˈneɪtɪv ˈspikər. ju ˈɔlsoʊ nid ˈækjərət	/ækjərət/	eɪ=a dʒ=j	/aɪə/=[ɛ] [əˈkwaɪər]	[tu]	
P1	dɪˈzɛr tu saʊnd laɪk ə [natɪv] ˈspikər. [dʒju] ˈɔlsoʊ nid [tu] [əˈkwaɪər]	D	DI	S	A	
18	information about the English sound system and lots of exposure to ɪnfərˈmeɪʃən əˈbaʊt ði ˈɪŋglɪʃ saʊnd ˈsɪstəm ænd lɑts ʌv ɪkˈspoʊ ʒər tu			/K/=[ʃ]		
19	ɪnfərˈmeɪʃən əˈbaʊt ði ˈɪŋglɪʃ saʊnd ˈsɪstəm ænd lɑts ʌv [ɪʃspoʊʒər] tu	D	DI	S	A	
	the spoken language. ðə ˈspoʊkən ˈlæŋgwəʤ					
	ðə ˈspoʊkən ˈlæŋgwəʤ					

*Celce-Murcia, M., Brinton, D., & Goodwin, J. M. (1996). Teaching pronunciation: A reference for teachers of English to speakers of other languages. Cambridge: Cambridge University Press.

ANNEX No. 3 Interview Participant 1

UNIVERSIDAD PEDAGOGICA NACIONAL
FRANCISCO MORAZÁN
VICERRECTORIA DE INVESTIGACIÓN Y POSTGRADO

Dirección de Postgrado

RUBRIC ABOUT PHONETICS AWARENESS FOR STUDENTS

Quanhy Participant # 1

General Data: STUDENTS' KNOWLEDGE OF THE PHONETICS OF BOTH LANGUAGES, SPANISH AND ENGLISH.

Place: Universidad Pedagógica Nacional Francisco Morazán, campus Sta. Rosa. **Year:** 2018
Objective: To collect students' perception related to phonetics of English.

Instruction: Read each question, providing the answer you consider correct.

Subject Code:					
Age	**Sex**	**M**	**F**	**Term**	**Economic status**
Place of origin: El Pinal San Juan de Opoa Copán			✓		middle class

1. Why is phonetics important?

It is important because we can improve our pronunciation. = C

2. How do plosives consonant sound differ from fricatives in English?

I don't remember = I

3. Write the phonetic symbol for the initial consonant sound, using IPA symbols
a. (photograph) f
b. (sugar) ʃ
c.(thimble) h ✗
d. (children) ʃ ✗

2/4 = PC

4. Write the phonetic symbol of the vowel sound using IPA symbols
a. (foot) ʊ
b.(said) ɑ ✗
c. (light) i ✗
d. (toast) ɑ ✗

1/4 = I

5. Choose the correct phonetic symbol from the following letter sounds
/dʒ/ /ð/ /θ/ /ʒ/
a. father dʒ ✗
b. that ð
c. measure θ ✗
d. joy ʒ ✗

1/4 = I