# TEACHING PRONUNCIATION THROUGH EXPERIENTIAL LEARNING AND PRONUNCIATION TECHNIQUES. 

Thesis presented for<br>BA in English Language Teaching<br>Degree

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## Note of Aceptance

The project here entitied:
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"One language sets you in a corridor for life.
Two languages open every door along the way." (FrankSmith)

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## Research topic:

Teaching pronunciation through experiential learning and pronunciation techniques.

## INTRODUCTION

During the observation of four English classes at the beginning of a professional practicum in the second half of 2015 in a private school in Bogota, it was observed students had some pronunciation problems when they spoke and performed short conversations in listening and speaking activities. It looks like a simple problem; but the reality is that it is an aspect which may cause negative implications in students' learning process because pronunciation is an aspect that is linked with speaking and listening mainly (Bearte K., 2O14). If you analyze this point of view you might say: What is the relationship among them? The answer is simple. Whether you pronounce a word or sets of words wrongly, at the beginning, you do not notice the consequences. Those consequences are related to there is a great quantity of words with minimal pairs which have completely different meanings to each other. An example of this is: 'she went to bet VS she went to bed (bet VS bed)'. However, when you progress, you realize whether you are able to pronounce a word correctly, you can listen and understand it without any problem. But if you pronounce something wrongly, you might probably generate misunderstandings and that is why this project took for topic EFL pronunciation.

Other concepts which are recurrent in this research project are Phonetics and Phonology. Probably you are wondering why Phonetics and Phonology in the same private school in Bogota Luigi Pirandello. It was observed teachers dealt with pronunciation in class in an inappropriate way. That was perceived from a personal perception because students had the notion that English language has the same sounds as in Spanish. It means, students did not know English has got a
completely different phonological system that in Spanish language (Cala R., 1998). That is why students pronounce English phonemes like in Spanish. For example, they pronounced the word 'feel' (/fi:1/) like /fil/ and at first glance it cannot be perceived like a big problem; but there is another word with a minimal pair 'fill' (/fII/) and here if students do not know the difference in terms of pronunciation, they can perceive both words like homophones ${ }^{1}$ or even like the same word. Another aspect is that the fault is not the teachers' or even students'; the lack of material is to blame and even the lack of teachers' training. Teachers have to work with material they design or material they manage to deal with every aspect of language learning that students should know. The lack of teachers' training in terms of linguistic disciplines such as Phonetics and Phonology are commonly omitted by teachers and this affects students to develop their production and perception skills in oral productions.

In addition, in terms of Phonetics and Phonology as linguistic disciplines, there is a great quantity of aspects students should know; but one of those aspects is the differentiation of some phonemes which are in the phonological system of L2 but are not in L1. For that reason, this research project focused on three minimal pairs / $\_$/ VS / æ /, / i / VS / i: / and / $\theta / \mathrm{VS} /$ / /, which EFL learners had more difficulties in terms of pronunciation according to a pre-research test and an observation of students' pronunciation. That pre-research test and observation were done as the first step of this research (a needs analysis). In this step researcher asked students to read some sentences and words in order to identify their difficulties in terms of pronunciations and phonemes which students had greater difficulty with. It is important to clarify those minimal pairs are just a sample of EFL students' difficulties. Those minimal pairs were chosen because

[^0]they are the most common and they have some features which do not exist in Spanish, features such as: length (e.g. /i:/ VS /I/), difficulties in distinction (e.g. / $/ / \mathrm{VS} / æ /$ ), the combination of two vowels (middle sounds) (e.g. /I/ 'e'//i' and /æ/ 'a'/'e'), the place of articulation of some phonemes which do not exist in Spanish or are limited (Avery P. \& Ehrlich S., 1992); e.g. interdental $/ \theta /$ and $/ \delta /$, in Spanish there is one consonant ' $z$ ' but it is pronounced only in different variations of accents in Spain but not in Latin-America (Transpanish, 2014).

Other important point to mention here is that Experiential Learning strategy was used in the implementation stage. This strategy was an innovative aspect because this research project pretended to implement it in order to show that English pronunciation teaching can be carried out with a strategy, which allows students learn by their own through the experience as a pedagogical tool.

In addition, four Pronunciation Techniques were carried out mainly; so that students were able to acquire and practice those three minimal pairs mentioned above in simple words, sentences and short conversations. Such Pronunciation Techniques were: drilling, minimal pairs, listening activities and reading activities (Kelly G., 2000). It is important to clarify those activities or techniques were adapted depending on students' current needs, interests and the nature of each phoneme or couple of minimal pairs per session. Drilling, for example, is not just repetition in one simple way, as the teacher can adapt drilling to different situations and contexts (Kelly G., 2000).

In the same line, taking into account this research' objectives, this paper has been organized in the following way:

In the first chapter the basis of the research project is described: justification, research problem, research question and objectives of the research. It means, it
explains why it was focused on pronunciation; why Experiential Learning approach was chosen; why these Phonetics and Phonology Pronunciation Techniques were chosen; how this research started; how this paper was addressed (objectives), and what this research pretended to solve or describe (research question).
$>$ In second chapter a historical background related to other three related research projects in terms of pronunciation, Phonetics and Phonology are mentioned and analyzed. Also the main constructs of this research in the theoretical framework part are defined (Phonetics and Phonology techniques, phonemes worked in this research project and Experiential Learning Strategy).
$>$ In chapter three, characteristics and stages about the structure of this research project are described. It means, the design methodology, which is formed by the approach, the research paradigm, the characteristics of the research population and instruments of data collection are described. That is, the reason why this research was focused on action research and in a mixed research; the description and features of the population, and finally, the data collection instruments that were selected, how they were applied and how they helped in the process of data analysis.

In chapter four, the implementation stage is described. It means, the description of each session and the description of how instruments of data collection were used and the specific moments in which they were used.
> In chapter five data analysis and aspects related to what was implemented in the school are described; at the same that findings that were found in the implementation stage.
$>$ Finally, in chapter six the description of conclusion and the research project outcomes are presented.

## CHAPTER I

## JUSTIFICATION

Nowadays English Teaching Studies play an important role in this society, as globalization has become an essential part in humans' daily life, due to the fast technological growth and the idea of expanding proposals business around the world. Added to this, English has positioned itself as the language for those purposes. So, it is essential that all human beings who want to access the globalized world need to communicate using English as a world language (Forbes, October $26^{\text {th }}, 2012$ ). For this, firstly they need to learn English and it is at this point that English as a Foreign Language (EFL) teachers take part in the process.

In the same line, EFL students need to learn all communicative English skills (listening, speaking, reading and writing) and along with them grammar and pronunciation. In the past years ESL teaching was focused mainly on reading and writing. However, almost everything else was overlooked, including pronunciation (Dodgson D., (2015). This was due to the lack of training for teachers who did not have enough tools and strategies to teach pronunciation. This explains that many students in previous years did not have the elements to express themselves about any topic in an oral way because they studied English in a way in which oral production merely concerned to the teacher. It means, students were trained mainly in writing and reading (Dodgson D., 2015). That is why pronunciation currently plays an important role giving learners the bases to avoid misunderstanding and miscommunication for mispronunciation reasons; so that students understand how to produce and perceive English sounds among other pronunciation characteristics (Griffiths B., 2004) \& (Dodgson D., 2015).

As a result of the above, this research project arose to give an option for EFL teachers to teach and address pronunciation in English classes, especially the production and perception of English phonemes, because the English phonological system is very different from the Spanish phonological system. Hence this research focused on a part of pronunciation (segmental levels), in which Spanish speakers commonly make mistakes, because they lack information in this field. Proof of this is in any students' book or workbook, which are focused on the grammatical part, and there is nothing, or too little, related to pronunciation (See Appendix V: Extra information 5.1.). It is necessary for students to know that English phonemes are independent from phonemes in Spanish. For example, to say 'cat' which is pronounced /kæt/, instead of /cst/ 'cut' taking into account that $/ æ /$ and $/ \Lambda /$ minimal pair is harder for Spanish-speaking learners of English to differentiate and pronounce. In that way it is a different word if you change its vowel pronunciation. In other words, the problem here is that Spanish has only one phoneme for ' $a$ ' while English has more than one (/ $/ / \mathfrak{l} / / \mathrm{a}: / / \mathrm{p} /$ and even unstressed schwa sound $/ ə /$ ) (Parkinson S., 1983). That is why this research project highlights the importance of Phonetics and Phonology Pronunciation Techniques to help teachers to deal with that kind of obstacles when students communicate in English.

As the main problem found with this research has been the lack of teachers' training in the field of Phonetics and Phonology to deal with pronunciation difficulties of Spanish-speaking learners of English, this research proposes Experiential Learning Strategy; so that students are able to realize by themselves the way how English phonemes could be acquired. At the same time, in order to contextualize the pedagogical experience from the Experiential Learning Strategy, this research project proposes the use of four Phonetics and Phonology Pronunciation

Techniques (reading activities, listening activities, minimal pairs and drilling); so that English phonemes are not taught in isolation and without any meaningful treat for EFL students.

It was chosen Experiential Learning Strategy so that students could have an experience at the same time they learn about segmental features of the pronunciation. In addition, it was chosen as a known teaching strategy in which untrained teachers in the Phonetics and Phonology Linguistics fields could deal with segmental pronunciation features. Experiential Learning Strategy was combined with phonetics and phonology techniques as an innovative feature from this research project, in order to take into account the pedagogical experience and pronunciation techniques that make the features of the English phonemes in relation to Spanish phonological system easier to understand.

To sum up, this research project provides strategies about how teachers can deal with real problems in the private school Luigi Pirandello in Bogota, where this research project was carried out. The problems which are the basis for this research are: the teachers' lack of training in Phonetics and Phonology, the lack of material to deal with the teaching of English phonemes and the lack of time to practice pronunciation in class. The aim of this research project is to propose strategies about how EFL teachers can deal with English pronunciation in their classes, and how they can deal with students' difficulties in this field too.

## Purpose statement

The purpose of the following study is to propose an alternative teaching strategy related to the use of mainly four English Phonetics and Phonology Pronunciation Techniques (drilling, minimal pairs, listening activities and reading activities) through Experiential Learning approach
in order to contribute to EFL learners' pronunciation process, which allows them to produce English phonemes in a natural way in simple and common words, sentences and short conversations, with the goal of improving speaking and listening skills, using for this research students from sixth grade from the private school Luigi Pirandello in Bogota, during the first semester, 2016.

## Research problem

Pronunciation is essential in the EFL and also in Spanish learning process, and it has been in the background for different reasons. Some of those reasons are the lack of material for teaching English pronunciation and the lack of teachers' training in phonetics and phonology to teach pronunciation. (Griffiths B., 2004). That is why it is important not to set it aside because speaking is the most common form of communication and it is the easiest way too. Spanish speaking-learners of EFL need to know and differentiate the characteristics of English phonemes, due to the fact that most of the English sounds are completely different from Spanish sounds (Shoebottom P., 1996, 2015).

One of the aspects you are probably wondering after reading the research question is "what is the point of this research?" and also you are thinking, students can learn pronunciation in listening activities and surely when they make pronunciation errors and are corrected by the teacher. However, is that the correct way to teach English pronunciation? There are three different ways to deal with pronunciation teaching in the classroom: a) integrated teaching: it is the kind of lesson when pronunciation has the same importance that other skills, b) reactive teaching: in which pronunciation difficulties that arises in the class are dealt with there and at the moment, and c) practice lesson: in which a particular feature of pronunciation is isolated and
practiced for its own sake (Kelly G., 2000). Here, it is important to say that teachers have to avoid the reactive teaching, and they have to apply practice and integrate teaching in order to work and dealt with every pronunciation features, so teacher can anticipate problems, questions, and they can be prepared for explicitly teaching pronunciation.

Teaching English pronunciation through Phonetics and Phonology techniques is a meaningful way to instruct students on how English phonemes are produced and understood within a linguistic and extra linguistic context, and allows students to understand the differences between English and Spanish phonological systems.

It may be thought that an experienced phonetician is required for teaching pronunciation and it could be a good idea. However, the most important aspect to keep in mind is learners' needs in pronunciation terms. Even if teachers are not phoneticians, through their experiences they might know the basics about the phonetics chart and how each English phoneme is pronounced. Moreover in order to teach any topic, teachers need to research how to teach it in a proper way, and how it can be explained. Then, they have to create and apply activities and strategies, and English pronunciation is not the exception in this process.

This problem was first identified in personal experiences as an EFL learner, because English classes were the same, day after day, where teachers taught grammar, writing, listening and reading but nothing else. In other words, pronunciation was overlooked most of the time. However, a few times pronunciation was addressed in a special way, using correction of mistakes in pronunciation at the time to make them and that was all. The problem is not that it happened in that way; the problem is that this teaching process is being reproduced nowadays. Proof of this is that those teachers in the author's teaching practicum carried out the same teaching process. Added to that, the pre- test was carried out in order to look for needs in general
terms by the researcher with a group of students from sixth grade from Luigi Pirandello School. There, it was shown a list of words in English; then those students read each word. In that pretest, it was observed that students read the words using most of the time Spanish phonemes; obviously some words were right, but it was because they might have listened to them before. It was proved previously of implementation of the first session in the implementation stage because most of the students were surprised when they discovered that there were more vowel sounds in English than in Spanish.

## Research question:

How do Phonetics and Phonology Pronunciation Techniques and Experiential Learning strategy enhance the pronunciation of /ı/ VS /i:/, / $\Lambda / \mathrm{VS} / \mathfrak{\text { / } / \text { and } / \theta / \mathrm { VS } / \delta / \text { minimal pairs in }}$ common words contained in simple sentences and short conversations in students from Luigi Pirandello School?

## OBJECTIVES

## General objective

$>$ To analyze students' progress in the pronunciation of three minimal pairs (/ $/$ / VS /æ/, /I/ VS /i:/ and / $\theta / \mathrm{VS} / \mathrm{\delta} /$ ) in common words contained in simple sentences and short conversations, using Phonetics and Phonology Pronunciation Techniques and Experiential Learning strategy.

## Specific objectives

$>$ To identify students' difficulties in terms of (/ $/$ / VS /æ/, /I/ VS /i:/ and / $\theta / \mathrm{VS} / \mathrm{/} /$ ) minimal pairs pronunciation in common words contained in simple sentences and short conversations.
$>$ To describe students' pronunciation progress of $/ \Lambda /$ VS /æ/, /I/ VS /i:/ and / $\theta /$ VS $/ ð /$ minimal pairs during the implementation stage using Phonetics and Phonology Pronunciation Techniques and experiential learning.
$>$ To evaluate how Phonetics and Phonology Pronunciation Techniques and experiential learning approach promote the improvements of the pronunciation of / $\Lambda /$ VS /æ/, $/ \mathrm{I} / \mathrm{VS} / \mathrm{i}: /$ and $/ \theta / \mathrm{VS} / \mathrm{d} /$ minimal pairs in common words contained in simple sentences and short conversations.

## CHAPTER II

## LITERATURE REVIEW

On this part of the project, it is important to keep in mind some similar researches which are related with this research project's objective and context. Hence, the following researches describe different aspects which were taken into account to develop this research project; those aspects were in terms of: data collection instruments, data analysis, key concepts, and even the methodology.

The following researches are relevant because they show different points of view about how English phonemes have been taught and dealt with by different authors and researches.

1. Jaya S. Goswami, Hsuan-Yu Chen (2010) The impact of instruction in phonetic and phonemic distinctions in sounds on the pronunciation of Spanish-speaking

## ESL learners

The journal and research worked by Jaya S. Goswami, Hsuan-Yu Chen, (2010) explains if Phonetics and Phonology instruction should be implemented in the classroom, its effectiveness and impact in the classroom environment. For this research the target sounds were categorized into sounds having allophonic distinctions between the two languages (/t/ -ten- and /d/ in -den-); sounds which differ in the two languages (/v/ in vase and /z/ in zoo ), and sounds which are phonemes in English but absent in Spanish (/ठ/ in there, $/ \theta /$ in think and $/ \mathrm{J} /$ in shoe).

The research was conducted with 33 students from a private high school, who were instructed in the differentiation of sounds between Spanish and English through lecture-type as well as through improved technological materials. During the period of research, ESL learners attended classes and there, the most important cases or the cases which EFL learners had the biggest difficulties in terms of pronunciation were taken to be considered in the investigation.

Those English sounds were /t/ /d/ /v/ /z/ / $\partial / / \theta / / \mathrm{J} /$ and their respective minimal pairs or allophone sounds $(/ \mathrm{d} /, / \mathrm{t} /, / \mathrm{b} /, / \theta /, / \theta /$ or $/ \mathrm{t} /$, / $\mathrm{\delta} / \mathrm{or} / \mathrm{d} /$ and the last $/ \mathrm{t} \mathrm{f} /$ ).

Researchers carried out a pre-test on subjects before starting the phonetic instruction classes and a post-test in order to compare whether subjects achieved a meaningful development in their pronunciation skills. Results were examined and analyzed by the researcher using a tape recorder and placing a score for each test to compare them at the end of the research. Results were positive and gave answer to the research questions, showing that Phonetic Instruction and Training was important to be applied in ESL classes in order to improve students' pronunciation skills.

This research could be taken to support the idea of this research project in which grammar activities are not enough to develop oral production in a proper manner because ESL learners need to deal with learning new sounds and speech habits in their learning process. That is, students need to know the differences between allophone sounds, new sounds and changes between L1 and L2 production.

This research project took some aspects from the research project mentioned above. Those aspects are: the idea of a pre and post-test to know students' progress in the production of the target phonemes (/æ/ VS / $/$ /, $/ \mathrm{i}: / \mathrm{VS} / \mathrm{I} /$ and $/ \mathrm{\delta} / \mathrm{VS} / \theta /$ ); the analysis of data of the tests in terms of charts and instruments of data collection, due to it was interesting the idea of monitoring the students' process with 3 tests in the different stages of the implementation of the research, and how the gathered information was organized and analyzed; the theoretical constructs of Phonetics and Phonology and the idea of using audio recordings to gather the data.

| Target sounds |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Differ in a phonetic feature (place of articulation) |  | Differ in phonological behavior (allophone [AL] vs. phoneme /PH/) |  |  | Absent in native language |  |
| Sample | Tests | t | d | v | z | б | $\theta$ | š |
| 1 | pre | 3 | 4 | 1 | 2 | 0 | 1 | 1 |
| 1 | post | 6 | 6 | 4 | 5 | 4 | 5 | 5 |

Example of pretest and post-test analysis (Data analysis, chart 1, Jaya S. Goswami, Hsuan-Yu Chen, 2010), in pretest and post-test 60 words were used which contained the target sounds in different positions and either pre and post tests used the same words. The numbers of files and columns are the number of correct pronunciation of each target sound.

## 2. Gleason J. (2012) Beaches and peaches: common pronunciation errors among L1 Spanish speakers of English.

Continuing with researches, Gleason J. (2012) took into account four specific cases: 1). /P/ VS /b/, 2). /I/ vs /I:/, 3). /ov/ vs / o:/ and 4). /t/ vs /d/. They were proposed by the author as the most common errors made by Spanish-speaking learners of ESL. The study was done by taking two native Spanish speakers; who lived 5 and 7 years in the United States respectively, Fulano and Juanita (pseudonyms). The first one lived in United States for 5 years and took an English course during two and half years; while the second one had lived in United States for 7 years and she had not taken any English course yet.

The two participants were recorded while they were doing a set of activities related to pronunciation, such as: role-plays, tongue twister, etc. The analysis of the information collected was graded quantitatively in order to verify the raised patterns and looked for other errors in the pronunciation of participants in a case study as a research approach.

The results showed unexpected data. First of all, there was no difficulty in the pronunciation of the phonemes $/ \mathrm{P} /$ and $/ \mathrm{b} /$. However, the biggest errors found and the most
difficult minimal pair for Spanish speakers was the case of /I/ vs /I:/. In addition, phonemes /t/ vs /d/ showed also great difficulty in pronunciation. The information collected helped to identify others errors in pronunciation of the minimal pairs $/ \mathrm{v} / \mathrm{vs} / \mathrm{b} /$, /f/ vs $/ \mathrm{v} /$ and the pronunciation of consonants clusters which is a common problem for Spanish-speaking leaners of EFL. Those problems were identified at the time to analyze the data collected in interviews because as it was mentioned before researchers did not pretend to find any mistake in those aspects. The conclusion of this study was that the two participants Fulano and Juanita improved significantly, as they learned to grasp the differences between minimal pairs worked. However both participants continued committing errors, but they improved significantly their pronunciation.

Gleason's research (2012) mentioned above can be taken in order to support this research in the following aspects. For example, it is important not to generalize phonemes into specific cases, because EFL learners need to face each English phoneme individually or by minimal pairs in order to make a comparison with Spanish phonemes and in this way to identify how English phonemes must be pronounced. Also Gleason's research helps to identify some English phonemes which Spanish speakers have difficulties with. As it can be seen in that research, it shows a situation which proves that it is necessary for Spanish learners of EFL having knowledge in the pronunciation features and differences between L1 and L2 phonemes, so that they do not commit mispronunciation and miscommunication. Also, this research helps to take activities and materials for data collection such as: tongue twisters and free speaking activities which allowed to designed lesson plans for each session.

The aspects which makes the research project described above important to this research project are: Gleason's research project worked with a minimal pair which this research has worked as well (/i:/ VS /I/) because she proved that this minimal pair was difficult to pronounce
for Spanish speakers. Gleason's research created some activities which were based on two Phonetics and Phonology Pronunciation Techniques which this research has used as well (reading activities and minimal pairs) because those pronunciation techniques allow students to increase their pronunciation skills though reading aloud and differentiating between two minimal pairs. Other aspect is the use of a kind of activity which was helpful to complete the experiential learning cycle (four stage: active experimentation) because Gleason used free-speaking activities to record the students' progress; this aspect was chosen because it allows students to practice what they have learnt throughout the session and in previous stages of Experiential Learning cycle And the last and not least important aspect is the use of transcripts of recorded activities to analyze data and of course the way to analyze those transcripts too.

## 3. You, Alwan, Kazemzadeh \& Narayanan (2005) Pronunciation variations of Spanish-accented English spoken by young children

In the same line You, Alwan, Kazemzadeh \& Narayanan (2005) emphasize that the purpose of the research was to find out the English phonemes that have become in allophones by Spanish speakers. For example, /b/ instead of /v/, /d/ instead of /ð/ or /t/ instead of / $\theta /$. That research worked using young ESL learners. For this research authors used a dynamic programming-based transcription alignment on 4500 words spoken by children from five to seven years old whose first language was Spanish.

The results of You, Alwan, Kazemzadeh \& Narayanan's research (2005) served like base to identify Spanish allophones and variation in each Spanish phoneme in order to contrast Spanish sounds with the production of English sounds; and in this way, to focus this research towards the acquisition of the most complex English phonemes for Spanish speakers. That research gives a new key concept about English pronunciation which is "acoustic phonetic level
transfer" Alwan, Kazemzadeh \& Narayanan (2005). Its meaning is the production of non-native sounds, using approximated sounds, for example: in Spanish th/ $\delta /$ sound does not exist and that is why ESL learners use /d/ sound to approximate the new sound. It is important keeping in mind this concept because it allows researches create or look for a manner in which students can get to pronounce new phonemes for them. For example how students can differentiate a minimal pair like / $\mathrm{\delta} / \mathrm{VS} / \theta /$ instead of pronouncing /d/ VS /t/.

This third research is different because it only focuses on the allophones sounds of L2 in relation to the phonemes of L1. However, for this reason, it can contribute on the use of materials, strategies and the results about how learners of ESL need to understand allophones sounds; how those sounds can help them to improve their speaking and listening skills and how they interfere in students' pronunciation learning process.

To sum up, three different researches were described in terms of the way they were carried out taking into account the use of Phonetics and Phonology to study English phonemes that Spanish speakers have more problems with, in relation to pronunciation. Also those researches helped this research project in several aspects. For example, the Haya and HsuanYu's research (2010) shows a proper classification of English phonemes (different place of articulation between L1 and L2; sounds which differ in phonological behavior, specifically, allophone vs phoneme: and sounds which are absent in Spanish); and this classification was taken in order to apply the lesson plans with this research population. Gleason's research (2012) gives a viewpoint over some phonemes (/i:/ and /I/) in which at the time to implement Phonetics and Phonology must have special attention; and that viewpoint is that students tend to replace phonemes when they cannot articulate then, in other words /i:/ phoneme is replaced by Spanish /i/ and /I/ is replaced by /e/ or even by Spanish /i/. To conclude it can be said that it is important
to be based on previous research studies to improve them or get ideas for a new research and from there, starting with the next part of the research project which is the building of the key concepts of research.

## THEORETICAL FRAMEWORK

This research project was carried out following mainly four Pronunciation Techniques which were implemented in the field of Phonetics and Phonology. In addition, Pronunciation Techniques of this research project were implemented taking into account the Experiential Learning Strategy due to this strategy allows students to analyze and practice the language skills, and get to their perceptions of $/ \Lambda / \mathrm{VS} / æ /$, $/ \mathrm{I} / \mathrm{VS} / \mathrm{i}: /$ and $/ \theta / \mathrm{VS} / \delta /$ minimal pairs, because learning of English phonemes is strongly related to the experience so that students understand in firsthand how those phonemes are produced and perceived.

In order to contextualize this research paper, it is necessary to mention theoretical constructs in which the development of this study is supported with, as well as some authors who have worked in this field and have been mentioned through this chapter. It is important to mention that the most important concepts which helped this research to drive it in a straight way and to understand why this research is developed were selected. The concepts were

1. Phonetics and Phonology

### 1.1. Phonetics

1.2. Phonology

### 1.3. Phonemes

### 1.3.1. Minimal pairs

## 2. Experiential learning

Every construct and sub-construct is focused on English as a foreign language learning, but in some parts they are contrasted with the Spanish one, because this project is
particularly addressed to Spanish-speaking learners in order to improve their pronunciation of EFL of common words contained in simple sentences and short conversations.

## 1. PHONETICS AND PHONOLOGY

In order to introduce the main sub-concepts of this construct, they will be defined according to the point of view of 3 authors per sub-construct, these sub-concepts are phonetics, phonology and phonemes:

### 1.1. Phonetics

One of the most important concepts in this research project is phonetics because the approach for this research project is the use of Phonetics and Phonology techniques to deal with errors and mistakes in English pronunciation in students from sixth grade in a private school in Bogota. Phonetics has to be defined in order to understand the focus of this research. Delahunty \& Garvey (2010) state "phonetics is a system for describing and recording the sounds of language objectively. Phonetics provides a valuable way of opening our ears to facets of language that we tend to understand by reference to their written rather than their spoken forms" (P.89). As it can be deduced phonetics is the written way to oral process or simply the graphic representation of each human sound from all languages.

An important aspect to highlight is that phonetics describes and records the sounds of language. It is important because it means phonetics gives a tool so that learners understand how sounds or phonemes are produced and perceived in learners' roles of listeners and speakers. Also it means those processes allow to identify the characteristics of each sound, permitting learners
get knowledge about some aspects of pronunciation such as: manner of production, place of production and the characteristics that involve the production of a specific sound; and therefore what makes a sound different from other similar sounds or phonemes.

The second aspect that attracts the attention of the authors' quote is the final part that says that people tend to understand by reference to their written rather than their spoken forms, because from a personal point of view people tend to relate images with what they want to say, even at the moment when they try to understand something. For example the difference in pronunciation between 'feel /fi:l/ and fill /fil/' is the sound of letter ' i ', because in the later word /I/ sound is shorter than in the first word which can be considered to be a mix between /e/ and /i/ sounds from Spanish.

Another point of view about phonetics is "the scientific study of speech sounds" (Collins and Mees, 2013, P.303). It is possible that this definition is understood as something brief and devoid of information. However, it gives the necessary information to understand that Phonetics is a science responsible for defining the basis for the sounds in a language, so that learners of a language can understand the characteristics that make a sound different from others and all that involves the study and understanding of the sounds in a language (manner of production, manner of perception, changes about accents, etc).

Whether a comparison is made between both points of view, it is possible to notice some differences and some similarities between both. First and the most relevant is the fact phonetics is focused on studying sounds in the speech process. Otherwise the first view focuses on Phonetics as a system used to represent human communicative sounds objectively and the second view focuses on phonetics as a science of study.

Both definitions previously mentioned and explained probably have a relationship among them, because they are focused in speech sounds and perhaps each definition complements each other. It means phonetics is a science which has the goal into study the speech sounds; but it is focused in the graphical representation of speech sounds in order to achieve its understanding, the characteristics of each sound and the differences with similar sounds or allophones.

For greater understanding, another viewpoint states phonetics is "the branch of linguistics that deals with the sounds of speech and their production, combination, description, and representation by written symbols" (Mannell, Cox \& Harrington, 2000-2014). As it can be seen in the above viewpoint, the meaning of phonics is shown from a more explicit definition than others mentioned above, in which phonetic is not a science, but a branch of a science (linguistics). Also it can be observed that phonetics handles everything related to the production and perception of speech sounds.

In the above quote, it is important to highlight the part where it says phonetics deals with representation by written symbols, because it means phonetics has created an International Phonetic Alphabet IPA or more, which allows students to identify the number of sounds of a language (the number of sounds in a language is not strictly related to the alphabet which speakers of a specific language use in their writing).

The meaning of the quote implies that phonetics studies how speech sounds work in one language taking into account their characteristics individually, as in a context, that is, words, sentences and everything that involves oral communication. Also it shows how speech sound are
produced and perceived. In other words this quote is similar to other quotes mentioned about phonetics.

To sum up phonetics is a branch of linguistics that deals with the study of speech sounds, considering the production and perception of all speech sounds and the representation of written symbols. This research project took into account two specific areas of phonetics which were 'articulatory phonetics' that is focused on how human being sounds are produced and 'auditory phonetics' that is focused on how sound are perceived. Auditory and Articulatory Phonetics were a fundamental part in this research project because Auditory Phonetics allowed students to identify the specific characteristics of each new phoneme and minimal pair in order to understand the message from any communicative situation; and Articulatory Phonetics allowed students to pronounce each new phoneme and minimal pair automatically and appropriately in order to be understood in any oral communication. The Phonetics part was shown in the implementation stage, as researcher gave previous instruction to implement Pronunciation Techniques. For example, previously students got an explanation about the understanding and production of each new minimal pair, they were faced to a real situation (a video, an audio, etc.) so that they could infer how sounds were produced or articulated taking into account new speech habits and articulator involved. .

### 1.2. Phonology

The second important sub-construct is phonology, which in many cases is understood like phonetics. For that reason it is important to distinguish the similarities and differences among them. Collins and Mees (2013) say "it is the branch of linguistics that deals with the system and patterning in sounds of a language" (P. 303). As it can be seen, the meaning of
phonology mentioned above is similar to the one of phonetics viewpoints mentioned in one of the previous paragraphs too. However, it is important to observe three words in this phonology point of view: system, patterns and a language; so there are some differences. First phonetics is related to every speech sounds, but it is not specific for a language. However, phonology is strictly related to a specific language because each language has its own characteristics and its phonemes which makes them different from others. For example English is a stressed timed language and Spanish is a syllable time language. It means English takes into account pitch, rhythm and time. However, Spanish has other kind of characteristics related to syllables, such as: every syllable is perceived as taking up roughly the same amount of time, the tilde and more. So it is important to keep in mind those differences because although Phonetics and Phonology work altogether, their approaches are different (Kelly G., 2000).

Other aspect that can be inferred from that quote is that all languages have similar sounds among them; but there are other sounds which vary from language to language. For example 'th'/ð/ and $/ \theta /$ are sounds that do not exist in Spanish; or the $/ \tilde{n} /$ sound in Spanish does not exist in English. In the same line /r/ sound is not the same in English that in Spanish, due to position and manner of articulation of the tongue is completely different. Those characteristics are studied in phonology according to the quote above.

Other point of view about phonology says "Phonology concerns itself with the ways in which languages make use of sounds to distinguish words from each other" (Delahunty \& Garvey, 2010, P. 89). This view is detailed; but it is closely related to the previous one, stating the same concept in other words. That is, phonology is not related to how speech sounds are produced in an individual way; instead of that, it is about how to differentiate them, considering patterns and how to distinguish some sounds from others.

When authors say that languages make use of sounds to distinguish one words from each other, it refers to patterns like minimal pairs which is a characteristic of a language where two words or phonemes are almost similar, but they have one different sound or characteristic. For example, 'cut' and 'cat' is a minimal pair in which the 'a' vowel sound is perceived in both words by Spanish speakers, and it is here where the distinction of different sounds makes difference from one to each other. The phonological transcription of both words is $/ \mathrm{k} \wedge t / \mathrm{and} / \mathrm{kæt} /$ respectively. It means, the first word has a similar sound of Spanish 'a' but is shorter and the second word the phoneme in the middle of the word can be perceived to be a mix between /a/ and /e/ sounds from Spanish. In the same line, rhythm, intonation and stress are characteristics of languages like English. Rhythm refers to the pitch of voice; in other words strong (stress) and weak forms in speech. Also intonation is something about how speakers present key information in a conversation using the tone of voice (Kelly G., 2000).

Also Mannell, Cox \& Harrington (2000-2014) say "phonology is the study of the sound structure of a language". From this point of view, phonology is related to how sounds within a language work together; that is, phonology is about how sounds are produced keeping in mind patterns mentioned by other authors.

Authors state that phonology explain how sounds works in a language in an individual way and how these sounds work in the structure of a language too. It means how sounds are used in order to form words, sentences and in other words in spoken in communication. Taking into account the authors' point of view, it is important to say that it is really similar to the previous points of view, because when authors talk about language structures, they refer to patterns like rhythm, intonation and stress, which are concepts explained above.

To conclude phonology is the branch of linguistics which explains the studying sounds and how a system and patterns in a language work. It is important to take into account that phonology works in a specific language, due to each language has different patterns such as: rhythm, intonation, stress, pitch; and added to this phonology keeps in mind how to differentiate sounds among them like minimal pairs phenomenon. The concept of phonology has been carried out in this research project taking into account some pronunciation patterns of English keeping in mind phonemes characteristics such as: allophone sounds, new sound for Spanish speaking learners of English as a foreign language and minimal pairs. This construct is very important to this research because Phonology gives the main basis to describe the segmental features of English learning and teaching; in other words, phonology helps to understand how each phoneme is described in order to perceive and produce them properly; and also Phonology helps to differentiate among some characteristics from English phonological system which might be a challenge for nonnative speakers, such as minimal pair, allophone and differentiation between different forms of articulation of phonemes in English and Spanish.

### 1.3. Phonemes

In this part the concept of sounds disappears because a new concept is the appropriated to refer to language sounds. This term is phoneme or phone due to sounds are everything related to noise, oral production and more. In other words the concept of sound is general and in Phonetics and Phonology it is referred to phonemes instead of speech sounds. According to Delahunty \& Garvey, (2010) phonemes "are the minimal unit, which is easy to identify individually; but when it is contrasted with its minimal pair it makes a difference in meaning. For example, natives speakers distinguish /z/ and /s/ in words like zip and sip; but for nonnatives it is
hard to identify this minimal pairs" (P. 108). Although this is not a definition for phonemes, it is important to highlight that some aspect about it. First, a phoneme is a minimal unit of sounds such as: $/ \mathrm{z} /$ and $/ \mathrm{s} /$; also it is important to connect some concepts like minimal pairs with phonemes.

Another important aspect to identify is that for nonnative speakers it is hard to identify some minimal pairs. That it is because there are some sounds which exist in one language, but in other languages they do not exist. Also, it means that it is very necessary nonnative speakers from another language learn new sounds in L2; so that they avoid mispronouncing them, due to sometimes what nonnative speaker want to say is completely different from what a native speaker understands, and as result of that, nonnative speakers can create misunderstandings. For example a Spanish speaker wants to say 'zip' and a native English speaker can understands 'sip' as $/ \mathrm{z} /$ does not exist in Spanish; in other words, a nonnative English speaker is creating a misunderstanding.

In the same way, Delahunty and Garvey (2010) suggest it is necessary to know how phonemes in a language work, because in that way EFL students can understand how phonemes are produced and perceived. As matter of fact, it is known that not all languages have the same phonemes. That is why most of the time EFL students associate such phonemes which do not exist in L2 (second language) with some similar phonemes from their L1 (first language).

Other viewpoint is Mannell, Cox \& Harrington (2014) who state "In each human language, there is a finite number of units called phonemes that a language uses to build its words". This viewpoint is linked to the previous point of view because both say phonemes are minimal units that build words of a particular language.

However, in this point of view, Mannell, Cox \& Harrington (2014) define what a phoneme is, and they add that a phoneme is the basis which language uses to build words. Also they say in each language there is a finite number of unites which are phonemes. It means there is a limited number of sounds in a language; and that is why some phonemes are in a language, but they does not exist in other language (new sound for nonnative speakers of a language). Authors give a reason for studying new phonemes in the process of acquisition of a new language. When people want to produce a new sound or phoneme, they try to produce it alike one phoneme that exists in their mother tongue and it generates mispronunciation. For example the case of phoneme $/ \mathrm{v} /$ is replace for Spanish speakers learners of English as a second language by /b/ phoneme in cases such as: voice /vois/ they replace this word by /bois/, but the latter pronunciation belongs to the word "boys".

Added to this another point of view the authors state "One set of abstracts units which together form the sound system of a given language, and through which contrasts of meaning a produced" (Collins \& Mees, 2013, P. 303). In here and in previous viewpoints similar aspects about phonemes are affirmed, like phonemes are minimal unit from a giving language and that they together build the language.

If authors' viewpoint is analyzed, it can be inferred those authors say the same aspects with different words about phonemes. First author gives some examples about what phonemes are; the second author gives the idea that phonemes help to build the words in a language and the last all phonemes in a language create a system of phonemes which are differentiated because each phoneme is assigned a set of characteristics about them which made something different from other phonemes.

To conclude, phonemes are the minimal unit in Phonetics and Phonology study which together form the sound system of a language. It is important to highlight some phonemes have special characteristics, for example minimal pairs. Also phonemes in a language are limited, and most of the time phonemes are not related to writing symbols (alphabets) because phonemes in a language have their own spelling patterns. Phonetics has created its own system of symbols like an International Phonetics Alphabet (IPA), but there are several phonetics alphabets apart from IPA.

Phonemes which were worked in this research project were $/ \Lambda / \mathrm{VS} / æ /$ / $/ \mathrm{I} / \mathrm{VS} / \mathrm{i}: /$ and $/ \theta / \mathrm{VS} / ð /$, because it was noticed these 6 phonemes are the most difficult sounds for Spanish speaking learners of English as a foreign language to learn (Avery P. \& Ehrlich S.; 1992). Also those phonemes make interference in the process of oral communication (listening and speaking), taking into account that they are three minimal pairs because a mispronunciation of a phoneme change the message which is conveyed. That is why this research project was focused on those phonemes.

### 1.3.1. Minimal pairs worked in this research

This research project worked with three minimal pairs: two minimal pairs of vowels $/ \lambda /$ VS /æ/ and /I/ VS /i:/ and one minimal pair of consonants / $\theta / \mathrm{VS} / ð /$. It is important to clarify this because consonant and vowels have some differences at the moment of being studied. That is why in the following paragraphs each minimal pair is described in terms of manner of articulation, place of articulation, and lip positions in the case of vowel sounds.

### 1.3.1.1. Vowel sounds:

There are twelve pure vowels and eight diphthongs, according to Kelly G. (2000):
"Vowels are articulated when a voiced airstream is shaped using the tongue and the lips to modify the overall shape of the mouth. [...] Reference is also made to lips; the illustration below show the basic lip position


How to teach pronunciation: The Pure Vowel Sound, Chapter 3, (P30).

Rounded: the lips are pushed forward into the shape of a circle. Example sound; /v/ Spread: the corners of the lips are moved away from each other as when smiling. Example sound: /i:/

Neutral: the lips are not noticeably rounded or spread. Example sound //2" (P29-30).

According to the previous author Kelly G, (2000), it can be said that vowels have two main characteristics: the first one is that the main speech organs involved in the articulation of each vowel are the lips in three positions: rounded, spread and neutral and the tongue which shapes to allow the airstream, the second characteristic is that all vowels are voiced in terms of force of articulation.

An important aspect to keep in mind in order to contrast English and Spanish vowels is that there are more vowels in the English phonological system (12 pure vowels) than in the Spanish one (5 pure vowels) (Academia Torrente Ballester (ATB), 1984-2014, P7). It is
important to stress this aspect because the ignorance of this fact prevents the full EFL learners' development and acquisition of communicative skills (listening and speaking).

There are some difficulties in the production of some vowel phonemes, as Spanish vowels are often shorter than English vowels and the duration of the vowel is often a distinction in English phonemic. Examples of this are i / i: u / u: and æ / a: Parkinson S. (1983, P 97). Other reason is that when Spanish-speaking learners of English as a second language know there are different sounds for a letter, they tend to confuse them as allophone sounds. For example, there is a sound for ' $a$ ' in Spanish and there are four different sound for this in English $/ \Lambda /$, /æ/, /a:/ and $/ \partial /$. The third reason is that most of vowel phonemes have different manners of articulation than in Spanish, and it generates a challenge to articulate and perceive them.

The pedagogical techniques and strategies which have been proposed in order to deal with vowels phonemes are described in the description of the following minimal pairs because the level of difficulty is different for each phoneme.

### 1.3.1.1.1. /a/ vs /ae/:

The first pair of phonemes has got some similar characteristics: both are voiced and open vowels. It means, voiced refers to force of articulation with vibration in vocal cords. In other words, at the time to produce the vowel sound a person can feel a vibration by putting 2 or 3 fingers gently against his or her throat and open vowels refers to the tongue is low in the mouth (Kelly G. 2000, P-30).

The following chart shows the position of the tongue and a brief description about how each sound has to be pronounced


How to teach pronunciation: Open Vowels, Chapter 3, (P33).

The difficulties in pronunciation of /æ/ phoneme for Spanish speakers is mainly that Spanish speakers produce /æ/ as Spanish /e/ or Spanish/a/. However, this is a big mistake because it has to be distinguished from /e/, / $/$ / and /a:/ (Parkinson S.; 1983, P 108). A simple advice on how Spanish-speaking learners can produce the phoneme /æ/ is pronouncing the 'Spanish /e/' sound but with the open mouth. According to Jones D. (1962) "the sound may also be obtained by trying to imitate the baaing of a sheep which resembles 'bæ: bæ:'" (P 73).

The difficulties for Spanish speakers with phoneme $/ \Lambda /$ are the same that in $/ \mathfrak{x} /$ phoneme. It means, students need to distinguish between /æ/ and /a:/ (Parkinson S.; 1983) (P 126). To pronounce $/ \Lambda /$ Spanish-Speaking learners can get to this sound pronouncing a 'Spanish /a/' but in a shorter way. It is important to say that this is just a simple opinion; but it does not
mean it is the only one way to get to those phonemes. However students with this way can understand the difference between both phonemes $/ æ /$ and $/ \Lambda /$.

The strategies which have been proposed to be implemented to deal with apart of methods to get them mentioned above are minimal pair technique in production and perception. That is, the teacher pronounces some words and students have to guess which minimal pair it is, for example hurry/Harry, luck/lack, fun/fan, hat/hut batter/butter and more. Another strategy is reading, in which students have to read some texts or sentences with both phonemes and they have to practice pronunciation of both phonemes, sentences for example: <the cat had fun in the farm>, <I cannot have fun in the sun without my fan> Parkinson S. (1983) (PP 109-130)

In textbooks and course books this minimal pair is dealt with some pronunciation activities as well. For example:

## Pronunciation spot

The sounds/e/and/ $\mathrm{A} /$
1 Notad Listen to the following pairs of words.
Notice that in these words, the letter ' $a$ ' is
pronounced $/ \mathrm{ac} /$ and the letter ' $u$ ' is pronounced $/ \mathrm{A}$ /.
a cat/cut
b bat/but
c mad/mud
d hat/hut.
e cap / cup
2 Iill There are other letters that can be
pronounced $/ \mathrm{A} /$. Underline all the $/ \mathrm{s} / \mathrm{and} / \mathrm{A} /$ sounds
in the phrases below. Then listen to check
a a happy cat.
b madly in love
c a bad cut
d her young san
e a black tax
3 Practise saying the phrases, paying
attention to the $/ \mathrm{I} / \mathrm{/} /$ and $/ \mathrm{A} /$ sounds.

Cunningham S. \& Moor P.; (2005) Pre-Intermediate: Module 7; P-69; Practise..; Pronunciation Spot


Cunningham S. \& Moor P.; (2005) Intermediate: Module 6; P-69; Practise..; Pronunciation Spot

### 1.3.1.1.2. /i:/ vs /I/

The second minimal pair has got the same features than the previous one (/æ/vs $/ \Lambda /$ ).
That is, they are voiced and there two phonemes are close vowels. The later feature refers to the tongue which is quite high in the mouth. Those two phonemes have got a small difference which is beneficial to Spanish speakers and it is /i:/ phoneme is similar to 'the Spanish/i/'.

The following chart shows the main features of /I/ and /i:/ phonemes:


How to teach pronunciation: Open Vowels, Chapter 3, (P31).

Regarding these two phonemes, as it was mentioned above, Spanish-speaking learners have an advantage because the phoneme /i:/ is similar to the 'Spanish /i/' the difference is that /i:/ is a bit longer than Spanish/i/. An important feature is that the common spelling for this phoneme is [ee] and [ae], but the latest is not a general rule. It means not always the combination [ea] is pronounced with the phoneme /i:/. On the other hand, the phoneme /I/ is pronounced as an intermediate sound between 'Spanish /e/ and /i/' (Parkinson S.; 1983); as an advice to get to this phoneme students can pronounce the phoneme /i:/ but with the mouth opens a little bit more.

There is hardly any difficulty with the phoneme /i:/ because it is similar to Spanish ' i '. However, the phoneme /i/ has some challenges for Spanish speaker because it is often pronounced with the Spanish ' $i$ '. Therefore, it can cause misunderstandings and mispronunciation (Parkinson S. 1983, PP 101-104). For example, it is different to say: <it's a
great leap> that saying <it's a great lip>/li:p/ VS /IIp/. A personal advice in order to get the /i/ English phoneme is that you can get this phoneme saying Spanish 'i' but with your mouth a little more open and with the sound shorter.

The strategies which have been implemented to deal with these phonemes apart those methods mentioned above are minimal pair technique from production and perception. It means, the teacher pronounces some words and students have to guess which minimal pair is, for example seat/sit, live/leave, chip/cheap, beat/bit is/ease and more. Another strategy is to read sentences which contain the phoneme /i:/, for example: <Bill leaves home early because he lives at Pill> <the keeper fed the sick seal kippers> <Tim buys fish and chips cheap every week> another technique is pronouncing a list of word in English and a minimal pair in Spanish: sea-si, seal-sil, me-mi, tea-ti, meal-mil, feel-fil Parkinson S. (1983, PP 102-105).

This minimal pair has been worked in different ways in course books a proof of that is:


Cunningham S. \& Moor P.; (2005) Intermediate: Module 3; P-35; Practise..; Pronunciation Spot

### 1.3.1.2. Consonants

In English there are not established rules for the pronunciation of some consonants because there are some changes in pronunciation for the same spelling. Proof of this is that the combination [ch] is not always pronounced with the phoneme $/ \mathrm{t} \mathrm{f} /$. For example, the words 'yacht $/ \mathrm{jpt} /$, much /m $\wedge \mathrm{t} / /$, technology /tek' noləd3i/'. However, forty four phonemes can be distinguished, which have special characteristics in terms of spelling and pronunciation, making it possible to differentiate among themselves.

According to Kelly G. (2000)
"Consonants are formed by interrupting, restricting or diverting the airflow in a variety of ways. There are three ways of describing the consonant sounds: 1) the manner of articulation: refers to the interaction between various articulators and the airstream, 2) the place of articulation: gives information about what the various articulators actually do and 3) the force of articulation: fortix (unvoiced sounds) or strong and lenis (voiced sounds) or weak" (P47).

There are two kind of sounds described according to force of articulation, Lenis, is pronounced with relatively weak muscular tension and breath pressure and Fortis, is pronounced with considerable muscular tension and breath pressure

### 1.3.1.2.1. /ठ/VS / $\theta /$

The first consonant pair is new for Spanish-Speaking learners, because there is no sound near to them. However, these sounds could be approximated to the Spanish $/ \mathrm{d} / \mathrm{and} \mathrm{a} / \mathrm{z} /$ with some differences and changes, but these mentioned Spanish sounds serve as a basis in order to get to / $/ \mathrm{d} / \mathrm{vs} / \theta /$ phonemes (Parkinson S. 1983).

Both phonemes have got some similar characteristics because both are fricative and dental in terms of manner of articulation and place of articulation respectively. According to Astrof J. and Sikowitz M. (2011) fricatives "[...] are sounds that are produced with a close approximation between the articulators, which allows the air to scape with some friction. The escaping air is turbulent and is called friction" (P27). In other words the air flows between two articulators which come close enough together for the movement of air to be heard between them. In the same line the difference among both phonemes is in force of articulation, because $/ \theta /$ is unvoiced and fortis and $/ \delta /$ is voiced and lenis


Astrof J. and Sikowitz M. (2011)

As it was mentioned above a way in which Spanish Speakers can get to / $\delta /$ phoneme is pronouncing the 'Spanish $/ \mathrm{d} /$ ', but putting the tongue tip in the middle of teeth. On the other hand Spanish speakers can get to phoneme $/ \theta /$ by imitating the sound $/ z /$ pronounced by Spanish speakers in Spain (the lisp sound), but with the tip of the tongue between the teeth.

The difficulties for Spanish speaker in relation to this minimal pair are: first this sounds do not exist in Spanish. Second for / $\theta /$ Latin-Americans and in general Spanish speakers can imitate the sound of 'ce' and 'ci' pronounced with the Spanish or Castilian accent although it is not the same sound, it is an approximation. The last one, $/ \delta /$ phoneme may be acquired easily
because this phoneme sounds like Spanish d in the middle of a word (dedo). However, later difficulty can be misunderstood because Spanish 'd' is not always pronounce like / $\delta /$ phoneme (Parkinson S. 1983)

The strategies and methods to practice both phonemes are almost the same like in vowels. It mean, this minimal pair has been implemented using drilling techniques with words which contain each phoneme such as: <though, think fourth, path, bath, thesis and more> or <their, they, them, with, bathe mother, father and more>. Another strategy is through reading some texts or sentences such as: <Thursa will be thirty three next moth> <the author of that bestseller is none other than Arthur Boothe> Parkinson S. (1983) (PP 200-202).

Some course books deal with the pronunciation of $/ \theta /$ and $/ \delta /$ in ways such as:

```
Pronunciation spot
The sounds /d/and /0/
a amil) Listen and notice the
two 'tr' sounds /N/and N.N.
AN this, that, thete, those.
    thers, they, the, mothes,
    tather, brother
*) thank you, three thirty,
    ttuirteen, thing., Thunday
Thit is how you mate the rounds.
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```
b. Listen again and repeat the
wordL
c) EFFIS}\mathrm{ thten and repest
the eight santences.
```

Cunningham S. \& Moor P.; (2005); Elementary: Module 2; P-25; Practise..; Pronunciation Spot.

```
Pronunciation spot
The sounds/0/ and /0/
1 【ICSED The letters 'th' can be pronounced as / }9
or///, Listen to the examples.
a/*/thing birthday seventh
b/a/there this weather
2 Look at the words below. Are the letters 'th'
pronounced /0/ or /O/?
month they thought third together
father thirty whether health thanks
3 EkMID Listen and check. Practise saying
the words, paying attention to the/6/
and/O/ sounds.
```

Cunningham S. \& Moor P.; (2005) Pre-Intermediate: Module 4; P-41; Practise..; Pronunciation Spot. In addition, teachers have been dealing with pronunciation in a reactive or remedial teaching way. It means, a lot of pronunciation teaching tends to be done in response to errors which the students commit in the classroom in a way of reactive teaching (Kelly G., 2000). This is somehow useful but teachers need to focus and plan their lessons taking into account the relevant pronunciation factors for Spanish speakers. It is a fact that many people relate the foreign language learning process to the acquisition of grammar and vocabulary, and they put aside pronunciation from neglect. According to Kelly G (2000) "a teacher of L2 pronunciation needs to have: a) a good grounding in theoretical knowledge, b) practical classroom skills and c) access to good ideas for classroom activities" ( $\mathrm{P}-13$ ). The quote above is important because the author states pronunciation is not just having knowledge in the pronunciation field because pronunciation teaching needs having knowledge in pronunciation skills, good ideas about the way to deal with pronunciation and strategies to take students to practice pronunciation in different contexts.

## 2. EXPERIENTIAL LEARNING

This research Project was focused on experiential learning as the teaching strategy at the time of implementation, obviously taking into account the Pronunciation Techniques that had been provided by Phonetics and Phonology. Experiential learning strategy was selected as teaching strategy for this research project because the learning of English phonemes can be strongly related to the experience as a learning process. It means students need to confront the perception of sounds in context such as: in simple word, sentences and conversations in real life situations; so that they realize and are aware how these sounds work in every day conversations in order to understand and produce them in their English Language Learning Process. Also, Anisa I. (2013) states "Using Experiential learning can be fitted to the real situation in the classroom. To be said knowing English, students have to know the meaning, the spelling, the pronunciation, and the use of the words." In other words, pronunciation is an inherent aspect to the experience which is the basis on Experiential Learning Strategy.

According to Eyring quoted by Brown D. H. (2000) experiential learning "[...] highlights for us is giving students concrete experiences through which they 'discover' language principles (even if subconsciously) by trial and error, by processing feedback, by building hypothesis, and by revising these assumptions" (P-238). It can be inferred from these authors that Experiential Learning is a process that consciously or unconsciously has been applied in the classroom, especially at the time of the practice stage, when students have to live real life experience in which they have to analyze how language works in relation to the experience. An example of this in relation to the teaching of pronunciation is when students work with a listening activity. For instance, a teacher gives students a sheet with the lyrics of a song, then, students have to follow
the lyrics of the song at the same time they are listening to the track. In this example students are having an experience in which a real situation about how the lyrics are pronounced, and that process is done unconsciously. Also students can practice the pronunciation of some fragments from the song; so that they can achieve the correct pronunciation of those fragments, taking into account what they heard when the song was played.

In the same line it is possible to say students have the most important role in their learning processes, because the teacher is just a guide of the students' learning process who plans how students live real special experiences in which they can learn about the topic of the class. However students have the main role because they analyze, describe and generate their own ideas about how language works through such experience. For example, continuing with the example above, if a student sees the word 'answer' in the worksheet, and he times before pronounced it /ænsuər /, so at the moment when he listens to a song, he hears / ænsər /, it is very possible that unconsciously he learns from his mistake and corrects it by himself. In this example students have had an experience and they have learnt from it about how the word answer is pronounced.

In addition Eyring quoted by Brown D. H., (2000) said that an important word in the process of experiential learning is 'discover'. This is actually an important aspect in this process because students have to learn by their own (discover by their own) in order to get to their conclusions about the topic. Students' discovery or knowledge obtained in the experience step is debated among students and teacher to get a general conclusion.

Another point of view on experiential learning strategy says
"The assumption is that we seldom learn from experience unless we assess the experience, assigning our own meaning in terms of our own goals, aims, ambitions and expectations. From these processes come the insights, the discoveries, and understanding. The pieces fall into place, and the experience takes on added meaning in relation to other experiences" (Saddington quoted by Knutson S., 2003, P-53).

Saddington quoted by Knutson S. (2003) states an interesting reason in which experience has two points of view. The first one is the experience as an unimportant aspect due to most of the time experience is seen as something which lacks of importance. The second one which is the experience as a pedagogical methodology in which experience is assessed to analyze and get to a conclusion about the topic. To conclude this idea, it can be said that a simple experience has no value. However, whether students assess it, the experience acquires a pedagogical value, because students can make the most to understand an assigned topic. An example of this can be a reading activity in which students have to read and no mere (read by reading without understanding or read without a purpose) that is the first case where experience lacks of importance. However, if this activity has a purpose like for example teaching the pronunciation of some specific words, the characteristic of experience changes because that experience becomes in a pedagogical experience where students learn something new or in this case learn to pronounce some phonemes in some words.

In the same line, if Saddington quoted by Knutson S (2003) and Brown D (2000) points of view are compared, it can be observed either get to the same conclusion to say experiential learning gives students the advantage of being the drivers of their own knowledge keeping in mind discovery by the experience, the assessment of the experience, the point of view of each participant in learning and teaching process. The biggest advantage of experiential learning
strategy is that roles are divided in an equitable manner. It means class is not teacher-centered and it is not a total learner-centered, because teacher is a guide who plans how students achieve a language feature and learners drive their own experience and how to assess it in order to draw a conclusion.

In addition, there is a cycle which describes the experiential learning stages, and this is the Lewin's cycle


Figure 2a - The Lewinian Experiential Learning Model - Kolb A. 1984 quoted by Bourton L. \& Lamport S., (2013).

According to the figure, the experiential learning strategy has a process which taking into account points of view mentioned above, they contextualize why experiential learning is going to be used as the strategy for supporting this research. This cycle helps students to acquire minimal pairs worked with this research project.

Experiential learning cycle was worked in the following way:

1) As it is almost impossible to take students to intercultural meetings or meetings with native English speakers, the teacher has shown students through audiovisual materials about English phonemes and minimal pairs worked in each
session; in other words students were contextualized using available materials and tools. For example in the first session, the teacher played the song 'Innocence by Avril Lavigne' in order to students chose the correct word between minimal pairs, so that they discovered if the singer pronounced a word with the phoneme /i:/ or /I/ e.g. eat VS it.
2) Lead students so that from the material presented they draw their own conclusions and hypotheses about the topic to be worked in each session. It means after having implemented the first step, teacher asks students about the pronunciation of the minimal pair worked in that session indirectly, in context (simple words, sentences or conversations) through readings, tongue twisters, short conversations or even in a dictation. For example, in session three of this research project, the researcher asked students to repeat the sentence <my uncle broke his ankle>; in that sentences the researcher draw students to perceive the pronunciation of the minimal pair uncle /' $\varsigma \emptyset k l /$ VS ankle /'æŋkl/ (/ $/$ VS /æ/), so that they were able to produce them properly.
3) Create debates or conversations and give a contextualization about the topic so that students can create their own viewpoints keeping in mind classmates and teacher' points of view. Those debates or conversation are carried out answering the question made by the teacher Can you identify some differences between the following pair of words or sentences (write on board a short list of minimal pairs) (fan VS fun, cat VS cut)? What are the difference between (cat VS cut in terms of pronunciation)? How are (cat VS cut) pronounced? The idea of this stage is students try to identify how the minimal pair worked in that session
works. Then, teacher provides feedback and gives tips about how students can get to pronounce the minimal pairs in a correct way.
4) Give students the opportunity to apply what they learnt in each session among them using communicative activities and games. For example, conversations, role-plays, activities of mimics, readings and more activities where students have to pronounce.

See the appendix part for understanding the procedure of each session.

To sum up, experiential learning has several advantages and one of the most import is the development of students' critical analysis so that they can take advantage of an experience, coming from a simple experience in a pedagogical strategy. Experiential learning was carried out almost as a natural process of phonological development. It means students as first step have to live a real life experience and analyze that experience in order to understand how each minimal pair works in context.

## CHAPTER III

## RESEARCH DESIGN

This chapter aims to show the approach used in this research, which served as the basis for getting the answer to the research question. Further to this, in this chapter the methods of data collection are described in order to support the results of the research; the instruments of data collection were field notes, tests, and audio recordings; describing how these methods were carried out; so that the problem of lack of strategies and training in pronunciation teaching in Luigi Pirandello School was solved. In addition, in this chapter the research population and the instruments used to collect data are described.

## RESEARCH PARADIGM

## Mixed research

This research study is located in a mixed methods research, taking into account its principles and characteristics. Mixed research according to Johnson B, Christensen L, (2012) who state that "[...] uses a mixture or combination of quantitative and qualitative methods, approaches, or concepts in a single research study or in a set of related studies." (P50). Following with that point of view, this research is focused on numerical and no numerical data, taking into account EFL learners and teachers' needs and responses to the implementation stage about learning and teaching pronunciation respectively. It means, the data from this research was gathered having into account factors such as: statistics on how many students behave in one way or in another in terms of progress, acquisition, number of mistakes, and subjective data in aspects
like variations of phonemes and minimal pairs production, perception of minimal pairs, students' behaviors in implementation stage, and so on.

The mixed research paradigm was chosen because the research has a focus on the needs on how pronunciation should be addressed, taking into account the participants' behavior and characteristics from this research. Also from a personal perspective to answer the research questions it is necessary taking into account different aspects in terms of data like variables (statistics) and patterns or categories.

It is important to clarify that most of data collection information was organized in charts, tables, transcripts in order to obtain a better description from the information collected. The data analysis is described in charts, diagrams and categories in order to contrast and triangulate the quantitative with qualitative gathered data with each data collection instrument.

## RESEARCH APPROACH

## Action research (AR)

Action research is a method used by teachers and researchers in order to provide a solution to some problem or issue that teacher wants to improve in the classroom or in the way he or she has been carrying out his or her methods process. According to Burns A. (2010) action research "is related to the idea of reflective practice and the teacher as a researcher, action research involves self-reflective, critical and systematic approach to exploring your own teaching context". (P-2). After having clarified the concept of action research, it can be said that it was chosen because it wanted to solve a possible problem in the EFL classroom and the most appropriate way to solve a problem is from the context where problems emerge.

To contextualize how action research has been carried out, the phases of action research were taken into account. According to Kemmis S. \& McTaggart R. quoted in Burns Anne (1999) action research occurs through a dynamic and complementary process, in four moments:

- Develop a plan of critically informed action to improve what is already happening.
- Act to implement the plan.
- Observe the effects of the critically informed action in the context in which it occurs, and
- Reflect on this effects as the basis for further planning.

In the same way, the best manner to solve a problem is researching what it wants to improve or implement from a specific context where the problem emerges, in this case in a classroom; and it is what this research wanted to do, taking EFL learners' needs and lack of knowledge in order to create activities using Pronunciation Techniques such as: drilling, minimal pairs, listening activities and reading activities. Therefore this research project followed the four moments mentioned above:

- This first stage was carried out with a pre-test in which aspects such as: students’ needs and lack of knowledge in order to find strategies to solve the issue were designed. Diagnosis was important to keep in mind in this stage because it allows the researcher to find weaknesses or aspects which needed to be improved or changed. Also, in this stage, Pronunciation Techniques and the way to adapt such activities in the EFL classroom were planned, considering that the strategies and techniques were carried out simultaneously and not just in isolation. That is, two
or three techniques could be applied in the same activity (drilling and reading, listening and minimal pairs and so on).
- Implementation of six sessions was the second stage. It means, researcher carried out the implementation of six designed lesson plans taking into account the Phonetics and Phonology Pronunciation Techniques, the pedagogical strategy to implement the activities, lesson plans and the strategy used in this research (Experiential Learning). At the end of this stage a post-test was carried out in order to assess the students' pronunciation process after the implementation of the sessions.
- Then, the process of data analysis was carried out taking into account observations and the collected data in the implementation stage. That is, analyzing what happened in each session, triangulating the gathered information with the data collection instruments (field notes, tests and audio-recordings transcriptions) and verifying whether Phonetics and Phonology Pronunciation Technics within the Experiential Learning Strategy fulfilled the expectations and established objectives of the research.
- At the end of this research the reflection process was carried out in which was analyzed the research project results, analysis, and effects of the Experiential Learning Strategy and Phonetics and Phonology Pronunciation Techniques implementation in order to realize if they fulfilled the established goals. Then, conclusions were generated in order to show the research effects; so that new ideas for future researches were described for making the circle of action research again.


## SETTINGS

The research was carried out with students from the private school Luigi Pirandello. The school is located in the northeast zone of Bogota Colombia. In general terms, the school Luigi Pirandello has around 960 students, in levels of preschool, primary, secondary and high school; one grade in preschool, five grades in primary (from first to fifth grade), four grades in secondary (from sixth to ninth grade) and two grades from high school (tenth to eleventh grade). This private school is a mixed school at all levels 'boys and girls' (Luigi Pirandello's institutional education project 2014, P-12).

Continuing with school information, as an essential fact, the school has as emphasis and short-term goal to become a bilingual school 'Spanish and English' -Luigi Pirandello's PEI(2014, P-12). This information generated an added value to this research because it aims to give solution to one of the obstacles that teachers face in every day to achieve the goal of being a bilingual school in terms of 'how to teach EFL pronunciation as an integrated part of the EFL class'.

The school has agreements with some universities, so that; students can have access to higher education such as the Universidad de La Sabana and Politecnico Gran Colombiano. With the latter, the school has especial agreements which establishes that students from tenth and eleventh grade while doing their scholar studies, they can do studies in technical programs. Currently the school has an agreement in programs such as: health sciences, graphic design and advertising.

On the other hand the school has a variety of technological tools and educational materials, which allow better teaching and learning process. Added to that each classroom has a video beam. Also, there are some rooms with useful materials and tools; so that teachers can use
that kind of sources for teaching in their classes, materials such as: maps, games, pictures, posters, photos, audiovisual materials and more. Most of books used in classes are from Pearson Publishing House.

Each member of the Luigi Pirandello school is characterized by a set of moral, ethical and spiritual values, which students develop at the same time they acquire knowledge in each area of study; "the values that students should acquire are responsibility, respect, honesty, solidarity and tolerance" (PEI, PP 7-8). The discipline and order are two attitudes students have to preserve and develop together with the values mentioned in PEI.

It is important to mention some aspects about the syllabus of the English subject worked in sixth grade. During the school year, students from sixth grade have learnt about simple present, present progressive, past simple, past progressive, present perfect, past perfect and past perfect progressive. Also the school manages teaching English in a special way, due to students do not have just an English subject. They have 2 subjects to improve their English skills. The Luigi Pirandello School's subjects to teach English are: 1) Grammar and Writing, and 2) Listening and Speaking. Both subjects are focused on the same topics, but the difference is in the kind of activities which are implemented. It means, activities in Grammar and Writing Subject are focused in readings and textual production and Speaking and Listening Subject is centered on listening activities, dialogues, role plays and activities where students have to listen and practice speaking. This way to teach English is helpful in some aspects, however students need to work 4 communication skills simultaneously because ones depend on the others, even with pronunciation.

In the field of pronunciation features and issues, teachers used remedial or reactive lessons. That is, they dealt with pronunciation at the moment when students mispronounce any
word. However, teachers dealt with pronunciation using integrated lessons in some special occasions. For example, when teachers taught the grammatical topic <past simple> they integrated the pronunciation of the 'ed' forms with different activities of listening speaking and writing.

## PARTICIPANTS

Students from Luigi Pirandello School were chosen as research population, taking into account the characteristics of the school, students and teachers. Based on this fact, a particular course was chosen to start with the research in order to limit the population to a small group and to focus the research on a single level of English. The course chosen was 6A during first semester, 2016 as research population.

All students have an hourly intensity of 12 hours per week of English classes, which facilitates access to different perspectives of English for the two subjects mentioned previously (Grammar \& Writing and Listening \& Speaking). Also, this means that students have an adequate level of English to conduct this research. Students have an average of A2/B1 or preintermediate/intermediate English level according to Common European Framework of Reference for Languages (CEFR); it means according to Trim John (2011) they show the following characteristics:

|  | C2 | Can understand with ease virtually everything heard or read. Can summarize information <br> from different spoken and written sources, reconstructing arguments and accounts in a <br> coherent presentation. Can express him/herself spontaneously, very fluently and precisely, <br> differentiating finer shades of meaning even in more complex situations. |
| :--- | :--- | :--- |
|  | C1 | Can understand a wide range of demanding, longer texts, and recognize implicit meaning. <br> Can express him/herself fluently and spontaneously without much obvious searching for <br> expressions. Can use language flexibly and effectively for social, academic and professional <br> purposes. Can produce clear, well-structured, detailed text on complex subjects, showing <br> controlled use of organizational patterns, connectors and cohesive devices. |
| B2 | Can understand the main ideas of complex text on both concrete and abstract topics, <br> including technical discussions in his/her field of specialization. Can interact with a degree of <br> fluency and spontaneity that makes regular interaction with native speakers quite possible <br> without strain for either party. Can produce clear, detailed text on a wide range of subjects <br> and explain a viewpoint on a topical issue giving the advantages and disadvantages of various <br> options. |  |
| B1 | Can understand the main points of clear standard input on familiar matters regularly <br> encountered in work, school, leisure, etc. Can deal with most situations likely to arise whilst <br> travelling in an area where the language is spoken. Can produce simple connected text on <br> topics which are familiar or of personal interest. Can describe experiences and events, <br> dreams, hopes \& ambitions and briefly give reasons and explanations for opinions and plans. |  |
| A2 | Can understand sentences and frequently used expressions related to areas of most immediate <br> relevance (e.g. very basic personal and family information, shopping, local geography, <br> employment). Can communicate in simple and routine tasks requiring a simple and direct <br> exchange of information on familiar and routine matters. Can describe in simple terms <br> aspects of his/her background, immediate environment and matters in areas of immediate <br> need. |  |
| A1 | Can understand and use familiar everyday expressions and very basic phrases aimed at the <br> satisfaction of needs of a concrete type. Can introduce him/herself and others and can ask and <br> answer questions about personal details such as where he/she lives, people he/she knows and <br> things he/she has. Can interact in a simple way provided the other person talks slowly and <br> clearly and is prepared to help. |  |
| A |  |  |

Figure 3. Table 1: Common Reference Levels: global scale from Chapter 3 of the CEFR
(2001a:24)

The course 6A has a pre-intermediate level which is a proper level of English, because they are on A2 and B1 taking into account information in the chart above. However, they have some gaps about pronunciation due to they have not had contact with any source of information about the Phonological English System. In a personal perspective from the previous semester,
the only knowledge they have on the Phonological English System was what they had deducted by themselves. Proof of this was that students replaced English phonemes by Spanish phonemes. An example of this is that they thought the words (cat and cut) were pronounced in the same way. They pronounced them with the Spanish /a/. However, they had some aspects that made up for this and that added a plus to the research work. These aspects were: the attitude, motivation, active participation and thirst for knowledge (See Appendix III: Field notes.). All these aspects made the research to be rewarding and meaningful for all participants. It got to that conclusions in relation to researcher's previous personal experiences at school.

In the course 6A, there were 32 students ( 17 girls and 15 boys). Their level of English was pre-intermediate English level which was proper for the current research. That is, students had adequate knowledge in language features (grammar, vocabulary and four communicative skills). Their range of age was between 13 to 15 years old. Regarding grammar, they had an excellent level at the same time to writing and reading; but the speaking skill was something in which they had to work more. This could be provided with results of their processes in previous grade ( $5^{\text {th }}$ grade). From a personal opinion pronunciation is something extremely related to speaking and listening, and for improving these skills it is necessary to work hard at pronunciation. the pronunciation skill was dealt with by teachers using remedial teaching and not a planned lesson in practice or integrated lesson; and in this point it is where this research project has the main role in order to create strategies so that students improve their oral skills (listening and speaking), through explicitly practicing of pronunciation.

## DATA COLLECTION INSTRUMENTS

In this part each data collection instrument used in the research to collect information are described in order to evaluate the impact of the Phonetics and Phonology Pronunciation Techniques. The data collection instruments used for this research were field notes, pre/post-test, and audio recordings. Field notes are useful in the process in order to have control of the process during the lesson to improve and think about what is going on in each session. Tests are one of the most useful tools in order to monitory students' pronunciation learning process. Test in this research were used in the following way: the pre-test was used at the beginning as a diagnostic test and the post-test was used to analyze the students' pronunciation progress at the end of the implementation and data analysis stages. Finally, audio recording was used as the most helpful data collection instrument and means because as the project is focused on pronunciation this technique helped to monitor the students' process session after session and as means to gather information altogether with pre/post-test.

## Field notes:

This method of data collection instrument was chosen in order to take control of every aspect which was present in the environment of an English class and in this way to analyze the strategies that were used in every lesson, due to those aspects had to be considered to evaluate proposal activities and materials. Field notes in words said by Burns (1999)
"[...] are often referred to in qualitative research are descriptions and accounts of events in the research context which are written in a relatively factual and objective style. They generally include reports of non-verbal information, physical settings, group' structures and records of conversations and interactions between participants" (p 87)

This method provided a format which was useful at time to collect information in every session, because this instrument allowed taking and reflecting recorded information (mainly perceived by the researcher) in order to analyze what was going on in session for improving and achieving the objectives and goals from this research. Added to that, this method was used together with audio recording methods, so that all the time each process in sessions was being recorded for having firsthand information and thus avoiding to disregard valuable information, which may have had some impacts on the development of this proposal such as: good ideas to improve, activities which could be helpful to deal with EFL pronunciation. That is because good ideas come at any time and if there is no record of them, these ideas may be lost. Also, field notes as a data collection instrument was helpful to pay attention to students' progress in the pronunciation of the three minimal pairs worked in this research.

With field notes the following aspects were gathered: students' behavior; reactions in relation to new phonemes; students' perception from minimal pairs; how Experiential Learning Strategy worked in every session; how Phonetics and Phonology Pronunciation Techniques were carried out; students' problems; and students' suggestion and options for future Phonetics and Phonology Pronunciation Techniques implementations. Categories in the data analysis stages were established a priori, the established categories were $1 / \mathrm{i}: / \mathrm{VS} / \mathrm{I} /$, 2. /æ/ VS $/ \Lambda /$, and 3. $/ \theta / \mathrm{VS}$ /ठ/.

The format used for this research was taken and adapted from Gamboa, A. (2013) (See Appendix III: Field notes)

## FIELD NOTES

FIELD NOTE \# ...
DATE: ... \# OF PARTICIPANTS: .... students

## RESEARCHER:

| OBSERVATION | COMMENTS |
| :---: | :---: |
|  |  |

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## Test:

This was the most helpful instrument of data collection because this instrument showed the students' progress from the first session to the sixth session because tests were applied in two specific moments: the pre-test previously to implementation of the first session, and second, the post-test applied at the end of the implementation of the six sessions. According to Johnson B, \& Christensen L, (2012) test is " $[\ldots]$ commonly used in quantitative research to measure attitudes, personality, self-perceptions, aptitudes or performance of research participants" (P-197). This research focused on the last aspect mentioned in the quote above (performance) because this research centered in students' pronunciation of $/ \Lambda / \mathrm{VS} / æ /, / \mathrm{I} / \mathrm{VS} / \mathrm{i}: /$ and $/ \theta / \mathrm{VS} / \mathrm{/} /$ minimal pairs in common words contained in simple sentences.

It is important and necessary to clarify that this method of data collection was worked together with audio recording in order to analyze how students pronounced the minimal pairs in context (in each sentence); so the data analysis was supported by the transcription of each recording. One of the characteristics from this data collection instrument was that the gathered
information was used to make a comparison between the pre-test and post-test in order to analyze the students' learning process in terms of pronunciation taking into account the students' pronunciation level previously to the implementation stage with the students' pronunciation level after applying the six sessions.

To transcript the audio recordings, the IPA was taken into account to describe the sound that were pronounced by students at the moment the pre-test and post-test were applied. For applying the pre-test and post-test as sample only fifteen students were taken (the same students that were chosen in the pre-test, were chosen for the post-test); the sentences which were used in pre-test were used in post-test, the one difference was a sentence more was added.

## Audio recording:

This method was the first method thought to gather information for this research because this research was focused on EFL pronunciation and this is the most useful method to record the process and assess the process of the research population. Also the recorded material was available to analyze the process of each participant in every session as an instrument in which the researcher could analyze over and over again what was said during the sessions and even as a support from other data collection instruments.

This method of data collection is defined by Burns (1999) with the following words, "audio and video recording are very valuable resources of accurate information on patterns of interactional behavior which may not be obvious during the actual teaching process" (p 94). First of all, this method played an important role before of first session and after last session, due to this research project pretended to assess first the English phonemes which were worked in the sessions and after the last session in order to analyze whether activities and explanations provided positive results.

The second objective was using this data collection method at the same time that pre and post-tests were carried out, so that researcher had the exact pronunciation from each participant. Also audio recording method was used in every session in order to have material for making reflection in order to improve session after session as the action research states and get excellent results as conclusion of this research project.

To conclude, data collection instruments mentioned above served to analyze if this research project was carried out in a way where the proposal reflected a helpful process which gave answer to the research question.

## ETHICS

This research project aimed to analize the impact of Experiential Learning strategy and Phonetics and Phonology Pronunciation Techniques in students from Luigi Pirandello School. The main research intention was to help students to understand the features of six English phonemes in order to improve students' learning process in terms of pronunciation. For the implementation process, some worksheets and materials were used, so that students had some changes and improvements in English pronunciation and in this way improving their listening and speaking skills.

The data was gathered from the beginning of the implementation until its ending to analyze it. In consideration of protecting students' identity, the researcher did not reveal students' names nor faces (Sture J., 2010). Instead, the researcher assigned a code-number per student from 1 to 32, and for the sample a new code-number was assigned. In addition, audiorecordings as a tool of data collection was used. However, those recordings were transcribed only by the researcher and they were not presented or replayed to any person in order to protect studedents identity.

This research project is never going to cause any harm or inconvenient in their lives, in their learning process, in their grades nor in their society. What this research project pretended was to enhance their English pronunciation and in the same way their listening and speraking skills.

## CHAPTER IV

## INSTRUCTIONAL DESIGN

This chapter aims to show the approach used in this research, which served as the basis for getting the answer to the research question. In addition, when planning the sessions several factors were kept in mind. First of all, the four Phonetics and Phonology Pronunciation Techniques (minimal pairs, reading activities, listening activities and drilling). The second aspect was the Experiential Learning cycle and its four stages; this was very important because this cycle was carried out in every session. The last aspect was the use of the data collection instruments (tests, audio recording and field notes) and their specific moments in which they were applied.

## ACTIVITIES AND TIMETABLE

| Session and date | Learning objectives | Pedagogical activity/ies | Kind of data to be collected |
| :---: | :---: | :---: | :---: |
| Session <br> 1 <br> /I/ vs /i:/ <br> Date <br> May 5 ${ }^{\text {th }}$, <br> 2016 | Learning objective: <br> - Make students recognize the phonemes /I/ vs /i:/ in the song "innocence" by Abril Lavigne through students choose the correct word. | Activity: <br> 1. Stage 1 of experiential learning cycle Concrete experience: students are faced to an experience in which they have to reflect by themselves. (See theoretical framework for more information about this stage). The teacher introduces students to activity of the | Field notes: <br> Here some aspects were kept in mind, aspects such as: students' behavior, reactions to phonemes /I/ and /i:/, and results after having implemented the activity. <br> Audio recordings: <br> This instrument was used when students had to read |


|  |  | song, for this the teacher asks: <br> - Do you know who Abril Lavigne is? <br> - Have you ever listened to some Abril Lavigne's song? Which ones? <br> - What kind of musical styles does Abril Lavigne sing? <br> - Have you ever listened to the song innocence by Abril Lavigne? <br> - Do you know the lyrics of the song? <br> - Can you sing a piece of the song? Do it. <br> Then, the teacher gives a copy per student with the lyrics of the song "innocence by Avril Lavigne" (See Appendix IV: Activities and Worksheets 4.1). After that, the teacher explains students that they have to follow the lyrics and pay special attention in how the singer pronounce the words in brackets because they have to choose the correct word, the teacher plays the track. | or pronounce fragments of the song in order to analyze the pronunciation process of the phonemes. For example: <br> Waking up I see that everything is okay. <br> The first time in my life and now it's so great. <br> Slowing down I look around and I am so amazed. <br> I think about the little things that make life great <br> I wouldn't change a thing about it <br> This is the best feeling <br> Note: (words in purple are those to take into account) |
| :---: | :---: | :---: | :---: |


|  | - Make students pronounce some words in the song in order to recognize differences between both phonemes (/I/ vs /i:/) <br> - Take students reflect about the pronunciation of both phonemes (/I/ vs /i:/) by their own so that they create their own conclusions and hypothesis about how both phonemes are pronounced. | 2. Stage 1 of experiential learning cycle Concrete experience. <br> The teacher asks students read the song. Then, teacher choose in a random way 3 students who read the song aloud, so that the teacher can notice if students have caught the distinction in the minimal pair (/I/ vs /i:/). Teacher corrects the mistakes at the end of the activity using repetition. <br> 3. Stage 2 of experiential learning cycle reflective observation and perception: students are carried out to create their own conclusions and hypothesis after concrete experience stage. (See theoretical framework for more information about this stage). <br> The teacher says "repeat after me the following list of sentences and words" (words and sentences are written | Field notes: <br> Aspects such as the students behavior, reactions and if they were able to perceive differences between /I/ vs /i:/. <br> Audio recordings <br> Students who were chosen to read the fragments of the song were recorded in order to know how their pronunciation of /I/ and/i:/ were. <br> Field notes: <br> The data were gathered about students‘ behavior, reactions and if they achieved understand the differences between the pronunciation of phonemes /I/ and /i:/. <br> Audio recordings <br> Students who were selected to read the sentences were recorded |
| :---: | :---: | :---: | :---: |



|  | experiential learning cycle so that they complement their conclusions and hypothesis in terms of pronunciation of both phonemes (/I/ vs /i:/). <br> - Make students to perform every | 2. Also teacher clarifies doubts. <br> The teacher gives some tips, so that students can get to /I/ and /i:/ phonemes: <br> - /I/ phoneme is an intermediate sound between Spanish /e/ and /i/ and you can get to the /I/ phoneme pronouncing Spanish /i/ but with your mouth more open and taking into account the sound is shorter <br> - /i:/ phoneme is longer than in Spanish. For example, notice the duration of the following minimal pair -si- (Spanish word) VS -sea- (English word), the difference is the second word is longer. <br> The teacher shows one more time the sentences and choose in a random way some students so that they pronounce them taking into account what they learnt in previous activity <br> 6. Stage 4 of experiential learning cycle | of phonemes /I/ and /i:/, after teacher explanations. <br> Field notes: |
| :---: | :---: | :---: | :---: |


|  | concept and aspects learnt during the whole session in order to develop the students' pronunciation progress in terms of (/I/ vs /i:/) phonemes | experimentation: students carry out the practice of what they actually learnt after having the experience, the reflection of the experience and the abstract conceptualization. (See theoretical framework for more information about this stage). <br> Students in pairs create and perform a dialogue using the words in song while the teacher monitors group by group the pronunciation. <br> Words: <br> - Feel, fill, eat, it, see, tear <br> Note: students can use more words such as: sit, seat, cheap, chip, heat, hit and so on. (See Appendix IV: Activities and Worksheets 4.2.). | The data were gathered about students‘ behavior. <br> Audio recordings <br> The students' performance were recorded in order to analyze the transition throughout the session in terms of the pronunciation between /I/ and /i:/ phonemes. |
| :---: | :---: | :---: | :---: |



| $\begin{aligned} & 20^{\text {th }} \\ & 2016 \end{aligned}$ | twisters which contain the minimal pair. <br> - Take students reflect about the pronunciation of both phonemes (/I/ vs /i:/) by their own so that | framework for more information about this stage). The teacher shows students the following tongue twisters: <br> * Kick Kip, keep Kip's kin. <br> * Lead lid, lead led deal <br> * Fix Mike's kite, feed Meg's hen <br> * Pick six beaks, seek big peeks. <br> * Mick's men met Mike's team <br> * she sells sea shells by the seashore <br> The teacher plays all tongue twisters and students have to repeat them after the track. <br> Then, the teacher chooses 10 students randomly so that students can be heard their pronunciation in isolation (student by student). <br> 2. Stage 2 of experiential learning cycle reflective observation and perception: students are carried out to create their own conclusions and hypothesis after concrete | implemented the activity and if students remembered the pronunciation of the phonemes. <br> Audio recordings: <br> This instrument was had into account when selected students had to read the tongue twisters <br> Field notes: <br> The data were gathered about students‘ behavior, reactions and statistical data about the number of students who perceived |
| :---: | :---: | :---: | :---: |



|  | - Implement an interview in order to analyze students' pronunciation learning process of the minimal pair (/I/ and /i:/). | can reach the correct sound of each phoneme: <br> - /I/ phoneme is an intermediate sound between Spanish /e/ and /i/ and you can get to the /I/ phoneme pronouncing Spanish /i/ but with your mouth more open and taking into account the sound is shorter <br> - /i:/ phoneme is longer than in Spanish. For example, notice the duration of the following minimal pair si /sí/ (Spanish word) VS sea /si:/ (English word), the difference is the second word is longer. <br> 4. Stage 4 of experiential learning cycle Active experimentation: students carry out the practice of what they actually learnt after having the experience, the reflection of the experience and the abstract conceptualization. theoretical framework for more information about this stage). | Field notes: <br> The data were gathered about students‘ behavior, reactions and if they understood the differences between the pronunciation of phonemes /I/ and /i:/. |
| :---: | :---: | :---: | :---: |



| Session |  |  |  |
| :---: | :---: | :---: | :---: |
|  | - Make students | 1. Stage 1 of experiential | Field notes: |
| 3 | recognize the | learning cycle Concrete | Here some aspects were |
| /s/ vs /æ/ | phonemes /æ/ | experience: students are | had into account, |


| Date <br> May <br> $25^{\text {th }}$, <br> 2016 | and $/ N /$ in terms of pronunciation from the video "æ' or ' $\Lambda$ ' - carry or curry - Test Yourself - ESL British English Pronunciation" by <br> "iswearenglish. <br> - Take students reflect about the pronunciation of both phonemes (/æ/ and $/ \Lambda /$ ) by their own so that they create their own conclusions and hypothesis about how both phonemes are pronounced. | faced to an experience in which they have to reflect by themselves. (See theoretical framework for more information about this stage). <br> The teacher plays a recording about minimal pairs " $æ$ ' or ' $\Lambda$ ' - carry or curry - Test Yourself - ESL British English Pronunciation" taken from "iswearenglish YouTube channel. Then, the teacher chooses 3 students to read some minimal pairs from the video. <br> 2. Stage 2 of experiential learning cycle reflective observation and perception: students are carried out to create their own conclusions and hypothesis after concrete experience stage. (See theoretical framework for more information about this stage). <br> The teacher says some sentences and students have to repeat them after the | aspects such as: students' behavior and reactions to phonemes $/ æ /$ and $/ \Lambda /$, results after having implemented the activity. <br> Audio recordings: <br> This instrument was had into account when selected students had to read the tongue twister <br> Field notes: <br> The data were gathered about students‘ behavior, reactions and pronunciation of each sentence |
| :---: | :---: | :---: | :---: |




| throughout the <br> whole process. | more information about this <br> stage). <br> The teacher writes on board a <br> list of words which contain <br> the phonemes (/æ/ and $/ \Lambda /):$ <br> Fun, fan, ankle, uncle, sun, <br> cat, bug and bag. <br> Then, the class is divided in <br> pairs and the teacher says |
| :---: | :--- | :--- | :--- |
| between (/æ/ and $/ \Lambda /)$ |  |
| "guys you have to create a |  |
| short story using the words |  |
| written on board, then I |  |
| choose randomly 5 pairs in |  |
| order to read their stories". |  |
| The teacher monitors each |  |
| pair and helps then in order to |  |
| clarify doubts or help them |  |
| with the vocabulary. |  |


| Session <br> 4 | - Take students to | 1. Stage 1 of experiential | Field notes: |
| :---: | :---: | :---: | :---: |
| I $\mathrm{N} /$ and /æ/ | recognize $/ \mathrm{N} /$ and /æ/ phonemes through the | learning cycle Concrete experience: students are faced to an experience in | The students' behavior, reactions and attitudes about the activity and |
| Date: | reading The Tale | which they have to reflect by | the minimal pair (/æ/ |
| June | of Stingy Jack | themselves. (See theoretical | and $/ \Lambda /$ ). |
| $\mathbf{3}^{\mathrm{rd}}$ | using listening | framework for more |  |
| 2016 | activity and | information about this stage). |  |
|  | minimal pair. | The teacher asks students for answering the following |  |



|  | The Tale of Stingy Jack and repetition of some fragments of the reading. <br> - Make students review about how they can reach both phonemes (/ $/$ / and /æ/) In order to clarify doubts and reinforce knowledge. | more information about this stage). <br> The teacher takes some fragments of the text The Tale of Stingy Jack, he reads and students have to repeat in order to clarify doubts in terms of pronunciation. Then, the teacher chooses 5 students to read some sentences from the reading (I or 2 per student) <br> 3. Stage 3 of experiential learning cycle Abstract conceptualization: teacher make feedback about how students perform stages 1 and <br> 2. Also teacher clarifies doubts. <br> The teacher makes a review about some ways students can reach the correct sound of each phoneme: <br> - /æ/ phoneme is an intermediate sound between Spanish /a/ and /e/. A way in which you can get to the $/ \mathfrak{\text { } / ~}$ phoneme is pronouncing Spanish /e/ but with your mouth more open, but | pronunciation of phonemes /æ/ and $/ \Lambda /$. <br> Audio recordings <br> Students who were selected to read the fragments from the story were recorded <br> Field notes: <br> The data were gathered about students ${ }^{\text {‘ }}$ behavior, reactions and if they remembered the differences between the pronunciation of phonemes /æ/ and $/ \Lambda /$. |
| :---: | :---: | :---: | :---: |


|  | - Take students to practice the pronunciation of / $\mathrm{N} /$ and $/ \mathfrak{x} /$ phonemes in order to reinforce how to pronounce and perceive them. | remember! It is not a Spanish $/ \mathrm{a} /$ nor a Spanish /e/, it is a mix between the two sounds. <br> - You can get to /æ/ phoneme imitating the baaing of a sheep (the teacher is going to play the baaing of a sheep). <br> - The phoneme $/ \mathrm{N} /$ is just like a Spanish /a/ but shorter. <br> 4. Stage 4 of experiential learning cycle Active experimentation: students carry out the practice of what they actually learnt after having the experience, the reflection of the experience and the abstract conceptualization. <br> (See theoretical framework for more information about this stage). <br> The teacher divides the class in groups of 4 and 5 students. Then, the teacher gives a set of flash cards (they have a picture and a corresponding word), so that students take a flash car in turns and they have to create a sentences | Field notes: <br> The gathered information was based on students' behavior and attitudes at time to apply what they learned throughout the session. <br> Audio recording: <br> At time in which the teacher monitored some groups and some students the students pronunciation was recorded |
| :---: | :---: | :---: | :---: |


|  | including the word; the <br> teacher monitors the activity <br> and he records some groups <br> (students)' pronunciation. |
| :--- | :--- | :--- |


| Session <br> 5 <br> / $\theta$ / and <br> / $\mathbf{~ / ~}$ <br> Date <br> June <br> $10^{\text {th }}$, <br> 2016 | - Make students recognize the phonemes $/ \theta /$ and $/ \delta /$ in the pronunciation of some tongue twisters which contain the minimal pair. | 1. Stage 1 of experiential learning cycle Concrete experience: students are faced to an experience in which they have to reflect by themselves. (See theoretical framework for more information about this stage). <br> The teacher projects the video "Tongue twisters for TH sound (1): Speak with a Standard British English Accent" from Anna'sBritishEnglish YouTube channel. The teacher stops the video in some moments, so that students repeat each tongue twister after they watch how Anna pronounces each tongue twister (Anna's mouth movements). This activity is a recognition activity of phonemes. Then, the teacher | Field notes: <br> Here some aspects were had into account, aspects such as: students' behavior and reactions to phonemes $/ \theta /$ and / $\delta /$ results after having implemented the activity. <br> Audio recordings: <br> This instrument was had into account when selected students had to read the tongue twister |
| :---: | :---: | :---: | :---: |





|  | 4.4.). Then, the teacher <br> chooses 3 couples to read their <br> conversation. |
| :--- | :--- | :--- | :--- |


| $/ \theta /$ and <br> /ð/ <br> Date <br> June <br> $16^{\text {th }}$, <br> 2016 | - Make students recognize the phonemes $/ \theta /$ and /ठ/ in the song stiches by Shawn Mendes through catching the correct words in a listening exercise to fill in the gaps. | 1. Stage 1 of experiential learning cycle Concrete experience: students are faced to an experience in which they have to reflect by themselves. (See theoretical framework for more information about this stage). Teacher introduces students to activity of the song, for this the teacher asks: <br> - Do you know who Shawn Mendes is? <br> - Have you ever listened to some Shawn Mendes's song? Which ones? <br> - What kind of musical styles does Shawn Mendes sing? <br> - Have you ever listened to the song stitches by Shawn Mendes? <br> - Do you know the lyrics of the song? <br> - Can you sing a piece of the song? Do it | Field notes: <br> Here some aspects were kept in mind, aspects such as: students' behavior, reactions to phonemes / $\theta /$ and / $\delta /$ and results after having implemented the activity. <br> Audio recordings: <br> This instrument was had into account when students had to read or pronounce fragments of the song in order to analyze the pronunciation process. |
| :---: | :---: | :---: | :---: |






Chart adapted from: Gamboa A., Mg. English Language Teaching, Universidad Pedagógica Nacional

## CHAPTER V

## DATA ANALYSIS

## CATEGORIES

This chapter describes the process of analysis and triangulation of the categories that emerged from the research question and objectives. It means, categories emerged a priori (Johnson B, Christensen L, 2012). As this research focused on pronunciation and specifically improvements in three minimal pairs, the selected categories were: a). Distinctions in the production and perception of the minimal pair /i:/ VS /I/, b). Distinctions in the production and perception of the minimal pair $/ \mathfrak{x} / \mathrm{VS} / \Lambda /$, and c ). Distinctions in the production and perception of the minimal pair $/ \theta / \mathrm{VS} / \delta /$ in order to describe the results obtained in the analysis of the implementation stage. In addition, each category was described and analyzed keeping in mind: the results obtained in the application of two tests (pre and post), the field notes, audio recordings, the stages of Experiential Learning Cycle, and Phonetics and Phonology Pronunciation Techniques (minimal pairs, reading activities, listening activities and drilling). It is important to clarify that Phonetics and Phonology Pronunciation Techniques were applied and carried out in every activity; and in the same way, in every stage of the Experiential Learning cycle. In other words, the analysis was organized in the following way:

## Research Question

How do Phonetics and Phonology Pronunciation Techniques and Experiential Learning strategy enhance the pronunciation of /ı/ VS /i:/, / $\wedge$ / VS /æ/ and /Ө/ VS /ð/ minimal pairs in common words contained in simple sentences and short conversations in students from Luigi Pirandello School?

## Categories

Distinctions in the production and perception of the minimal pair /i:/ VS /I/

Distinctions in the production and perception of the minimal pair /æ/ VS /s/

Distinctions in the production and perception of the minimal nair / $\mathbf{A} / \mathrm{VS}$ / $\mathbf{x} /$

## Sulbcategories

The following subcategories were applied for each category:

1. Pre-test
2. Experiential Learning stages -Concrete Experience -Reflective Observation -Abstract conceptualization -Active Experimentation
3. Post-test

The analysis was focused on two tests (pre \& post), six field notes and the transcriptions of audio recordings in order to measure students' progress throughout the implementation of the six sessions. The tests were applied to a sample of fifteen sixth graders, who were selected in a random way. The researcher followed the following steps in order to choose the sample and organize the data properly:

- First, a code-number was assigned per participant (whole population).
- Second, the teacher collected some relevant information required by the website https://graphpad.com/quickcalcs/randomN2/ was completed (number participants and quantity of random numbers that were required " 32 and 15 respectively"), this website was useful only for obtaining the sample of the population randomly. (See Appendix V: Extra information, 5.2)
- And third, a new code-number was assigned for each participant of the sample, from 1 to 15 in order to protect their identities.


## Roles

The data collection process was carried out by the researcher, the tenured teacher, and students. Their roles were distributed in the following way:

- The researcher: in the process of tests implementation, he was responsible for giving instructions and explanations, recording students' answers, solving doubts, and transcribing students' answers to IPA. In sessions implementation, he was responsible for implementing the lesson plans, recording students' process (using field notes and audio-recordings), giving instructions, solving doubts, monitoring students' activities, and maintaining the order throughout the sessions.
- The tenured teacher: she was responsible for filling in the field note format. They had to collect information related to: students' behavior, students' reaction in each activity, and what happened in each activity.
- Students, they were responsible for paying attention, participating actively and following the researcher's instructions. On the other hand, 15 students (the sample) had to participate in the implementation of the pre and post tests reading six sentences.

Tests were applied by the researcher student by student. In the pre-test, students had to read six sentences; and in the post-test they had to read the same six sentences but with an additional sentence with the minimal pairs considered in this research. After the implementation of the pre-test and post-test sentences were tanscribed to the IPA. It is important clarify that ' $\underline{a}$ \& í symbols represent Spanish phonemes which do not exist in English Phonological System. Then, those sentences were written in charts, in blue if they were correctly pronounced, and in
red if they were pronounced incorrectly. In addition, sentences in the tests were on flash cards, each sentence with a representative picture, so that students understood what they were saying.

In the following chart, there is an example about how sentences were organized:

| My uncle lost his hat on Thursday when he was visiting his brother in law mai 'ıjkl lost hiz hæt pn ' $\theta \mathbf{3}: \mathbf{z d e}$ wen hi: wnz 'vizitıj hiz 'brıðər in b: |  |
| :---: | :---: |
| Participant's code | Phonological transcription with IPA |
| 1 2 3 |  mai ' $九 \mathfrak{k l}$ l lpst his hæt pn ' $\theta$ urzdeı wen hi: wnz ' vizitıy his 'broðər in lo: mai 'aŋpl! lost his hąt pn ' Uurzdeı wen hi: wpz 'vızıtı̣ his 'broðər in lo: |

To code the data gathered in tests (pre and post), Excel program was chosen to create a chart where each row represented the information of a single participant, and where each phoneme contained in each sentence in the pre-test and post-test had a column. Each Excel cell had a numerical value ( $\mathbf{1}$ or $\mathbf{- 1}$ ); if the student answered with the proper phoneme, the value number was written $\mathbf{1}$, but if the student pronounced the phoneme with a different phoneme or with a L1 phoneme, the value number was written -1. As it showed in the following example:

| Sentence | Chicks live in little villages <br> tJiks Iiv in lital vilidzaz |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Transcription |  |  |  |  |  |  |  |  |
| Participants' <br> code | Ph 1 | Ph 2 | Ph 3 | Ph 4 | Ph 5 | Ph 6 | Correct <br> answers |  |
| 1 | 1 | 1 | -1 | 1 | 1 | -1 | 2 |  |
| 2 | 1 | 1 | -1 | 1 | 1 | -1 | 2 |  |
| 3 | 1 | -1 | -1 | -1 | -1 | -1 | -5 |  |
| Totals | 3 | 1 | -3 | 1 | 1 | -3 |  |  |

Chart adapted from Alvarez D., Andrade L., \& Beltran M., Ug. BA English Language Teaching, Universidad Minuto de Dios. (2016)

Another chart which appears in the analysis is the comparison between pre-test and posttest in this case Excel program was chosen in order to show the comparison in terms of
percentages. Also, the chart showed the total right answers and total wrong answers in the pre and post-test. Each row showed the information per participants. Here there is an example.

| Results: third sentence $/ æ / \mathrm{VS} / \mathrm{\wedge} /$ |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| 3 phs. | Pre-test |  | $13=100 \%$ | Post-test |  | $13=100 \%$ |
| Participants | T. right ans. | T. wrong ans. | Percentage r.a. | T. right ans. | T. wrong ans. | Percentage r.a. |
| Student 1 | - | 3 | $0 \%$ | 3 | - | $100 \%$ |
| Student 2 | - | 3 | $0 \%$ | 1 | 2 | $33.33 \%$ |
| Student 3 | - | 3 | $0 \%$ | 3 | - | $100 \%$ |

1. Category I: Distinctions in the production and perception of the minimal pair /i:/ VS /I/:

### 1.1. Pre-test:

Sentences from the pre-test:

| Sentences | Transcription of the pronunciation taking into <br> account IPA |
| :--- | :--- |
| Chicks live in little village | tfiks liv in litəl vılıd3əz |
| Eager Eddy eats eagles every evening | i:gər edı i:ts i:gəlz 'evərı 'i:vnı! |

For the analysis in this category the phonemes written with blue were taken into account and for each phoneme a number was assigned from left to right. It means, in first sentence the numbers from 1 to 6 were assigned and in the second sentence the numbers from 1 to 7 were assigned. The following charts represent the collected data. The first and second chart belong to the first sentence, and the third and fourth belong to second sentence.

| Chicks live in little villages tfiks liv in litəl vilidjəz |  |
| :---: | :---: |
| Participant's code | Phonological transcription with IPA |
| 1 | t $\int$ iks lif in litpl viladzez |
| 2 | t jiks lif in litpl viladzez $^{\text {d }}$ |
| 3 | t $\int$ iks lif in litpl viladzez |
| 4 |  |
| 5 | t $\int$ inks lif in litpl viladzez |
| 6 | t 5 iks lif in litol viladzez |
| 7 | tfiks lif in litol viladzez |
| 8 | t jiks lif in $^{\text {in litpl viladzez }}$ |
| 9 | tfiks lif in litpl viladzez |
| 10 | t $\underline{i}^{\text {k }}$ k lif in litol viladzez |
| 11 | tfiks lif in litpl viladzez |
| 12 | t jiks lif in litol viladzez $^{\text {d }}$ |
| 13 | t inks lif in litol viladzez $^{\text {d }}$ |
| 14 | t 5 iks lif in litpl viladzez |
| 15 | tfinks lif in litpl viladzez |

Transcripts of the audio recordings in the first sentence (pre-test)

| Sentence | Eager Eddy eats eagles every evening i:gar edı i:ts i:galz 'evarı 'i:vnın |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Participants' code | Ph 1 | Ph 2 | Ph 3 | Ph 4 | Ph 5 | Ph 6 | Ph 7 | Correct answers |
| 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 2 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 3 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 4 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 5 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 6 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 7 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 8 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 9 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 10 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 11 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 12 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 13 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 14 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 15 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| Totals | -15 | -15 | -15 | -15 | -15 | -15 | -15 |  |


| Eager Eddy eats eagles every evening i:gər edı i:ts i:galz 'evarı 'i:vnı! |  |
| :---: | :---: |
| Participant's code | Phonological transcription with IPA |
| 1 |  |
| 2 | iger edio its ígols 'evorí 'ivnin |
| 3 | iger edi its ignls 'evori 'evning |
| 4 | $\underline{\text { iger edi its ignls 'everi }}$ 'evnin |
| 5 |  |
| 6 |  |
| 7 |  |
| 8 | iger edi its ígols 'evorí 'evning |
| 9 | $\underline{\text { iger edi its ignls 'everi }}$ 'evnin |
| 10 |  |
| 11 |  |
| 12 |  |
| 13 |  |
| 14 | $\underline{\text { iger edi its ignls 'evori }}$ 'evnin |
| 15 | iger edio its ígols 'evərí 'ivning |

Transcripts of the audio recordings in the second sentence (pre-test)

| Sentence | Eager Eddy eats eagles every evening i:gər edı i:ts i:gəlz 'evərı 'i:vnın |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Participants' code | Ph 1 | Ph 2 | Ph 3 | Ph 4 | Ph 5 | Ph 6 | Ph 7 | Correct answers |
| 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 2 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 3 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 4 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 5 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 6 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 7 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 8 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 9 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 10 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 11 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 12 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 13 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 14 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| 15 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 |
| Totals | -15 | -15 | -15 | -15 | -15 | -15 | -15 |  |

As it could be observed, all of the students did not pronounce the sentences with their proper phonemes because they replaced them by mother tongue phonemes in both sentences. It means, they could not pronounce properly the long /i:/ and short /I/. They replaced by the only sound "i" in Spanish

According to Mannell, Cox \& Harrington (2014) "In each human language, there is a finite number of units called phonemes that a language uses to build its words". If it is kept in mind that each language has their own phonological system, it can be infered that as students have a codificated number of phonemes (their mother tongue ones); they try to pronounce words in the new language using phonemes they commonly use. That is the reason why students need to be faced to explicit experiences and activities that allow them understand that sounds in L1 are not the same in L2. In other words, students need to acquire new speech habits.

Another relevant point to mention here is that students had no an explicit knowledge about the characteristics of English vowels, especially those that are present in the minimal pair /i:/ VS /I/. It means, in both sentences the long " $i$ " and short " $i$ " were presented; but as it was stated before, English has its own phonological system and Spanish has another one. However, in terms of "i" sound, English has two vowel sounds /i:/ and /I/, but Spanish has just one high front vowel /i// (Hudson J., 2013). It made students think that words that contain ' i ' sound were pronounced with a unique sound (Spanish ' $\underline{i}$ '). For example, $<$ Eager Eddy eats eagles every evening> / iger edi its ignls 'evərí 'ivnị /. However, they recognized that the sound "i" could be spelled in different manners like in eat, Eddy or evening.

In the same line, it is importantnt to say that the most common characteristics of English vowels are the length and the position of each vowel sound (Parkinson S., 1983). That is, this is the big differences between the minimal pair /i:/ VS /I/; which /i:/ is the long " i " sound and /I/ is
the short one. In here, it is necessary students keep in mind those characteristics, but they need to be understood in a practical way and not theoretically because theoretically gives the technical knowledge and practicing allows to understand how each sound it is produced and perceived in real situations.

Another aspect that was found was the relationship between pronunciation and spelling. Some students did not know that each sound such as /i:/ has different spelling patterns. For example, the word <villages>/vilidzəz/ in first sentence, it was pronounced/viladzez/ by all of students.

According to Avery P. \& Ehrlich S., (1992) "The English spelling system often fails to represent the sounds in English in a straightforward manner. In other words, there is no one-toone correspondence between the sound that we hear and the letters we see on page". That is why for the minimal pair /i:/ VS /I/, it is important including the explanation of exceptions of general rules in words such as: villages /vılıdzəz/, luggage /'lıgıd3/, people /'pi:pl/, reliable /rı'laıəbl/, busy /'bızi/ and believe /bı'li:v/ in order to avoid mispronunciation or give student the basis to pronounce any word which contains /i:/ or /I/ phonemes.

### 1.2. Experiential Learning Stages:

It was shown and evidenced in the data gathered with the field notes and audio-recordings that students had a meaningful improvement in the pronunciation of the minimal pair /i:/ VS /I/ after having implemented the four Experiential Learning stages throughtout both sessions (the Experiential Learning cycle was carried out completely in every session).

### 1.2.1. Concrete experience:

It is important to state in the first session and in the first stage of Experiential Learning cycle, students were confused and even most of them wondered: What is the idea of a song? and What is the difference between both "I"s? The later question arose because they thought that each given couple of words were pronounced in the same way. That is, words like see/SI or feel/fill were pronounced as /si/ VS /si/ and /fil/ VS /fili/. After the researcher's explanation, the song was played twice or three times, they started to reflect about there were differences between each word, in terms of pronunciation (Appendix III: Field notes \# 1).

As it was seen students had two different problems. The first one was they were faced to new sounds (/i:/ and /I/) they had to apply and use in common English words; and the second one was that they was faced to minimal pairs exercises. According to Kelly G., (2000) minimal pairs "[...] are words or utterances which differ by only one phoneme". Taking into account that statement, the latter aspect mentioned became in a problem because the minimal pair activity was carried out with new sounds. It means, minimal pair activities are not a challenge if students are faced to sound that are usually used in their daily life. However, the pedagogical experience did not have sense in this way, but as they were faced to the minimal pair /i:/ VS /I/ (new phonemes), students had a meaningful experience in which they had to identify there were 2 new sounds and the differences in terms of pronunciation between words in each pair. An example here was the part of the song "It's the happiness inside that you're 8. (feeling / filling)" (see Appendix III: Field notes \# 1 and Appendix IV: Activities and Worksheets, 4.1.)

In this stage of Experiential Learning Cycle, students had to analyze by themselves about the purpose of activities. In the first session students needed to understand what a minimal pair was and that there was a subtle difference in terms of pronunciation in each couple of words. For
example, the words in the minimal pair feeling VS filling sound almost the same but with a subtle variation in pronunciation terms, the students' reaction was to think both words sounded exactly the same, then, they started to perceive a subtle difference in pronunciation of both words (Appendix III: Field notes \# 1). In the second session, students had to remember that in English there were two different sounds for "i" but they did not remember it at the beginning of the session because they replaced the phonemes /i:/ and /I/ in the pronunciation of the tongue twisters by Spanish phoneme /íl. (Appendix III: Field notes \# 2). It is important to clarify there was a long time between session 1 and session 2, (15 days) and this factor played an important role in students' process.

The minimal pair technique had an important function in this stage, as students lived an experience and reflect on that experience; and as Avery P. \& Ehrlich S., (1992) state "Minimal pairs can first be used to help students develop an awareness of the distinction between the two sounds". In the case of teaching the minimal pair /i:/ VS /I/, it was an excellent idea using minimal pair technique because this technique made students aware of there are two different sounds for the sound "i" and the importance to pronounce correctly a sound in a word.

### 1.2.2. Reflective observation

The point of this stage was to give students other different inputs to the experience in stage one of the cycle, so that, they tried to make conclusions by their own. That is, in stage one students had to identify there was a difference between both phonemes and in this stage they had to make generalizations on how the pronunciation of each phoneme was. For example, when students understood that there was a difference in terms of pronunciation in each word or phoneme a new challenge emerged to them. The new challenge was the pronunciation of the phoneme /I/ because they could not manage to pronounce it. They replaced this phoneme by

Spanish /ㅍ/ or even by /e/ (Appendix III: Field notes \# 1). That was a problem because a new minimal pair emerged /I/ VS /e/. That is why the third stage of Experiential Learning cycle played an important role in each session.

Replacing phonemes is the first step to get to understand new phonemes in a language like in the case of phoneme /I/. According to Parkinson S., (1983) "the phoneme /I/ is pronounced as an intermediate sound between Spanish /e/ and /i/". Taking into account that statement, it can be inferred students can achieve the pronunciation of the phoneme /I/ when they realize this is a new phoneme and it cannot be replaced by /e/, /i:/ or Spanish /i/ because they are saying a diferent word. For example, it is different the pronunciation of words like fill /fII/, feel /fi:1// or fell /fel/. It means, if those forms are shown to students they can reflect on the importance to pronounce properly each phoneme and that they should not keep in the approximation of phonemes, and it is possible if they realize about this difference by themselves.

The minimal pair /i:/ VS /I/ was worked during two sessions as it was said above, and it is important to say that at the beginning of the second session students did not remember what they had learned the session before. In the second session the Experiential Learning cycle and Phonetics and Phonology Pronunciation Techniques were applied again, with different activities but keeping in mind the stages of the cycle. In this session students had no problem to manage the pronunciation of the phonemes and most of them learned to perceive and produce the phonemes properly. For example, in the first activity they pronounced the word 'keep' as /kip/, but in second activity, most of them could identify the word, and pronounced /ki:p/ instead of /kip/ or /kIp/ (Appendix III: Field notes \# 2).

Here, it can be said the proverb "practice makes perfect" by Anonymous. This because as it was described above, in the first session students learnt about the perception and production of
the minimal pair /i:/ VS /I/ and in the second session they did not remember anything, but if students in their daily life practice the pronunciation of those phonemes, they might make that process automatically and naturally. However, as it was said above the period of time between first and second session was against them (15 days).

### 1.2.3. Abstract conceptualization:

As it was said above, this stage helped students to understand that there were two phonemes for " i " in English phonological system (/i:/ and /I/). Also, this stage served to give students some ideas about how they can acquire the proper pronunciation of each phoneme in an easier way. In the first session when the teacher started to explain how students could get to the pronunciation of each phoneme /i:/ and /I/, students started to repeat and imitate what the teacher said and it made most of students achieved the proper pronunciation of each phoneme in an easier way (Appendix III: Field notes \# 1).

Drilling was one of the most important techniques in the process of achieving the proper pronunciation of the minimal pair. According to Kelly G., (2000) "in its most basic form, drilling simply involves the teacher saying a word or structure, and getting the class to repeat it. Being able to drill properly is a basic and fundamental language teaching skill" ( $\mathrm{P}-16$ ). More than the fact of drilling, students could get the phoneme hearing how the teacher pronounce a word and exaggerating the teacher pronunciation. For example, at the moment when teacher said "No guys, it is not /fil/, it is /fi:1/, repeat /fi: $1 /$ " in that case student repeated it and they exaggerate the pronunciation of /i:/ or in the case of /I/ when teacher said "Guys, it is not/fil// or /fi:l/ nor /fel/; it is /fIl/"; in that latter example students understand that it is wrong replacing the pronunciation of the sound /I/ and they can drill proppely the teacher's pronunciation.

In this stage, it could be observed student related everything with aspects that areusuals for them. For example, in session one students related the phonetical symbols with the simbols on the dictionary, and they usually related somewords with a respect sound, to remember when to use each sound (Appendix III: Field notes \# 1). It means, they use exemplification and the lived experience to remember and understood how each sound works.

As Bourton L. \& Lamport S., (2013) state" The pedagogical experience is kept in mind to clarify and generate new viewpoints". Taking into account this statement, it can be affirmed that it is important the explanation in practical term than the theory because practicing allows students remembering and keeping bases to understand how a topic like the minimal pair /i:/ VS /I/ works

### 1.2.4. Active experimentation:

The last stage was carried out providing an interaction time in which students practiced the pronunciation of the minimal pair /i:/ VS /I/. In this stage was observed that at the time to pronounce the phonemes in sentences students had some difficulties because some of them still replaced both phonemes by Spanish/i/. However, there were some students who monitored themselves and corrected their mistakes by themselves. For example, <I feel ill and I need a seat> one of the students who read this sentence said "/ai fi:1 il and ai ni:d a sit/ Oh sorry! /ai fi:1 Il and ai ni:d a sIt/" (Appendix III: Field notes \# 1).

According to McLeod, S. A. (2013) "the active experimentation stage in experiential learning cycle is where learnerer applies what they have learned to the world around them to see what results". In the four stage of experiential learning the most relevant finding was that some students monitored themselves when they pronounced a different phoneme instead of the proper. It was really interesting because it confirms that students lived an experience, took advantage of
it and improved their knowledge. Although not all of students have got this skill but they could help themselves to have a meaningful pedagogical experience.

### 1.3. Post-test:

In the post-test of this cathegory the same two sentences of the pre-test were chosen in order to compare the pronunciation previous to implementation stage and after it.

Sentences from the post-test:

| Sentences | Transcription of the pronunciation taking into <br> account IPA |
| :--- | :--- |
| Chicks live in little village | tJiks lıv in litəl vılıdзəz |
| Eager Eddy eats eagles every evening | i:gər edı i:ts i:gəlz 'evərı 'i:vnıy |

The post-test was applied taking into account the same aspects of the pre-test. It means, the researcher showed student the flash cards with the sentences and pictures so the sentences were meaningful form them. Then, students had to read them while the researcher recorded them. After that step, the researcher transcribed the audios using the IPA as it is shown in the following charts.

| Chicks live in little villages tfiks liv in lital vilidjaz |  |
| :---: | :---: |
| Participant's code | Phonological transcription with IPA |
| 1 | t 5 Iks lif in litpl viladzez |
| 2 | tfiks lif in litpl viladjez |
| 3 | t 5 Iks lif in litol viladzez |
| 4 | t $\int$ iks lif in litpl viladzez |
| 5 | t İks lif in $_{\text {in litpl viladzez }}$ |
| 6 | tfiks lig in litol viladzez |
| 7 | t $\int$ iks lif in litpl vilidzez |
| 8 | tfiks lif in litol viladzez |
| 9 | t jiks lif in litol viladzez $^{\text {d }}$ |
| 10 | tfiks lif in litpl viladzez |
| 11 | tfiks lif in litol viladzez |
| 12 | t 5 Iks lif in litol viladzez |
| 13 | t 5 Iks lif in litpl viladzez |
| 14 | tfiks lif in litol viladzez |
| 15 | t $\int$ iks lif in litpl vilidzez |

Transcripts of the audio recordings in the first sentence (post-test)

| Sentence <br> Transcription | Chicks live in little villages tfıks lıv in litəl vilıd3əz |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Participants' code | Ph 1 | Ph 2 | Ph 3 | Ph 4 | Ph 5 | Ph 6 | Correct answers |
| 1 | 1 | 1 | -1 | 1 | 1 | -1 | 2 |
| 2 | 1 | 1 | -1 | 1 | 1 | -1 | 2 |
| 3 | 1 | -1 | -1 | -1 | -1 | -1 | -5 |
| 4 | 1 | 1 | -1 | 1 | -1 | -1 | 0 |
| 5 | -1 | -1 | -1 | -1 | -1 | -1 | -6 |
| 6 | -1 | -1 | -1 | -1 | -1 | -1 | -6 |
| 7 | 1 | 1 | 1 | 1 | 1 | 1 | 6 |
| 8 | 1 | 1 | -1 | -1 | 1 | -1 | 0 |
| 9 | -1 | 1 | -1 | -1 | -1 | -1 | -6 |
| 10 | 1 | 1 | -1 | 1 | 1 | -1 | -6 |
| 11 | 1 | -1 | -1 | -1 | -1 | -1 | -5 |
| 12 | 1 | 1 | -1 | -1 | 1 | -1 | 0 |
| 13 | 1 | -1 | -1 | 1 | 1 | -1 | 0 |
| 14 | -1 | -1 | -1 | -1 | -1 | -1 | -6 |
| 15 | 1 | 1 | 1 | 1 | 1 | 1 | 6 |
| Totals | 7 | 3 | -11 | -1 | 1 | -11 |  |


| Eager Eddy eats eagles every evening i:gər edı i:ts i:galz 'evarı 'i:vnı! |  |
| :---: | :---: |
| Participant's code | Phonological transcription with IPA |
| 1 | i:ger edi i:ts i:gnls 'evori 'i:vnıy |
| 2 | i:ger edi i its i:gnls 'evori 'i:vnıy |
| 3 | i:ger edi i:ts i:gdls 'evrrí 'evnıy |
| 4 | i:ger edi i:ts i:gbls 'everi 'evnıy |
| 5 | i:ger edil i:ts i:gdls 'evərị 'i:vnıy |
| 6 | iger edi it its i:gnls 'evəriِ 'evnin |
| 7 | i:ger edi i:ts i:gdls 'evari 'i:vnıy |
| 8 | i:ger edi it:ts i:gdls 'evariِ 'evnıy |
| 9 | iger edilits iggls 'everi 'evnıy |
| 10 | i:ger edi i: ts i:gnls 'everi 'i:vnıy |
| 11 | i:ger edi i:ts i:gnls 'evari 'i:vnıy |
| 12 | i:ger edi i:ts i:gdls 'evari 'i:vnıy |
| 13 | i:ger edi i i:ts i:gnls 'everi 'i:vnıy |
| 14 | i:ger edie it its i:gds 'evorī 'evnıy |
| 15 | i:ger edil i:ts i:gdls 'evərị 'i:vnıy |

Transcripts of the audio recordings in the second sentence (post-test)

| Sentence | Eager Eddy eats eagles every evening i:gər edı i:ts i:galz 'evarı 'i:vnı刀 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Participants' code | Ph 1 | Ph 2 | Ph 3 | Ph 4 | Ph 5 | Ph 6 | Ph 7 | Correct answers |
| 1 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | 3 |
| 2 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | 3 |
| 3 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 |
| 4 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 |
| 5 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | 3 |
| 6 | -1 | -1 | -1 | 1 | -1 | -1 | -1 | -5 |
| 7 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | 3 |
| 8 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 |
| 9 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | -5 |
| 10 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | 3 |
| 11 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | 3 |
| 12 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | 3 |
| 13 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | 3 |
| 14 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 |
| 15 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | 3 |
| Totals | 11 | -15 | 11 | 13 | -15 | 3 | 13 |  |

Statistical information from the second sentence (post-test)
In the charts of statistical information, the answers are shown in red with negative
numbers and in blue with positive numbers. That is, right answers were highlighted with blue
and incorrect answers with red color. In general terms, it can be said that students had a meaningful improvement in pronunciation of /i:/ and /I/ phonemes because all of students did not have any correct answer in the pre-test, and in the post test they had several correct answers.

The results are shown in the following charts:

| Results: first sentence /i:/VS/I/ |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| 6 phs. | Pre-test |  | $6=100 \%$ | Post-test |  | $6=100 \%$ |
| Participants | T. right ans. | T. wrong ans. | Percentage r.a. | T. right ans. | T. wrong ans. | Percentage r.a. |
| Student 1 | - | 6 | $0 \%$ | 4 | 2 | $66.65 \%$ |
| Student 2 | - | 6 | $0 \%$ | 4 | 2 | $66.65 \%$ |
| Student 3 | - | 6 | $0 \%$ | 1 | 5 | $16.65 \%$ |
| Student 4 | - | 6 | $0 \%$ | 3 | 3 | $50 \%$ |
| Student 5 | - | 6 | $0 \%$ | - | 6 | $0 \%$ |
| Student 6 | - | 6 | $0 \%$ | - | 6 | $0 \%$ |
| Student 7 | - | 6 | $0 \%$ | 6 | - | $100 \%$ |
| Student 8 | - | 6 | $0 \%$ | 3 | 3 | $50 \%$ |
| Student 9 | - | 6 | $0 \%$ | 1 | 5 | $16.65 \%$ |
| Student 10 | - | 6 | $0 \%$ | 4 | 2 | $66.65 \%$ |
| Student 11 | - | 6 | $0 \%$ | 1 | 5 | $16.65 \%$ |
| Student 12 | - | 6 | $0 \%$ | 3 | 3 | $50 \%$ |
| Student 13 | - | 6 | $0 \%$ | 3 | 3 | $50 \%$ |
| Student 14 | - | 6 | $0 \%$ | - | 6 | $0 \%$ |
| Student 15 | - | 6 | $0 \%$ | 6 | - | $100 \%$ |


| Results: second sentence / i: /VS / I/ |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7 phs. | Pre-test |  | $7=100 \%$ | Post-test |  | $7=100 \%$ |
| Participants | T. right ans. | T. wrong ans. | Percentage r.a. | T. right ans. | T. wrong ans. | Percentage r.a. |
| Student 1 | - | 7 | $0 \%$ | 5 | 2 | $71.43 \%$ |
| Student 2 | - | 7 | $0 \%$ | 5 | 2 | $71.43 \%$ |
| Student 3 | - | 7 | $0 \%$ | 4 | 3 | $57.14 \%$ |
| Student 4 | - | 7 | $0 \%$ | 4 | 3 | $57.14 \%$ |
| Student 5 | - | 7 | $0 \%$ | 5 | 2 | $71.43 \%$ |
| Student 6 | - | 7 | $0 \%$ | 1 | 6 | $14.28 \%$ |
| Student 7 | - | 7 | $0 \%$ | 5 | 2 | $71.43 \%$ |
| Student 8 | - | 7 | $0 \%$ | 4 | 3 | $57.14 \%$ |
| Student 9 | - | 7 | $0 \%$ | 1 | 6 | $14.28 \%$ |
| Student 10 | - | 7 | $0 \%$ | 5 | 2 | $71.43 \%$ |
| Student 11 | - | 7 | $0 \%$ | 5 | 2 | $71.43 \%$ |
| Student 12 | - | 7 | $0 \%$ | 5 | 2 | $71.43 \%$ |
| Student 13 | - | 7 | $0 \%$ | 5 | 2 | $71.43 \%$ |
| Student 14 | - | 7 | $0 \%$ | 4 | 3 | $57.14 \%$ |
| Student 15 | - | 7 | $0 \%$ | 5 | 2 | $71.43 \%$ |


| Results: Category one /i: / VS / I / |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| 13 phs. | Pre-test |  | $13=100 \%$ | Post-test |  | $13=100 \%$ |
| Participants | T. right ans. | T. wrong ans. | Percentage r.a. | T. right ans. | T. wrong ans. | Percentage r.a. |
| Student 1 | - | 13 | $0 \%$ | 9 | 4 | $69.23 \%$ |
| Student 2 | - | 13 | $0 \%$ | 9 | 4 | $69.23 \%$ |
| Student 3 | - | 13 | $0 \%$ | 5 | 8 | $38.46 \%$ |
| Student 4 | - | 13 | $0 \%$ | 7 | 6 | $53.85 \%$ |
| Student 5 | - | 13 | $0 \%$ | 5 | 8 | $38.46 \%$ |
| Student 6 | - | 13 | $0 \%$ | 1 | 12 | $7.69 \%$ |
| Student 7 | - | 13 | $0 \%$ | 11 | 2 | $84.61 \%$ |
| Student 8 | - | 13 | $0 \%$ | 7 | 6 | $53.85 \%$ |
| Student 9 | - | 13 | $0 \%$ | 2 | 11 | $15.38 \%$ |
| Student 10 | - | 13 | $0 \%$ | 9 | 4 | $69.23 \%$ |
| Student 11 | - | 13 | $0 \%$ | 6 | 7 | $46.15 \%$ |
| Student 12 | - | 13 | $0 \%$ | 8 | 5 | $61.54 \%$ |
| Student 13 | - | 13 | $0 \%$ | 8 | 5 | $61.54 \%$ |
| Student 14 | - | 13 | $0 \%$ | 4 | 9 | $30.77 \%$ |
| Student 15 | - | 13 | $0 \%$ | 11 | 2 | $84.61 \%$ |

In first sentence, participants $1,2,4,7,8,10,12,13$ and 15 had results over the $50 \%$ ( $60 \%$ of the total sample), and participants 7 and 15 got a perfect score ( $13.33 \%$ of the total
sample). In the second sentence all of participants got scores over the $50 \%$ excluding participants 6 and $9(86.66 \%$ of the total sample); in the second sentence no one got a perfect score. In general results participants $1,2,4,7,8,10,12,13$ and 15 got results over the $50 \%$. ( $60 \%$ of the total sample)

As a general conclusion, in this category, students had considerable improvements because in comparison with the pre-test, students could pronounce the minimal pair / i:/ VS /I/ contained in sentences of the post-test properly; not in all cases but the acquisition of English phonemes is a process, and in that process practicing plays the main role. From a personal opinion, it is necessary every day, so that they become the proper pronunciation in a habit because students learned to produce and perceive this minimal pair (/i:/ VS /I/) in each session, but they need to practice a lot in order to pronounce those phonemes automatically.

## 2. Category II: Distinctions in the production and perception of the minimal pair /æ/ vs / $\mathbf{n} /$

### 2.1. Pre-test:

The following chart shows the sentences that were applied in the pre-test

| Sentences | Transcription of the pronunciation taking into account IPA |
| :---: | :---: |
| Sarah's uncle broke his ankle when he was drunk | serəs 'nŋkəl brook hiz 'æŋkəl wen hi: wDz drıık |
| The cat sleeps while I have a bath | ðə kæt sli:ps waıl aı hæv ə bæө |

For the analysis in this category the phonemes written with blue were taken into account and for each phoneme a number was assigned from left to right. It means, in the first sentence the
numbers from 1 to 3 were assigned, and in the second sentence the numbers from 1 to 3 were assigned. Just like in the pre-test of the first category.

The results are shown in the following charts. It is important to keep in mind that the transcripts were the same of those mentioned above in the first category and they had the same features. That is, $\underline{a}$ and $\underline{i}$ are from the Spanish phonological system.

| Sarah's uncle broke his ankle when he was drunk <br>  |  |
| :---: | :---: |
| Participant's code | Phonological transcription with IPA |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 | saras ' $\underline{u} \eta \mathrm{kdl}$ brook his ' $\underline{\text { ang }}$ kl wen hio wdz druyk |
| 6 |  |
| 7 |  |
| 8 |  |
| 9 |  |
| 10 |  |
| 11 |  |
| 12 |  |
| 13 |  |
| 14 |  |
| 15 |  |


| Sentence <br> Transcription | Sarah's uncle broke his ankle when he was drunk seras '^ŋkal brouk hız 'æŋkəəl wen hi: wDz draŋkk |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Participants' code | Ph 1 | Ph 2 | Ph 3 | Correct answers |
| 1 | -1 | -1 | -1 | -3 |
| 2 | -1 | -1 | -1 | -3 |
| 3 | -1 | -1 | -1 | -3 |
| 4 | -1 | -1 | -1 | -3 |
| 5 | -1 | -1 | -1 | -3 |
| 6 | -1 | -1 | -1 | -3 |
| 7 | -1 | -1 | -1 | -3 |
| 8 | -1 | -1 | -1 | -3 |
| 9 | -1 | -1 | -1 | -3 |
| 10 | -1 | -1 | -1 | -3 |
| 11 | -1 | -1 | -1 | -3 |
| 12 | -1 | -1 | -1 | -3 |
| 13 | -1 | -1 | -1 | -3 |
| 14 | -1 | -1 | -1 | -3 |
| 15 | -1 | -1 | -1 | -3 |
| Totals | -15 | -15 | -15 | -45 |


| The cat sleeps while I have a bath ðə kæt sli:ps waıl aı hæv ə bæも |  |
| :---: | :---: |
| Participant's code | Phonological transcription with IPA |
| 1 | de kat slips wail ar haf a bat |
| 2 | de kat slips wail ar haf a bat |
| 3 | de kat eslips gwail ar haf a bat |
| 4 | de kat eslips gwail ar haf a bat |
| 5 | de kat eslips gwail ar haf a bat |
| 6 | de kat eslips gwail ar haf a bat |
| 7 | ðe kąt slips wail ar haf $\underline{\text { a bat }}$ |
| 8 | de kat eslips gwail ar haf a bat |
| 9 | de kat eslips gwail ar háf aq bat |
| 10 | de kat eslips gwail ar haf a bat |
| 11 | de kat eslips gwail ar half $\underline{\text { a bat }}$ |
| 12 | de kat eslips gwail ar haf a bat |
| 13 | de kat eslips gwail ar haf a bat |
| 14 | de kagt eslips gwail ar háf a bat |
| 15 | de katat slips wail ar haf $\underline{\underline{a}}$ bat |


| Sentence | The cat sleeps while I have a bath <br> đə kæt sli:ps waıl aı hæv ə bæ日 |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Transcription |  |  |  |  |
| Participants' <br> code | Ph 1 | Ph 2 | Ph 3 | Correct answers |
| 1 | -1 | -1 | -1 | -3 |
| 2 | -1 | -1 | -1 | -3 |
| 3 | -1 | -1 | -1 | -3 |
| 4 | -1 | -1 | -1 | -3 |
| 5 | -1 | -1 | -1 | -3 |
| 6 | -1 | -1 | -1 | -3 |
| 7 | -1 | -1 | -1 | -3 |
| 8 | -1 | -1 | -1 | -3 |
| 9 | -1 | -1 | -1 | -3 |
| 10 | -1 | -1 | -1 | -3 |
| 11 | -1 | -1 | -1 | -3 |
| 12 | -1 | -1 | -1 | -3 |
| 13 | -1 | -1 | -1 | -3 |
| 14 | -1 | -1 | -1 | -3 |
| 15 | -1 | -1 | -1 | -3 |
| Totals | -15 | -15 | -15 | -45 |

Statistical information from the fourth sentence (pre-test)
As it could be observed in charts before, all of students replaced the phoneme /æ/ by Spanish /a/d. For example, in second sentence 'the cat sleeps while I have a bath' / Øə kæt sli:ps waıl aı hæv ə bæ̈ /, students generally pronounced / de kąt slips wail ar háf a bat /. Having in mind this starting point, it is possible to affirm that they did not have any knowledge about the production and perception of the phoneme $/ \mathfrak{æ} /$. In addition, it is correct to say that students thought English sounts were the same that those they commonly produce in Spanish.

The English phoneme /æ/ is not equivalent to Spanish /a/. They have some similarities such as: both are rounded and law, but the difference is in the place of articulation (Parkinson S., 1983). Students had in mind that /æ/ and /a/ were the same sound because they unknew the phoneme $/ æ /$; and probably they did not stop to think English had different phonemes that those they are used to use in their daily life. It happened because students in their whole process were
never instructed in pronunciation, and it made students overgeneralized the pronunciation of their L1 in L2.

Other important aspect to mention here is the fact that students replaced the phoneme $/ \mathrm{s} /$ by Spanish / $\underline{\mathbf{a}} /$ or even by Spanish / $\underline{\mathbf{u}}$. For example, in the first sentence 'Sarah's uncle broke his ankle when he was drunk' / serəs '^ykəl brouk hız 'æŋkəl wen hi: wdz drıyk /. Some students
 mispronouinced the phoneme $/ \Lambda /$ because they thought the pronunciation of those words was related to their common spelling ' $u$ '. For example, understand, uncle, fun, luck, butter and so on.

The phoneme $/ \Sigma /$ is hard for Spanish speakers but not in terms of the pronunciation because the difficulty is at time to remember it (Parkinson S., 1983). As it was described above this phoneme was not pronounced for some reasons: the firs one is the fact that students did not have any knowledge about it; the second one was students had already heard words with this phoneme, and they associated it with the Spanish sound / $\underline{a} /$; and the last one is students related this phoneme with its common spelling ' $u$ '. That is why they did not pronounce $/ \Lambda /$ and it was replaced for /u/ like in <uncle> they did not say/' $n \jmath k \boldsymbol{k} /$ /, they said 'uykəl. Last reason is the most important to bear in mind in order to avoid the overgeneralization in terms of spelling and pronunciation. That is why it is necessary students learn that the common spelling for phoneme $I^{\prime} /$ is in words that contain "u" or "o" like in drunk /drıŋjk/, uncle /' $\wedge \eta k l /$, summer /'s $\Lambda m ə(r) /$ or come $/ \mathrm{k} \wedge \mathrm{m} /$, money /'mıni/, and color /'kılə(r)/. However, there are some special cases or exceptions like in does $/ \mathrm{d} \Lambda \mathrm{z} /$, blood $/ \mathrm{bl} \Lambda \mathrm{d} /$ and enough $/ \mathrm{I}$ ' $\mathrm{n} \Lambda \mathrm{f} /$; that to avoid mispronunciations.

### 2.2. Experiential Learning:

The Experiential Learning Cycle was worked throughout all sessions altogether with Phonetics and Phonology Pronunciation Techniques, the gathered data was registered in field notesand audiorecordings in sessions 3 and 4. It is important to highlight that all stages of the cycle were carried out per session in both sessions.

### 2.2.1. Concrete experience:

The first stage of the Experiential Learning Cycle was carried out properly. In the third session students were faced to listen to a video in which some minimal pairs were shown in terms of words where they could know the correct pronunciation of each word in a clear a meaningful way. In that activity students realized that there were two sounds for "a" in English. However, they could not manage the correct pronunciation of the phonemes easily (Appendix III: Field notes \# 3). In the fourth session, this stage was carried out again but students did not remember the correct pronunciation and perception of the minimal pair /æ/ VS $/ \Lambda /$ because probably did not practice the pronunciation of the fonemes in the period of time between session three and four (Appendix III: Field notes \# 4).

According to Shoebottom P., (1996) "The length of the vowel sound plays an important role. It is not surprising, therefore, that Spanish learners may have great difficulty in producing or even perceiving the various English vowel sounds. Specific problems include the failure to distinguish the sounds in some minimal pairs". Taking into account that statement, it can be affirmed that as English phonological system has some differences in relation to the Spanish one; students tend to find hard the distinction and persection of English phonemes, this when they are faced to new sound in first time because they have not the habit to perceive or even produce L2
phonemes. It means, English has different sounds wich can be represented or reflected in minimal pairs, for example $/ \mathfrak{æ} / \mathrm{VS} / \Lambda / \mathrm{VS} / \mathrm{a}: /$ and this characteristic does not exist in Spanish phonological system. Having in mind that reason, it is important teach the distinction between minimal pairs that students have greater difficulties; and for this is necessary facing students to several exercises of minimal pair and listening, so that students understand by themselves the differences between minimal pairs in order to live a meaningful learning experience.

In the activity in the third session students tended to confuse the phoneme $/ \Lambda /$ with $/ \mathrm{u} /$ because the common spelling of $/ \Lambda /$ as it was mentioned above is ' $u$ '. Moreover, when they listened to the video and track, they confused the pronunciation of the phoneme $/ \Lambda /$ with Spanish $/ \underline{\mathrm{a}} /$. On the other hand, the phoneme $/ \mathfrak{m} /$ at the beginning was understood as Spanish $/ \underline{\mathrm{a}} /$ and in some cases like /e/(Appendix III: Field note \# 3).

The phoneme $/ \mathfrak{æ} /$ tends to be replaced by phoneme $/ \underline{\mathrm{a}} /$ or $/ \mathrm{e} /$, due to it is a middle sound between / $\underline{\mathrm{a}} /$ and /e/ (Parkinson S., 1983). On the other hand it can be said that spelling is a big interference for Spanish speakers (Shoebottom P., 1996). Having in mind those staments, it is correct to say that Spanish speakers have difficulties in pronunciation because they relate pronunciation with spelling as the pronunciation rules in Spanish. It means, as Spanish pronunciation is strictly related to spelling, students overgeneralize that fact in English pronunciation.

### 2.2.2. Reflective observation:

In third session, this stage was carried out properly. Here, students tried to identify the difference of the phonemes $' / æ / \mathrm{VS} / \Lambda /$. However as it was mentioned in the concrete experience, students changed the pronunciation of phoneme / $\Lambda /$ by Spanish / $\underline{\mathbf{a}}$ / and the phoneme '/æ/ was
replaced by Spanish /a/ or even by /e/ (Appendix III: Field note \# 3). In the fourth session, students did not remember the minimal pair. Suddenly a student screamed "ahhhh... esos son los sonidos que vimos la clase pasada, recuerdan el baa..., el sonido de las cabras u ovejas" ${ }^{2}$ (Appendix III: Field note \# 4).

Some learners produce these two vowel sounds (/æ/ and $/ \Lambda /$ ) in a similar manner; and in some cases they produce the first one (/æ/) similar to /e/ (Avery P. \& Ehrlich S., 1992), thaking into account this statement, it is possible to say that it is very important students make distinction between the minimal pair $/ \mathfrak{\not r} / \mathrm{VS} / \Lambda /$ and even if students make the distinction of the phoneme $/ \mathfrak{x} /$ pronounncing /e/. This pronunciation error has to be corrected immediately because students may create misunderstandings in terms of a new minimal pair æ/ VS /e/, in words like pan /pæn/ VS pen /pen/. As a tip to avoid this pronunciation mistake, students have to be faced to sentences that contain these three phonemes, so that they understand the differences among them in one single sentence, for example <the fat men put ten brackets on the black desk>/ ðə fæt men p $\Lambda \mathrm{t}$ ten 'brækıts o:n ðə blæk desk/.

### 2.2.3. Abstract conceptualization:

In session three, students were very interested in the teacher explanation, and after the teacher gave them some tips to get to the proper pronunciation for each phoneme, students found so funny the pronunciation of the phoneme /æ/ because one of the tips was the imitation of the baaing of sheeps (Appendix III: Field note \# 3). In fourth session, students immediately remembered the proper pronunciation of the phoneme $/ æ /$ with the sound of the baaing of a

[^1]sheep; in relation to the phoneme $/ \Lambda /$ students did not have problemes in terms of their pronunciation (Appendix III: Field note \# 4).

According to Jones D. (1962) in terms of the phoneme $/ æ /$ " $[\ldots]$ the sound may also be obtained by trying to imitate the baaing of a sheep which resembles 'bæ: bæ:'" (pg 62). This is a meaningful way to get to the proper pronunciation of the phoneme /æ/ because students don't remember positions of their mounts. Instead of that, they remember a common animal sound. In other words, the theoretical learning disappears and the practical learning appears in a meaningful way to get to produce the phoneme phoneme/æ/ properly.

In the third session students were paying attention actively and they were able to produce the minimal pair /æ/ VS / / / properly. It was achieved because students clarified their doubts and undertood the way they could get to the correct pronunciation of the minimal pair using drilling as a pronunciation technique (Appendix III: Field note \# 3).

The third stage of experiential learning helped students to clarify doubts and learn how to produce and perceive the phonemes (Bourton L. \& Lamport S., 2013). With this stage, students students confirmed there were different ways to pronounce "a" in English and they learned the way to achieve a proper pronunciation of the minimal pair $/ æ / \mathrm{VS} / \Lambda /$. In addition, they way in which students achieved the correct pronunciation of the minimal pair /æ/VS/ $/$ / was through repetition, practice in words and sentences within a meaningful context and assimilating the phoneme /æ/ with the baaing of a sheep.

### 2.2.4. Active experimentation:

The cycle was completed with this stage in sessions three and four. Here students were taken to live a second experience; but this experience was different to the first stage because in
here students had to apply what they had learned during the whole session. The activities were interesting for them because students had to create conversations about real situations, and that made students apply and practice what they had learnt and they understood the importance of correct pronunciation in real situations to avoid misunderstandings. Some of students even monitored themselves and tried to pronounce properly. The process of self-monitoring was carried out by students realizing about their mistakes at time to commit them and correcting them immediately they were commited.

### 2.3. Post-test:

Sentences from the post-test:

| Sentences | Transcription of the pronunciation taking into account IPA |
| :---: | :---: |
| Sarah's uncle broke his ankle when he was drunk | serəs 'aŋkəl brook hiz 'æŋkəl wen hi: wDz drajk |
| The cat sleeps while I have a bath | ðə kæt sli:ps warl aı hæv ə bæө |

The post-test was applied taking into account the same aspects that in the pre-test. It means, the researcher showed student the flash cards with the sentences and pictures, and they had to read them while the researcher recorded them. After that step, the researcher transcribed the audios using the IPA as it is shown in the following charts.

| Sarah's uncle broke his ankle when he was drunk scras 'ıŋkəl brook hiz 'æŋkəl wen hi: wDz drıŋk |  |
| :---: | :---: |
| Participant's code | Phonological transcription with IPA |
| 1 |  |
| 2 | saras ' $\wedge$ ¢kpl brouk his 'æŋkpl wen hi: wdz drıŋk |
| 3 |  |
| 4 | saras ' $\wedge$ ¢kdl brouk his 'æŋkpl wen hi: wdz drıyk |
| 5 | saras ' $\Lambda\rceil \mathrm{kdl}$ brouk his 'æŋkdl wen hi: wdz drıŋk |
| 6 |  |
| 7 |  |
| 8 |  |
| 9 |  |
| 10 | saras ' $\wedge$ ¢kpl brouk his 'æŋkpl wen hi: wdz drayk |
| 11 | saras ' ¢kpl brouk his 'æŋkpl wen hix wpz drıyk |
| 12 | saras ' $\wedge$ ¢kdl brouk his 'æŋkdl wen hi: wdz drıŋk |
| 13 | saras ' $\wedge$ ¢kdl brouk his 'æŋkdl wen hi: wdz drıŋk |
| 14 |  |
| 15 | saras ' $\wedge$ ¢kpl brouk his 'æŋkdl wen hi: wdz dr $\wedge$ ¢k |

Transcripts of the audio recordings in the third sentence (post-test)

| $\begin{gathered} \text { Sentence } \\ \hline \text { Transcription } \end{gathered}$ | Sarah's uncle broke his ankle when he was drunk seras '^ŋkal brouk hız 'æŋkal wen hi: wDz drıŋk |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Participants' code | Ph 1 | Ph 2 | Ph 3 | Correct answers |
| 1 | 1 | 1 | 1 | 3 |
| 2 | 1 | 1 | 1 | 3 |
| 3 | -1 | -1 | 1 | -1 |
| 4 | 1 | 1 | 1 | 3 |
| 5 | 1 | 1 | 1 | 3 |
| 6 | -1 | -1 | -1 | -3 |
| 7 | 1 | 1 | 1 | 3 |
| 8 | 1 | 1 | 1 | 3 |
| 9 | -1 | -1 | -1 | -3 |
| 10 | 1 | 1 | -1 | 1 |
| 11 | 1 | 1 | 1 | 3 |
| 12 | 1 | 1 | 1 | 3 |
| 13 | 1 | 1 | 1 | 3 |
| 14 | -1 | -1 | 1 | -1 |
| 15 | 1 | 1 | 1 | 3 |
| Totals | 7 | 7 | 9 | 9 |


| The cat sleeps while I have a bath ðə kæt sli:ps waıl ar hæv ə bæ日 |  |
| :---: | :---: |
| Participant's code | Phonological transcription with IPA |
| 1 | ðе kæt sli:ps wail ar hæf a bæ $\theta$ |
| 2 | ðe kæt sli:ps wail ar hæf a bæ $\theta$ |
| 3 | ðe kat esli:ps gwail ar haf a ba b $\theta$ |
| 4 | ðe kæt esli:ps wail ar half a bæ $\theta$ |
| 5 | ðe kæt sli:ps gwail ar háf $\underline{a}$ bæ $\theta$ |
| 6 | de kat esli:ps gwail ar haf a ba $\theta$ |
| 7 | ðe kæt sli:ps wail aı hæf a bæ $\theta$ |
| 8 | ðe kat esli:ps gwail an haf a bæ $\theta$ |
| 9 | de kat esli:ps gwail ar haf a ba b $\theta$ |
| 10 | ðe kæt esli:ps gwail ar haf a bæ $\theta$ |
| 11 | ðe kat esli:ps gwail ar haf a ba $\theta$ |
| 12 | ðe kæt sli:ps wail ar hæf a bæ $\theta$ |
| 13 | ðe kæt sli:ps wail ar haf $\underline{\text { a }}$ bæ $\theta$ |
| 14 | ðe kæt esli:ps gwail aı haf a $\underline{\text { ba }} \theta$ |
| 15 | ðe kæt sli:ps wail an hæf $\underline{\text { a }} \mathbf{b} æ \bar{\theta}$ |

Transcripts of the audio recordings in the fourth sentence (post-test)

| Sentence <br> Transcription | The cat sleeps while I have a bath бә kæt sli:ps wall aı hæv ə bæ日 |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Participants' code | Ph 1 | Ph 2 | Ph 3 | Correct answers |
| 1 | 1 | 1 | 1 | 3 |
| 2 | 1 | 1 | 1 | 3 |
| 3 | -1 | -1 | -1 | -3 |
| 4 | 1 | -1 | 1 | 1 |
| 5 | 1 | -1 | 1 | 1 |
| 6 | -1 | -1 | -1 | -3 |
| 7 | 1 | 1 | 1 | 3 |
| 8 | -1 | -1 | 1 | -1 |
| 9 | -1 | -1 | -1 | -3 |
| 10 | 1 | -1 | 1 | 1 |
| 11 | -1 | -1 | -1 | -3 |
| 12 | 1 | 1 | 1 | 3 |
| 13 | 1 | -1 | 1 | 1 |
| 14 | 1 | -1 | -1 | -1 |
| 15 | 1 | 1 | 1 | 3 |
| Totals | 5 | -5 | 5 | 1 |

Taking into account the results from the gathered information, it can be said that students had outstandings improvements in the pronunciation of the phonemes $/ \Lambda /$ and $/ \mathfrak{x} /$. However, it can be said that students still made mistakes in the pronunciation of the phoneme $/ \mathfrak{x} /$ replacing the phoneme by Spanish $\underline{a}$, and the phoneme $/ \Lambda /$ by Spanish $\underline{\text { a too. It is important to say that the }}$ spelling of the phoneme $/ \Lambda /$ was not a problem in the post-test but it is necessary to work and implement the spelling of each phoneme in order to avoid mispronunciation for the reason of it. In addition, it can be affirmed that students are still commiting mistakes in the pronunciation of those phonemes because only two session were implemented to improve this minimal pair; but the process has to be implemented several time in order to become in a habit the pronunciation of those phonemes

As it was mentioned before, students had no problems with the production of the phoneme $/ \Lambda /$. It could have been because this phoneme should not present a challenge for Spanish speakers in terms of production; the challenge is at time to remember it (Parkinson S., 1983). In the same line it can be affirmed that students did not confuse the pronunciation with the spelling in the pronunciation of the phoneme $/ \Lambda /$. On the other hand, it can be said students avoided replacing the phoneme $/ \mathfrak{x} /$ by $/ \mathrm{e} /$. These 2 events happened because probably students understood spelling it is not the same that pronunciation, and that is why the phoneme $/ \Lambda /$ was not replaced for $/ \mathrm{u}: /$. On the other hand, students realized that in English there was a /e/ phoneme, and if they changed the phoneme $/ æ /$ for $/ \mathrm{e} /$, they were saying a different word, for example, bat vs bet or even but.

| Results: Third sentence/æ/VS/^/ |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| 3 phs. | Pre-test |  | $3=100 \%$ | Post-test |  | $3=100 \%$ |
| Participants | T. right ans. | T. wrong ans. | Percentage r.a. | T. right ans. | T. wrong ans. | Percentage r.a. |
| Student 1 | - | 3 | $0 \%$ | 3 | - | $100 \%$ |
| Student 2 | - | 3 | $0 \%$ | 3 | - | $100 \%$ |
| Student 3 | - | 3 | $0 \%$ | 1 | 2 | $33.33 \%$ |
| Student 4 | - | 3 | $0 \%$ | 3 | - | $100 \%$ |
| Student 5 | - | 3 | $0 \%$ | 3 | - | $100 \%$ |
| Student 6 | - | 3 | $0 \%$ | - | 3 | $0 \%$ |
| Student 7 | - | 3 | $0 \%$ | 3 | - | $100 \%$ |
| Student 8 | - | 3 | $0 \%$ | 3 | - | $100 \%$ |
| Student 9 | - | 3 | $0 \%$ | - | 3 | $0 \%$ |
| Student 10 | - | 3 | $0 \%$ | 2 | 1 | $66.67 \%$ |
| Student 11 | - | 3 | $0 \%$ | 3 | - | $100 \%$ |
| Student 12 | - | 3 | $0 \%$ | 3 | - | $100 \%$ |
| Student 13 | - | 3 | $0 \%$ | 3 | - | $100 \%$ |
| Student 14 | - | 3 | $0 \%$ | 1 | 2 | $33.33 \%$ |
| Student 15 | - | 3 | $0 \%$ | 3 | - | $100 \%$ |


| Results: Fourth sentence /æ/VS / $/$ |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3 phs. | Pre-test |  | $3=100 \%$ | Post-test |  | $3=100 \%$ |
| Participants | T. right ans. | T. wrong ans. | Percentage r.a. | T. right ans. | T. wrong ans. | Percentage r.a. |
| Student 1 | - | 3 | $0 \%$ | 3 | - | $100 \%$ |
| Student 2 | - | 3 | $0 \%$ | 3 | - | $100 \%$ |
| Student 3 | - | 3 | $0 \%$ | - | 3 | $0 \%$ |
| Student 4 | - | 3 | $0 \%$ | 2 | 1 | $66.67 \%$ |
| Student 5 | - | 3 | $0 \%$ | 2 | 1 | $66.67 \%$ |
| Student 6 | - | 3 | $0 \%$ | - | 3 | $0 \%$ |
| Student 7 | - | 3 | $0 \%$ | 3 | - | $100 \%$ |
| Student 8 | - | 3 | $0 \%$ | 1 | 2 | $33.33 \%$ |
| Student 9 | - | 3 | $0 \%$ | - | 3 | $0 \%$ |
| Student 10 | - | 3 | $0 \%$ | 2 | 1 | $66.67 \%$ |
| Student 11 | - | 3 | $0 \%$ | - | 3 | $0 \%$ |
| Student 12 | - | 3 | $0 \%$ | 3 | - | $100 \%$ |
| Student 13 | - | 3 | $0 \%$ | 2 | 1 | $66.67 \%$ |
| Student 14 | - | 3 | $0 \%$ | 1 | 2 | $33.33 \%$ |
| Student 15 | - | 3 | $0 \%$ | 3 | - | $100 \%$ |


| Results: Category/æ/VS/^/ |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| 6 phs. | Pre-test |  | $6=100 \%$ | Post-test |  | $6=100 \%$ |
| Participants | T. right ans. | T. wrong ans. | Percentage r.a. | T. right ans. | T. wrong ans. | Percentage r.a. |
| Student 1 | - | 6 | $0 \%$ | 6 | - | $100 \%$ |
| Student 2 | - | 6 | $0 \%$ | 6 | - | $100 \%$ |
| Student 3 | - | 6 | $0 \%$ | 1 | 5 | $16.67 \%$ |
| Student 4 | - | 6 | $0 \%$ | 5 | 1 | $83.33 \%$ |
| Student 5 | - | 6 | $0 \%$ | 5 | 1 | $83.33 \%$ |
| Student 6 | - | 6 | $0 \%$ | - | 6 | $0 \%$ |
| Student 7 | - | 6 | $0 \%$ | 6 | - | $100 \%$ |
| Student 8 | - | 6 | $0 \%$ | 4 | 2 | $66.67 \%$ |
| Student 9 | - | 6 | $0 \%$ | - | 6 | $0 \%$ |
| Student 10 | - | 6 | $0 \%$ | 4 | 2 | $66.67 \%$ |
| Student 11 | - | 6 | $0 \%$ | 3 | 3 | $50 \%$ |
| Student 12 | - | 6 | $0 \%$ | 6 | - | $100 \%$ |
| Student 13 | - | 6 | $0 \%$ | 5 | 1 | $83.33 \%$ |
| Student 14 | - | 6 | $0 \%$ | 2 | 4 | $33.33 \%$ |
| Student 15 | - | 6 | $0 \%$ | 6 | - | $100 \%$ |

It can be observed that ten participants in the first sentence got a perfect score (66.67\%), and two of them did not have any improvement in pronunciation of the phonemes $/ \Sigma /$ and $/ æ /$. In the second sentence 5 students got a perfect score (33.33\%), and 4 (26.67\%) students had no improvement. In general terms, students had meaningful improvements in the pronunciation of $/ \Lambda /$ and $/ æ /$ phonemes.

To conclude, students had outstanding improvements in pronunciation of the minimal pair $/ \Lambda /$ VS $/ æ /$. However, there are some students who need more practice in order they can produce properly this minimal pair (/ $/ \mathrm{VS} / æ /$ ) in sentences in an automatic way because all students learnt something about the minimal pair $/ \Lambda / \mathrm{VS} / æ /$; but it is necessary practice to become its pronunciation in a daily life habit.
3. Category III: Distinctions in the production and perception of the minimal pair /日/ VS / $\mathbf{/} /$

### 3.1. Pre-test

Sentences from the pre-test:

| Sentences | Transcription of the pronunciation taking into account IPA |
| :---: | :---: |
| They think in that thing |  |
| My grandfather has thirteen teeth in his mouth | mai grænfa:ðər hæz $\boldsymbol{\theta}: r^{\prime}$ ti:n ti $\boldsymbol{\theta}$ in hiz $\operatorname{mau} \theta$ |

For the analysis in this category the phonemes written with blue were taken into account and for each phoneme a number was assigned from left to right. It means, in the first sentence the numbers from 1 to 4 were assigned, and in the second sentence the numbers from 1 to 4 were assigned. The following charts represent the collected data. The first and second chart belong to the first sentence, and the third and fourth belong to second sentence.

| They think in that thing <br>  |  |
| :---: | :---: |
| Participant's code | Phonological transcription with IPA |
| 1 | dei $\theta$ in $\underline{\text { in }}$ dat $\theta$ in |
| 2 |  |
| 3 | deit tip in dat tip |
| 4 | deit tiy in dat tip |
| 5 | deit tip in dat tip |
| 6 | dei itiy in dat tip |
| 7 | ðei $\theta \underline{\text { in }}$ in dat din |
| 8 | deit tip in dat tin |
| 9 | deit tiy in dat tip |
| 10 | deit tip in dat tip |
| 11 | deit tip in dat tip |
| 12 | deit tip in dat tip |
| 13 | deit tip in dat tip |
| 14 | deit tip in dat tip |
| 15 | dei $\theta$ in in in dat tin |

Transcripts of the audio recordings in the fifth sentence (pre-test)

| Sentence | They think in that thing |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Transcription | ðеı $\boldsymbol{\theta} \mathrm{I} \mathrm{j} k$ in ðæt $\boldsymbol{\theta} \mathrm{In}$ |  |  |  |  |
| Participants' code | Ph 1 | Ph 2 | Ph 3 | Ph 4 | Correct answers |
| 1 | -1 | 1 | -1 | 1 | 0 |
| 2 | -1 | 1 | -1 | -1 | -2 |
| 3 | -1 | -1 | -1 | -1 | -4 |
| 4 | -1 | -1 | -1 | -1 | -4 |
| 5 | -1 | -1 | -1 | -1 | -4 |
| 6 | -1 | -1 | -1 | -1 | -4 |
| 7 | 1 | 1 | -1 | -1 | 0 |
| 8 | -1 | -1 | -1 | -1 | -4 |
| 9 | -1 | -1 | -1 | -1 | -4 |
| 10 | -1 | -1 | -1 | -1 | -4 |
| 11 | -1 | -1 | -1 | -1 | -4 |
| 12 | -1 | -1 | -1 | -1 | -4 |
| 13 | -1 | -1 | -1 | -1 | -4 |
| 14 | -1 | -1 | -1 | -1 | -4 |
| 15 | -1 | 1 | -1 | -1 | -2 |
| Totals | -13 | -7 | -15 | -13 | -48 |


| My grandfather has thirteen teeth in his mouth mai grænfa:ðər hæz $\boldsymbol{\theta}$ :r'ti:n ti $\theta$ in hiz maü |  |
| :---: | :---: |
| Participant's code | Phonological transcription with IPA |
| 1 |  |
| 2 | mai granfa:der has tirir tin tit in his mavt |
| 3 | mai grandfa:der has 'tirtin tit in his mavt |
| 4 | mai grandfa:der has tir tin tit in his moot |
| 5 | mai granfa:der has 'tirtin tit in his moot |
| 6 | mai grandfa:der has 'tirtin tit in his mout |
| 7 | mai granfa:der has tir'tin tit in his mavt |
| 8 | mai granfa:der has 'tirtin tit in his mout |
| 9 | mai granfa:der has 'tiritin tit in his mout |
| 10 | mai granfa:der has 'tiritin tit in his moot |
| 11 | mai grandfa:der has 'tirtin tit in his mavt |
| 12 | mai grandfa:der has tir'tin tit in his mavt |
| 13 | mai grandfa:der has 'tirtin tit in his mavt |
| 14 | mai grandfa:der has tiri'tin tit in his mavt |
| 15 | mai granfa:der has tir ${ }^{\text {r }}$ tin tit in his mavt |

Transcripts of the audio recordings in the sixth sentence (pre-test)

| Sentence | My grandfather has thirteen teeth in his mouth |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Transcription | mai grænfa:ðər hæz $\boldsymbol{\theta}$ :r'r'ti:n ti $\theta$ in hiz mav $\theta$ |  |  |  |  |
| Participants' code | Ph 1 | Ph 2 | Ph 3 | Ph 4 | Correct answers |
| 1 | -1 | -1 | -1 | -1 | -4 |
| 2 | -1 | -1 | -1 | -1 | -4 |
| 3 | -1 | -1 | -1 | -1 | -4 |
| 4 | -1 | -1 | -1 | -1 | -4 |
| 5 | -1 | -1 | -1 | -1 | -4 |
| 6 | -1 | -1 | -1 | -1 | -4 |
| 7 | -1 | -1 | -1 | -1 | -4 |
| 8 | -1 | -1 | -1 | -1 | -4 |
| 9 | -1 | -1 | -1 | -1 | -4 |
| 10 | -1 | -1 | -1 | -1 | -4 |
| 11 | -1 | -1 | -1 | -1 | -4 |
| 12 | -1 | -1 | -1 | -1 | -4 |
| 13 | -1 | -1 | -1 | -1 | -4 |
| 14 | -1 | -1 | -1 | -1 | -4 |
| 15 | -1 | -1 | -1 | -1 | -4 |
| Totals | -15 | -15 | -15 | -15 | -60 |

As it can be observed, most of the students replaced the pronunciation of the phonemes $/ \theta /$ and $/ \partial /$ by $/ t /$ and $/ d /$ respectively. However, in first sentence it could be observed that four students pronounced properly some words which contained the minimal pair /日/ VS / $\delta /$, in 1 or 2 words.

According to Avery P. \& Ehrlich S., (1992) "Almost without exception, /日/ VS / / / are problematic for ESL students. The particular native language of student usually determines which sounds will be substituted; in general a voiceless sound will be substituted for the voiceless $/ \theta /$ and a voiced sound for voiced /ð/'.Having in mind that stament, it is possible to say that it is common students substitute some phonemes which are not in their L1, like those in the minimal pair $/ \theta / \mathrm{VS} / \delta /$, and as in Spanish these phonemes do not exit, students use to replace English phonemes for sounds that exist in their daily life phonological system. In addition, the fact that some students had produced some words that contain the minimal pair / $\theta / \mathrm{VS} / \mathrm{\delta} /$ could have been because they already had been corrected in the pronunciation of those words, that in a case of remedial teaching (Kelly G., 2000).

### 3.2. Experiential Learning

The Experiential Learning cycle was carried out taking into acount its four stages, it is important to say that it was completed in each session. Also, the Experiential Learning cycle was applied altogether with the four Phonetics and Phonology Pronunciation Techniques worked in this research (minimal pair, drilling, reading activities and listening activities).

### 3.2.1. Concrete experience

Here, it could be observed students could pronounce the phoneme $/ \theta /$ without any problem, but in the case of producing the phoneme / $\delta /$ students substituted it by the phoneme $/ \mathrm{d} /$; this process could be noted when students tried to imitate the pronunciation of some tongue twisters (Appendix III: Field note \# 5).

According to Avery P. \& Ehrlich S., (1992) "Spanish speaker students substitute the phoneme /ð/ for /d/ because both are positional variants in Spanish" keeping in mind that point of view, it is correct to affirm students replace the phoneme $/ \delta /$ for $/ \mathrm{d} /$ because in Spanish there is a sound that is very close to the phoneme $/ \delta /$; it is the " $d$ " sound in the middle of a word; for example, in words like dedo (finger) and madre (mother) the sound of " $d$ " is interdental just like the phoneme /ð/ in English (Parkinson S., 1983). Having in mind these statements, it is possible to affirm that a good method to achieve the pronunciation of the the phoneme $/ \delta /$ is tranfering the sound of /d/ produced in the middle of the some words in Spanish like <madre and dedo>, but with a slight variation in the position of the tongue, which is placing the tongue in the middle of the teeth because /d/ in Spanish is produced just putting the tip of the tong under the upper teeth in the alveolar ridge.

In session six it could be observed that a student replaced the phonemes $/ \theta /$ and $/ \delta /$ for $/ \mathrm{t} /$ and /d/ respectively. However, most of the students achieved to produce properly the minimal pair / $\theta / \mathrm{VS} / \mathrm{\delta} /$ when students were asked for reading some fragments of a song worked at the beginning of the lesson (Appendix III: Field note \# 6). It can be said that probably more than this student had replaced the phonemes in the same way because it was not enough two sessions to students manage the proper pronunciation of the minimal pair $/ \theta / \mathrm{VS} / \mathrm{\delta} /$.

Students' pronunciation process has a starting point, and that is the substitution of phonemes that do not exist in Spanish. Foe example, Spanish students might sustitude /t/ for / $\theta$ / in 'think', and /d/ for /ð/ in 'this' (Avery P. \& Ehrlich S., 1992). Here, it is possible to affirm that teachers need to use those sound that students commonly use to help them to achieve the English phonemes. For example, Spanish students might achieve the sound of the phoneme $/ \theta /$ imiting the European Spanish lisp, because the pronunciation of Cs and Zs is really similar to the phoneme $/ \theta /$, that because it is easier to achieve a most distinctive sound in L1 than one in L2. For example, to get to the word 'thin', students can imitate the European Spanish acent saying 'zin', using the lisp acent of the ' $z$ '.

### 3.2.2. Reflective observation

Here students identified there were 2 different sounds for the "th" in English, that could be evidenced because a student told teacher "Mr. la th suena de dos diferentes maneras ¿verdad? Porque en papa suena como d osea/fa:dər/ y en tres suena diferente, como $\theta$ (she produced the proper sound) osea $/ \theta$ ri: $/>3$ (Appendix III: Field note \# 5). In the same line, it was observed in session 6 thaat students replaced phonemes $/ \theta /$ and $/ ð /$ for $/ t /$ and $/ d /$ at the beginning of the activity because they did not remember the correct pronunciation, but then they tried to imitate the teacher pronunciation of the words that contained the minimal pair, and they remembered the proper pronunciation (Appendix III: Field note \# 6).

According to Avery P. \& Ehrlich S. (1992) "as /d/ and /ð/ are positional variants in Spanish, it is quite difficult to make students aware that they are substituting/ $ð /$ for $/ \mathrm{d} /$. In

[^2]Spanish, the equivalent sounds to English /t/ and /d/ are pronounced with the tip of the tongue touching the teeth rather than the tooth ridge". Taking into account that viewpoint, it is right to say that when students produce some words with th, they can get to their proper pronunciation unconsciously. However, it is necessary students learn the differences between the minimal pairs $/ \theta / \mathrm{VS} / \delta /, / \mathrm{t} / \mathrm{VS} / \theta /$, and $/ \mathrm{d} / \mathrm{VS} / \delta /$, so that students avoid the inadequate pronunciation of each phoneme, and avoid, that way, misunderstandings like in the following minimal pairs: /日/ VS /ठ/) bath VS bathe or breathVS breathe, /t/ VS / $\theta /$ /) tin VS thin or tank VS thank, and /d/ VS / $\delta /$ ) then VS den or day VS they.

### 3.2.3. Abstract conceptualization

In session five, when the teacher explained the way to get to the proper pronunciation of / $\theta$ / a girl said "Mr. Yo ya sabía que en palabras como three y think se usaba ese sonido y que en palabras como mother y father se dice como una $/ \mathrm{d} /{ }^{4}$. However, when the teacher drew the phoneme $/ \delta /$ and wrote some words that contained the phoneme $/ \delta /$ he said that these words were not pronounced with $/ \mathrm{d} /$; students were taken aback. Then, they tried to pronounce the phoneme and some of them could achieved it with no problem (Appendix III: Field note \# 5).

As was mentioned before, as $/ \theta /$ and $/ \delta /$ are positional variant in Spanish. It is quit difficult to make students aware that they are replacing English sound for Spanish sounds (Avery P. \& Ehrlich S., 1992). This statement helps students to realize English phonemes are not exactly the same than in Spanish, and gives teachers a new challenge which is working with tow minimal pairs $/ \theta / \mathrm{VS} / \mathrm{t} /$ and $/ \delta / \mathrm{VS} / \mathrm{d} /$; that because it is important students recognize the

[^3]differences of those phonemes to avoid mis pronunciation with words like 'den' VS 'ten' VS 'then'.

### 3.2.4. Active experimentation:

In session six, students had no problem to produce and perceive the minimal pair / $\theta / \mathrm{VS}$ $/ ð /$. However, when they were developing the activity some of students made mistakes when they said sentences which contained the minimal pair. Also, in this session it could be observed that an important behavior which was not identified before, was that some students made self correction. It means, in some moments when they made mistakes in terms of pronunciation, they monitored by their own, and corrected their mistakes (Appendix III: Field note \# 6).

According to Avery P. \& Ehrlich S., (1992) "Self correction is the ability to correct onself whe a pronunciation error has been pointed out" having in mind this concept, it is possible to say that an important aspect which has to be developed in students is self correction, it has to be developed altogether with pronunciation because students can have knowledge about pronunciation but if they do not correct themselves when they make mistakes, students will never become the proper pronunciation of English phonemes into a habit.

### 3.3. Post-test

Sentences from the post-test:

| Sentences | Transcription of the pronunciation taking into account IPA |
| :---: | :---: |
| They think in that thing |  |
| My grandfather has thirteen teeth in his mouth | mai grænfa:ðər hæz $\boldsymbol{\theta}: r^{\prime}$ ti:n tiө in hiz $\operatorname{mau} \boldsymbol{\theta}$ |

The post-test was applied taking into account the same aspects that were taken into account in the pre-test. It means, the researcher showed student the flash cards with the sentences and students had to read them while the researcher recorded them student by student. After that step, the researcher transcribed the audios using the IPA as it is shown in the following charts.

| They think in that thing <br>  |  |
| :---: | :---: |
| Participant's code | Phonological transcription with IPA |
| 1 | ðeí $\theta \mathrm{m}$ In ðæt $\theta_{\mathrm{m}}$ |
| 2 | ðeí $\theta_{\text {ry }}$ in ðæt $\theta_{\text {rn }}$ |
| 3 |  |
| 4 | ðeí $\theta \underline{\mathrm{in}} \underline{\underline{i n}} \underline{\text { in }}$ ðæt $\theta \underline{\mathrm{in}}$ |
| 5 | ðeí $\theta \underline{\mathrm{i}} \underline{\underline{i n}} \mathrm{i}$ ðæt $\theta \underline{\mathrm{in}}$ |
| 6 | deioi $\theta \underline{\mathrm{in}}$ in ðat $\theta \underline{\mathrm{in}}$ |
| 7 | ðeí $\theta \mathrm{m}$ In ðæt $\theta \mathrm{m}$ |
| 8 |  |
| 9 |  |
| 10 | ðeí $\theta \mathrm{m}$ in ðæt $\theta \mathrm{m}$ |
| 11 |  |
| 12 | ðeí $\theta$ in in ðææ $\theta$ in |
| 13 | ðеí $\theta \mathrm{m}$ In ðæt $\theta \mathrm{m}$ |
| 14 | ðeí $\theta$ in $\underline{\text { in }}$ ðat $\theta$ in |
| 15 |  |


| Sentence | They think in that thing |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Transcription |  |  |  |  |  |
| Participants' code | Ph 1 | Ph 2 | Ph 3 | Ph 4 | Correct answers |
| 1 | 1 | 1 | 1 | 1 | 4 |
| 2 | 1 | 1 | 1 | 1 | 4 |
| 3 | 1 | 1 | 1 | 1 | 4 |
| 4 | 1 | 1 | 1 | 1 | 4 |
| 5 | 1 | 1 | 1 | 1 | 4 |
| 6 | -1 | 1 | 1 | 1 | 2 |
| 7 | 1 | 1 | 1 | 1 | 4 |
| 8 | 1 | 1 | 1 | 1 | 4 |
| 9 | -1 | 1 | 1 | 1 | 2 |
| 10 | 1 | 1 | 1 | 1 | 4 |
| 11 | 1 | 1 | 1 | 1 | 4 |
| 12 | 1 | 1 | 1 | 1 | 4 |
| 13 | 1 | 1 | 1 | 1 | 4 |
| 14 | 1 | 1 | 1 | 1 | 4 |
| 15 | 1 | 1 | 1 | 1 | 4 |
| Totals | 11 | 15 | 15 | 15 | 56 |

Statistical information from the fifth sentence (post-test)

| My grandfather has thirteen teeth in his mouth mai grænfa:ðər hæz $\boldsymbol{\theta}_{3} \cdot \mathrm{r}$ 'ti:n ti: $\boldsymbol{\theta}$ in hiz mave |  |
| :---: | :---: |
| Participant's code | Phonological transcription with IPA |
| 1 | mai granfa:ðer hæs $\theta$ rr'ti:n ti: $\theta$ in his mav $\theta$ |
| 2 | mai granfa:ðer hæs $\theta$ rr'ti:n ti: $\theta$ in his mav $\theta$ |
| 3 | mai grandfa:ðer has ' $\theta \underline{i r} \underline{\underline{i r}}$ in ti: $\theta$ in his mavt |
| 4 | mai grandfa:ðer hæs $\theta$ rr'ti:n ti: $\theta$ in his mout |
| 5 | mai granfa:ðer has $\theta$ Ir'ti:n ti: $\theta$ in his mov $\theta$ |
| 6 | mai grandfa:der hæs 'tirtin tit in his movt |
| 7 | mai granfa:ðer hæs $\theta$ rr'ti:n ti: $\theta$ In his mav $\theta$ |
| 8 | mai granfa:ðer has ' $\theta$ rrtin ti: $\theta$ in his mout |
| 9 | mai granfa:der has 'tirtin tit in his mout |
| 10 | mai granfa:ðer hæs $\theta$ rr'ti:n ti: $\theta$ in his mou $\theta$ |
| 11 | mai grandfa:ðer hæs ' $\theta$ rrtin ti: $\theta$ in his mavt |
| 12 | mai granfa:ðer hæs $\theta$ rr'ti:n ti: $\theta$ in his mav $\theta$ |
| 13 | mai granfa:ðer has $\theta$ rr'ti:n ti: $\theta$ in his mav $\theta$ |
| 14 | mai grandfa:der has $\theta$ rr'ti:n ti:t in his mavt |
| 15 | mai granfa:ðer hæs $\theta$ rr'ti:n ti: $\theta$ in his mav $\theta$ |


| Sentence | My grandfather has thirteen teeth in his mouth <br> Transcription |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Participants' <br> code | Ph 1 | Ph 2 | Ph 3 | Ph 4 | Correct <br> answers |
| 1 | 1 | 1 | 1 | 1 | 4 |
| 2 | 1 | 1 | 1 | 1 | 4 |
| 3 | 1 | 1 | 1 | -1 | 2 |
| 4 | 1 | 1 | 1 | 1 | 4 |
| 5 | 1 | 1 | 1 | 1 | 4 |
| 6 | -1 | -1 | -1 | -1 | -4 |
| 7 | 1 | 1 | -1 | 1 | 2 |
| 8 | 1 | 1 | 1 | -1 | 2 |
| 9 | -1 | -1 | -1 | -1 | -4 |
| 10 | 1 | 1 | 1 | 1 | 4 |
| 11 | 1 | 1 | 1 | -1 | 2 |
| 12 | 1 | 1 | 1 | 1 | 4 |
| 13 | 1 | 1 | 1 | 1 | 4 |
| 14 | 1 | -1 | 1 | -1 | 0 |
| 15 | 1 | 1 | 1 | 1 | 4 |
| Totals | 11 | 9 | 9 | 3 | 32 |

Statistical information from the sixth sentence (post-test)
Having in mind the information in the charts above, it is correcto to affirm students
showed meaningful improvements in the pronunciation of the phonemes $/ \theta /$ and $/ \delta /$. However, it can be observed that in the charts of sentence six, students had still some problems in relation to words they had as a strict habit their mispronunciation, just like in words they, teeth and mounth.

It is not difficult for Spanish student to achieve the pronunciation of the minimal pair / $\theta$ / VS / $/$ / because the $/ \theta /$ is a close sound to European Spanish lisp, and the sound of $/ \varnothing /$ is a sound close to interdental/d/ (Parkinson S., 1983). Taking into account that point of view, it is correct to say that students took advantage of the Spanish sounts to achieve the pronunciation of the phonemes /日/ VS /ð/.

| Results: Fifth sentence $\theta /$ and / $\delta /$ |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| 4 phs. | Pre-test |  | $4=100 \%$ | Post-test |  | $4=100 \%$ |
| Participants | T. right ans. | T. wrong ans. | Percentage r.a. | T. right ans. | T. wrong ans. | Percentage r.a. |
| Student 1 | 2 | 2 | $50 \%$ | 4 | - | $100 \%$ |
| Student 2 | 1 | 3 | $25 \%$ | 4 | - | $100 \%$ |
| Student 3 | - | 4 | $0 \%$ | 4 | - | $100 \%$ |
| Student 4 | - | 4 | $0 \%$ | 4 | - | $100 \%$ |
| Student 5 | - | 4 | $0 \%$ | 4 | - | $100 \%$ |
| Student 6 | - | 4 | $0 \%$ | 3 | 1 | $75 \%$ |
| Student 7 | 2 | 2 | $50 \%$ | 4 | - | $100 \%$ |
| Student 8 | - | 4 | $0 \%$ | 4 | - | $100 \%$ |
| Student 9 | - | 4 | $0 \%$ | 3 | 1 | $75 \%$ |
| Student 10 | - | 4 | $0 \%$ | 4 | - | $100 \%$ |
| Student 11 | - | 4 | $0 \%$ | 4 | - | $100 \%$ |
| Student 12 | - | 4 | $0 \%$ | 4 | - | $100 \%$ |
| Student 13 | - | 4 | $0 \%$ | 4 | - | $100 \%$ |
| Student 14 | - | 4 | $0 \%$ | 4 | - | $100 \%$ |
| Student 15 | 1 | 3 | $25 \%$ | 4 | - | $100 \%$ |


| Results: Sixth sentence $/ \theta /$ and / $/$ |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| 4 phs. | Pre-test |  | $4=100 \%$ | Post-test |  | $4=100 \%$ |
| Participants | T. right ans. | T. wrong ans. | Percentage r.a. | T. right ans. | T. wrong ans. | Percentage r.a. |
| Student 1 | - | 4 | $0 \%$ | 4 | - | $100 \%$ |
| Student 2 | - | 4 | $0 \%$ | 4 | - | $100 \%$ |
| Student 3 | - | 4 | $0 \%$ | 3 | 1 | $75 \%$ |
| Student 4 | - | 4 | $0 \%$ | 4 | - | $100 \%$ |
| Student 5 | - | 4 | $0 \%$ | 4 | - | $100 \%$ |
| Student 6 | - | 4 | $0 \%$ | - | 4 | $0 \%$ |
| Student 7 | - | 4 | $0 \%$ | 3 | 1 | $75 \%$ |
| Student 8 | - | 4 | $0 \%$ | 3 | 1 | $75 \%$ |
| Student 9 | - | 4 | $0 \%$ | - | 4 | $0 \%$ |
| Student 10 | - | 4 | $0 \%$ | 4 | - | $100 \%$ |
| Student 11 | - | 4 | $0 \%$ | 3 | 1 | $75 \%$ |
| Student 12 | - | 4 | $0 \%$ | 4 | - | $100 \%$ |
| Student 13 | - | 4 | $0 \%$ | 4 | - | $100 \%$ |
| Student 14 | - | 4 | $0 \%$ | 2 | 2 | $50 \%$ |
| Student 15 | - | 4 | $0 \%$ | 4 | - | $100 \%$ |


| Results: Category / $\theta /$ and $/ \varnothing /$ |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| 8 phs. | Pre-test |  | $8=100 \%$ | Post-test |  | $8=100 \%$ |
| Participants | T. right ans. | T. wrong ans. | Percentage r.a. | T. right ans. | T. wrong ans. | Percentage r.a. |
| Student 1 | 2 | 6 | $25 \%$ | 8 | - | $100 \%$ |
| Student 2 | 1 | 7 | $12.5 \%$ | 8 | - | $100 \%$ |
| Student 3 | - | 8 | $0 \%$ | 7 | 1 | $87.5 \%$ |
| Student 4 | - | 8 | $0 \%$ | 8 | - | $100 \%$ |
| Student 5 | - | 8 | $0 \%$ | 8 | - | $100 \%$ |
| Student 6 | - | 8 | $0 \%$ | 3 | 5 | $37.5 \%$ |
| Student 7 | 2 | 6 | $25 \%$ | 7 | 1 | $87.5 \%$ |
| Student 8 | - | 8 | $0 \%$ | 7 | 1 | $87.5 \%$ |
| Student 9 | - | 8 | $0 \%$ | 3 | 5 | $37.5 \%$ |
| Student 10 | - | 8 | $0 \%$ | 8 | - | $100 \%$ |
| Student 11 | - | 8 | $0 \%$ | 7 | 1 | $87.5 \%$ |
| Student 12 | - | 8 | $0 \%$ | 8 | - | $100 \%$ |
| Student 13 | - | 8 | $0 \%$ | 8 | - | $100 \%$ |
| Student 14 | - | 8 | $0 \%$ | 6 | 2 | $75 \%$ |
| Student 15 | 1 | 7 | $12.5 \%$ | 8 | - | $100 \%$ |

Taking into account the information in charts above, it can be said that in fifth sentence the $86.67 \%$ of the participants had a perfect score and there was no participant with a $0 \%$ which affirms students had meaningful improvements in relation with the pre-test results. In sixth sentence 2 students replaced the minimal pair / $\theta / \mathrm{VS} / \mathrm{\delta} /$ for Spanish phonemes. However it can be seen, most of participants had scores over the $50 \%$ of correct answers. As a general conclusion of the charts, most that $50 \%$ of participants had perfect scores and the $33.33 \%$ of the participants have results with more the $50 \%$ of correct answers.

## CHAPTER VI

## CONCLUSIONS

This chapter evidences the results obtained in the data analysis described in the previous chapter using Experiential Learning Strategy and the Phonetics and Phonology Pronunciation Techniques, including implications of the study, limitations, and suggestions for future researches.

## Relevant findings

Keeping in mind the implementation of the sessions using Experiential Learning Strategy and Phonetics and Phonology Pronunciation Techniques, it can be affirmed that students showed meaningful improvements in their pronunciation learning process. However, it is necessary students practice and apply what they have learned several times because students will be able to produce and perceive English phonemes, when they become their uses in a daily life habit. In addition, it can be said that this process is not achieved only with a few sessions because students have to work hard at it, and be corrected several times.

Highlighting the role of Experiential Learning Strategy during the implementation of the sessions, it is possible to say that students were able to manage the pronunciation of the minimal pairs /i:/ VS /I/, /æ/ VS / $/$ / and $/ \theta / \mathrm{VS} / \delta /$. This strategy provided students the opportunity to realize by themselves different aspects of pronunciation learning process: they realized English sounds were not the same than mother tongue, it allowed them to understand the importance of pronunciation in spoken English communications, and the opportunity to learn by themselves which allowed them to live experiences and have meaningful learning.

In the same line. It is possible to say that Experiential Learning cycle is useful for students, especially the first stage because in here students live an experience and they are put into context in relation to the topic. It is important to say that experience has to be meaningful and interesting for students because those factor makes the difference, so that students are interested in analizing the background and meaning of the experience. In addition, it is relevant to affirm that in first session in which students are faced to a segmental pronunciation topic, they need to dealt with an activity that allows them discriminate the phonemes, for example minimal pair, filling the gaps or a listening activity due to they help students to identify features of the topic (the phoneme or the minimal pair).

In the second stage, activities related to drilling or repetition and reading aloud are the most helpful for students because they allow them to analyze and identify the most relevant features of the phoneme or minimal pair. That is, differences, the way phonemes are produced and perceived; and in this way create a general opinion about the experience and the topic of the lesson.

The third stage of Experiential Learning cycle is useful for students because it is a stage in which students contextualize their knowledge in a grupal way. However, the third stage (Abstract Contextualization) has to be modified and adapted in order to provide a better learning process. It means, instead of make dabates or generate ideas only by students, this stage has be carried out in a way in which students receive ideas and a general contextualization on the topic by the teacher, so that students contrast what they learn in the concreat experience and reflective observation with teacher explanations. Moreover teacher explanations have to be related to activities in previous stages because the cycle is completed if all activities are interrelated.

In the fourth stage of experiential learning are presented two important aspects. The first is that students have to be faced to real situations in which they realized by themselves the importance of what they learnt in previous stages, and the correct way to apply it. The second aspect is something which student must develop by themselves, so that the process can be carried out properly and that two skills: self-monitoring and self-correction. The later aspect is important because those skills allow student to be aware of their own learning process.

Finally, pronunciation techniques and Experiential Learning Strategy allow teachers can take students to live a pedagogical experience in which students have the main role in their learning process. In here pronunciation technique have the role to allow teachers to plan and design activities and the lesson plans.

## Research questions answers

How do Phonetics and Phonology Pronunciation Techniques and Experiential Learning strategy enhance the pronunciation of $/ \mathrm{I} / V S / i: /, / / / V S / \propto</$ and $/ \theta / V S / \delta /$ minimal pairs in common words contained in simple sentences and short conversations in students from Luigi Pirandello School?

After having finishied the research process and keeping in mind the research question, it can be affirmed that Experiential Learning Strategy and Phonetics and Phonology Pronunciation Techniques contributed to enhance the students' pronunciation skills, taking in mind an environment where students live several pedagogical experiences. In other words, students learnt from real life experiences and were able to reflect about them in order to understand the production and perception of English phonemes.

With that in mind, it is important to clarify that students showed outstanding improvements after the implementation of six sessions. However, six sessions are not enough for having a perfect management of the phonemes and minimal pairs in terms of production and perception; but it was showed that using experiential learning, and Phonetics and Phonology Pronunciation Techniques students will be able to manage properly the minimal pairs worked in this research. Henceforward, students need to practice a lot, so that they become in a habit the pronunciation and production of those phonemes.

Moreover, it was found that students were able to remember the proper pronunciation of phonemes after having lived a meaningful experience, by the same token that it is easier remembering a practical activity or something that was so meaningful. To put it another way, it was easier for students remembering the baaing of a sheep than the form of articulation of the
phoneme $/ æ /$ or it is easier remembering the proper pronunciation of a word that was listened to in a song than the manner of articulation of a phoneme in isolation.

In general it can be said that Experiential Learning Strategy and Phonetics and Phonology Pronunciation Techniques contribute to enhance the improvements of pronunciation of $/ \mathrm{I} / \mathrm{VS} / \mathrm{i}: /, I_{\Lambda} / \mathrm{VS} / æ /$ and $/ \theta / \mathrm{VS} / \delta /$ minimal pairs. However, the effectiveness of them is in practicing.

## Pedagogical implications

This research project contributes to several aspects to take into account at time to teach segmental features of the English pronunciation (units or segments). In this research was showed that teaching English pronunciation is strictly related with L1 because students commonly think speech sounds in L2 are the same than in their mother tongue.

The implications of teaching pronunciation through Experiential Learning Strategy will give students the opportunity to live pedagogical experiences and analyze by themselves the relationship between the experience and the topic, to have an enriching learning taking into account the practice method in a students-centered-class, and to realize by themselves about the main features of production and perception of English phonemes in order to be contrasted to the teacher's conceptualization.

The intention with this research project is to contribute to the field of teaching and learning pronunciation in English, since this study will shed light about important aspects related to how pronunciation can be enhanced in a group of sixth grade students by means of applying Pronunciation techniques and Experiential learning Strategy.

This research is relevant for students because it will help them to improve in the pronunciation of three minimal pairs (/I/ VS /i:/, / $/$ / VS /æ/ and / $\theta / \mathrm{VS} / \mathrm{\delta} /$ ). Learning pronunciation is an aspect students must accomplish nowadays because the development of this skill makes them able to develop and improve their listening and speaking skills.

This action research project is also pertinent for the educational institutions in whish the grammatical topics have more than the $60 \%$ of the importance and pronunciation is set it aside or
even managed only in remedial lessons, because as this research shows, pronunciation play an important role in the development and improvement of oral communication skills.

Finally, teachers can take advantage of this research project in order to show the relevance of teaching pronunciation and to have ideas about the way pronunciation of segmental aspects of pronunciation can be deal with, in a environment of meaningful and enriching experiences that allow students have outstanding improvements.

## Limitations

During the develovement of this research project were found the following limitation:

First, the implementation stage was not carried out in a specific day of the week or even with the same period the time between sessions due to academic activities. School had planned some activities that could not be adjusted or reprogrammed. However, tenured teachers did their best to allow spaces and times; but as it was said above, this caused a limitation at the time to the implementation stage and data analysis results.

Second, the classroom was not suitable in some moments because it was located close to a street, where outside noises did not allow the proper develovement of some activities, especially those about listening and perception of English sounds. This was the biggest problem because in every session, students were faced to activities where they had to listening to audios carefully.

Third, some students did not take seriously some exercises and started to tease with their classmates or talk abouth something different to the activity, this behaviors were not all the time but that along with outside sounds made students lose the attention and interest in the activities of the session.

Fourth, it was not possible students got the opportunity to hear a native English speaker and it had been a meaningful experience in which they could have lived a real experience or situation about the way a native speaker produces naturally and automatically the minimal pairs worked in all session.

## Suggestions for future researches

Having in mind the objectives, research question, and findings of this research project, it can be said that this research serves as a basis of future researches, which the intention will be to work in the field of pronunciation improvements, in Spanish speaker students from high schools or even in higher education.

In the same line, this research might be helpful for teachers or proffesors who want to teach pronunciation in a student-centered lesson, and those who would like to work minimal pairs distinctions using pedagogical experieces and pronunciation techniques. As a point to having in mind, this research is preferred to deploy with sixth-grade students onwards, due to experiential learning is an strategy in which students live an experience, but at the same time they must analize and reflect about the relationship between experience and topic to create personal conclutions and contrast them to teacher's explanations.

On the other side, if this research is going to be apply to beginners it is advisable to modify the stage of experiential learning cycle in order to provide a most meaningful and interesting learning process. In that case one of the most important pronunciation techniques is drilling or repetition, since the critical period is for studentsand it will allow a better management of the phonemes.

In addition, future researches have to deepen in the relationship between pronunciation and the common spelling of each phonemes because in many cases difficulties are not in the production or perception of a phoneme, the difficulties are at time to read o say a word with not common spelling. For example, in word village it is not common the pronunciation of "a" as the phoneme /I/. this could be managed in the third stage of the Experiential Learning cycle.

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## APPENDIX

## Appendix I: Transcrption Pre-test

Pre-test

Sentences and phonological transcription with IPA
i. Chicks live in little village
tfiks liv in litəl vilıdzəz
ii. Eager Eddy eats eagles every evening
i:gər edı i:ts i:gəlz 'evərı 'i:vnı!
iii. Sarah's uncle broke his ankle when he was drunk

iv. The cat sleeps while I have a bath
ðə kæt sli:ps waıl aı hæv ə bæ日
v. They think in that thing

vi. My grandfather has thirteen teeth in his mouth mai grænfa:ðər hæz $\boldsymbol{\theta}$ :r' ti:n ti0 in hiz maü

## Sample

## Spanish phonemes:

a
i

| Chicks live in little village t fiks liv in litəl vilidzəz |  |
| :---: | :---: |
| Participant's code | Phonological transcription with IPA |
| 1 | tfiks lif in litpl viladzez |
| 2 | t 5 îks lif in litpl viladzez |
| 3 | tfiks lif in litpl viladzez |
| 4 | tfiks lif in litpl viladzez |
| 5 | tfiks lif in litpl viladzez |
| 6 | t 5 iks lif in litpl viladzez |
| 7 | t 5 iks lif in litpl viladzez |
| 8 | t inks lif in litpl viladzez $^{\text {a }}$ |
| 9 | tfiks lif in litpl viladzez |
| 10 | t İks lif in litpl viladzez $^{\text {d }}$ |
| 11 | t 5 iks lif in litpl viladzez |
| 12 | t 5 iks lif in litpl viladzez |
| 13 | tfiks lif in litol viladzez |
| 14 | tfinks lif in litol viladzez |
| 15 | tfinks lif in lityl viladzez |


| Eager Eddy eats eagles every evening i:gər edı i:ts i:galz 'evərı 'i:vnın |  |
| :---: | :---: |
| Participant's code | Phonological transcription with IPA |
| 1 |  |
| 2 | iger edi its ignls 'evori 'ivnin |
| 3 |  |
| 4 | $\underline{\text { iger edi }}$ its ignls 'everi ${ }^{\text {'evnin }}$ |
| 5 |  |
| 6 |  |
| 7 |  |
| 8 | $\underline{\text { iger edi in }}$ its igols 'evori 'evnin |
| 9 |  |
| 10 |  |
| 11 |  |
| 12 | $\underline{\text { iger edi its ignls 'evoril 'evning }}$ |
| 13 |  |
| 14 |  |
| 15 | iger edio its ignls 'evori 'ivnị |


| Sarah's uncle broke his ankle when he was drunk serəs 'ıŋkəl brook hiz 'æŋkəl wen hi: wdz drıŋk |  |
| :---: | :---: |
| Participant's code | Phonological transcription with IPA |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |
| 6 |  |
| 7 |  |
| 8 |  |
| 9 |  |
| 10 |  |
| 11 |  |
| 12 |  |
| 13 |  |
| 14 |  |
| 15 |  |


| The cat sleeps while I have a bath дə kæt sli:ps waıl aı hæv ə bæも |  |
| :---: | :---: |
| Participant's code | Phonological transcription with IPA |
| 1 | de kat slips wail ar haf a bat |
| 2 | de kat slips wail ar háf a babt |
| 3 | de kat eslips gwail ar haf a bat |
| 4 | de kat eslips gwail ar haf a bat |
| 5 | de kat eslips gwail a haf a bat |
| 6 | de kat eslips gwail ar haf a bat |
| 7 | ðe kat slips wail ar haf a bat |
| 8 | de kat eslips gwail ar haf a bat |
| 9 | de kat eslips gwail ar haf a bat |
| 10 | de kat eslips gwail ar haf a bat |
| 11 | de kat eslips gwail ar haf a bat |
| 12 | de kat eslips gwail ar haf a bat |
| 13 | de katt eslips gwail ar haf a bat |
| 14 | de kat eslips gwail ar haf a bat |
| 15 | de katt slips wail ar haf a bat |


|  | They think in that thing <br>  |
| :---: | :---: |
| Participant's code | Phonological transcription with IPA |
| 1 | deio $\theta \underline{i} \underline{i}$ in dat tin |
| 2 | deio $\theta \underline{i} \underline{\underline{i}}$ in dat tip |
| 3 | deit tip in dat tig |
| 4 | deit tip in dat tip |
| 5 |  |
| 6 | deit tip in dat tip |
| 7 | ðeio $\theta \underline{\mathrm{i}} \mathrm{\underline{in}}$ in dat tin |
| 8 | deit tip in dat tig |
| 9 | deit tip in dat tip |
| 10 |  |
| 11 | deit tip in dat tip |
| 12 | deie tip in dat tip |
| 13 | deit tip in dat tig |
| 14 | deio tip in dat tip |
| 15 | deio $\theta \underline{\mathrm{i}}$ in in dat tin |


| My grandfather has thirteen teeth in his mouth mai grænfa:ðər hæz Ө3:r'ti:n ti0 in hiz mave |  |
| :---: | :---: |
| Participant's code | Phonological transcription with IPA |
| 1 | mai granfa:der has tir'tin tit in his mavt |
| 2 | mai granfa:der has tir 'tin tit in his mavt |
| 3 | mai grandfa:der has 'tirtin tit in his mavt |
| 4 | mai grandfa:der has tir 'tin tit in his moot |
| 5 | mai granfa:der has 'tiritin tit in hix moot |
| 6 | mai grandfa:der has 'tirtin tit in his moot |
| 7 | mai granfa:der has tiri'tin tit in his mavt |
| 8 | mai granfa:der has 'tirtin tit in his moot |
| 9 | mai granfa:der has 'tiritin tit in his moot |
| 10 | mai granfa:der has 'tiritin tit in his moot |
| 11 | mai grandfa:der has 'tirtin tit in his mavt |
| 12 | mai grandfa:der has tir 'tin tit in his mavt |
| 13 | mai grandfa:der has 'tirtin tit in his mavt |
| 14 | mai grandfa:der has tir'tin tit in his mavt |
| 15 | mai granfa:der has tir'tin tit in hios mavt |

## Appendix II: Transcrption Post-test

## Post-test

Sentences and phonological transcription with IPA
i. Chicks live in little village
tfiks liv in litəl vilidzəz
ii. Eager Eddy eats eagles every evening
i:gər edı i:ts i:gəlz 'evərı 'i:vnıy
iii. Sarah's uncle broke his ankle when he was drunk
serəs 'aŋkəl brouk hiz 'æŋkəl wen hi: wpz drıŋk
iv. The cat sleeps while I have a bath
ðə kæt sli:ps waıl aı hæv ə bæ日
v. They think in that thing

vi. My grandfather has thirteen teeth in his mouth
mai grænfa:ðər hæz $\boldsymbol{\theta}_{3}$ r' ti:n ti: $\boldsymbol{\theta}$ in hiz maü
vii. My uncle lost his hat on Thursday when he was visiting his brother in law


## Sample

## Spanish phonemes:

a
i

| Chicks live in little villages tfiks liv in lital vilıdzəz |  |
| :---: | :---: |
| Participant's code | Phonological transcription with IPA |
| 1 | t $\int$ iks lif in litpl vilidzez |
| 2 | tfiks lif in litpl vilidjez |
| 3 | t f iks lif in litpl viladzez |
| 4 | t 5 Iks lif in litpl viladzez |
| 5 | t 5 ijks lif in litpl viladzez |
| 6 | t jiks lif in $^{\text {in litpl viladzez }}$ |
| 7 | t f iks lif in litpl vilidzez |
| 8 | t $\int$ iks lif in litpl vilidzez |
| 9 | t $\int$ İks lif in litpl viladzez |
| 10 | t $\int$ iks lif in litpl vilidzez |
| 11 | t 5 Iks lif in litpl viladzez |
| 12 | t $\int$ Iks lif in litol vilidzez |
| 13 | t $\int$ iks lif in litpl vilidzez |
| 14 | t 5 ijks lif in litpl viladzez |
| 15 | t $\int$ iks lif in litol vilidzez |


| Eager Eddy eats eagles every evening i:gər edı i:ts i:galz 'evarı 'i:vnı! |  |
| :---: | :---: |
| Participant's code | Phonological transcription with IPA |
| 1 | i:ger edi i:ts i:gdls 'evəri 'i:vnıy |
| 2 | i:ger edi i:ts i:gyls 'evari 'i:vnıy |
| 3 | i:ger edi i:ts i:gnls 'evərin 'evnıy |
| 4 | i:ger edi i:ts i:gnls 'everi 'evnıy |
| 5 | i:ger edi i:ts i:ggls 'evari 'i:vnın |
| 6 | $\underline{\text { iger edil its i:gdls 'evori }}$ 'evnị |
| 7 | i:ger edi i i:ts i:gdls 'evari 'i:vnıy |
| 8 | i:ger edilits i:gnls 'evaril 'evnıy |
| 9 |  |
| 10 | i:ger edi i:ts i:ggls 'everi 'i:vnın |
| 11 | i:ger edi i its i:gyls 'evari 'i:vnıy |
| 12 | i:ger edi i:ts i:gdls 'evari 'i:vnıy |
| 13 | i:ger edi its i:ggls 'everí 'i:vnın |
| 14 | i:ger edi i:ts i:gyls 'evəri 'evnıy |
| 15 | i:ger edi i:ts i:gnls 'evəriِ 'i:vnıy |


| Sarah's uncle broke his ankle when he was drunk serəs 'ıŋkəl brook hiz 'æŋkəl wen hi: wdz drıŋk |  |
| :---: | :---: |
| Participant's code | Phonological transcription with IPA |
| 1 | saras ' $\wedge$ ¢ ${ }^{\text {kpl }}$ brook hıs 'æŋkpl wen hi: wdz drıŋk |
| 2 | saras ' $\quad$ ¢jkpl brouk his 'æŋkpl wen hi: wdz drıŋk |
| 3 |  |
| 4 | saras ' $\wedge$ ¢kpl brouk his 'æŋkpl wen hi: wdz dr $\wedge$ ¢k |
| 5 | saras ' $\Lambda \mathfrak{y k p l}$ brouk his 'æŋkpl wen hi: wdz drıyk |
| 6 |  |
| 7 |  |
| 8 |  |
| 9 |  |
| 10 |  |
| 11 |  |
| 12 |  |
| 13 |  |
| 14 |  |
| 15 |  |


| The cat sleeps while I have a bath ðə kæt sli:ps waıl aı hæv ə bæ日 |  |
| :---: | :---: |
| Participant's code | Phonological transcription with IPA |
| 1 | ðе kæt sli:ps wail aı hæf a bæ $\theta$ |
| 2 | ðe kæt sli:ps wail ar hæf a bæ $\theta$ |
| 3 | ðe kat esli:ps gwail ar haf a ba b $\theta$ |
| 4 | ðe kæt esli:ps wail ar haf $\underline{\text { a }} \mathrm{b}$ ¢ $\theta$ |
| 5 | ðe kæt sli:ps gwail a harf a bæ $\theta$ |
| 6 | de kat esli:ps gwail ar háf a ba $\theta$ |
| 7 | ðе kæt sli:ps wail ar hæf a bæ $\theta$ |
| 8 | ðe kat esli:ps gwail an haf a bæ $\theta$ |
| 9 | de kat esli:ps gwail ar háf a ba b |
| 10 | ðe kæt esli:ps gwail ar haf a bæ $\theta$ |
| 11 | ðe kat esli:ps gwail ar háf a ba b $\theta$ |
| 12 | ðе kæt sli:ps wail aı hæf $\underline{\underline{b} \text { bæ }} \bar{\theta}$ |
| 13 | ðe kæt sli:ps wail ar haf a bæ ${ }^{\text {b }}$ |
| 14 | ðe kæt esli:ps gwail ar há a $\underline{\text { ba }}$ b $\theta$ |
| 15 | ðе kæt sli:ps wail aı hæf a bæ $\theta$ |


| They think in that thing <br>  |  |
| :---: | :---: |
| Participant's code | Phonological transcription with IPA |
| 1 | ðeí $\theta_{\text {m }} \mathrm{In}$ ðæt $\theta_{\text {my }}$ |
| 2 |  |
| 3 | ðeio $\theta \underline{\mathrm{in}} \mathrm{y}$ in ðat $\theta \underline{\mathrm{in}}$ |
| 4 | ðeí $\theta$ in in in ðæt $\theta$ in |
| 5 |  |
| 6 | deie $\theta \underline{i n} \underline{\underline{i n}}$ in dat $\theta \underline{\text { in }}$ |
| 7 | ðеiِ $\theta$ ıy in ðæt $\theta$ ın |
| 8 | ðeio $\theta \underline{\mathrm{i}} \underline{\mathrm{y}}$ in ðat $\theta \underline{\mathrm{in}}$ |
| 9 | deio $\theta$ in in dat $\theta$ in |
| 10 | ðеí $\theta$ ıŋ in ðæt $\theta$ ıy |
| 11 |  |
| 12 | ðеī $\theta$ in in in ðæt $\theta$ in |
| 13 | ðеí $\theta$ ıy in ðæt $\theta$ In |
| 14 | ðeí $\theta \underline{i n} \underline{\underline{i n}}$ in ðat $\theta \underline{\underline{i n}}$ |
| 15 | ðеí $\theta$ In in ðæt $\theta_{\text {In }}$ |


| My grandfather has thirteen teeth in his mouth mai grænfa:ðər hæz $\boldsymbol{\theta}:$ r'ti:n ti: $\boldsymbol{\theta}$ in hiz maü |  |
| :---: | :---: |
| Participant's code | Phonological transcription with IPA |
| 1 | mai granfa:ðer hæs $\theta$ Ir ${ }^{\text {r }}$ ti:n ti: $\theta$ in his mav $\theta$ |
| 2 | mai granfa:ðer hæs $\theta$ Ir'ti:n ti $: \theta$ in his mav $\theta$ |
| 3 | mai grandfa: ${ }^{\text {der }}$ has ' $\theta$ irtin ti: $\theta$ in his mavt |
| 4 | mai grandfa:ðer hæs $\theta$ Ir'ti:n ti: $\theta$ in his mov $\theta$ |
| 5 | mai granfa:ðer has $\theta$ rr'ti:n ti: $\theta$ in his mou $\theta$ |
| 6 | mai grandfa:der hæs 'tirtin tit in his movt |
| 7 | mai granfa:ðer hæs $\theta$ Ir'ti:n ti: $\theta$ in his mave |
| 8 | mai granfa:der has ' $\theta$ rrtin ti: $\theta$ in his mout |
| 9 | mai granfa:der has 'tirtin tit in his moot |
| 10 | mai granfa:ðer hæs $\theta$ Ir'ti:n ti: $\theta$ in his mov $\theta$ |
| 11 | mai grandfa:ðer hæs ' $\theta$ Irtin ti: $\theta$ in his mavt |
| 12 | mai granfa:ðer hæs $\theta$ Ir'ti:n ti: $\theta$ in his mave |
| 13 | mai granfa:ðer has $\theta$ rr'ti:n ti: $\theta$ in his mav $\theta$ |
| 14 | mai grandfa:der has $\theta$ rr'ti:n ti:t in his mavt |
| 15 | mai granfa:ðer hæs $\theta$ Ir ${ }^{\prime}$ ti:n ti: $\theta$ In his mav $\theta$ |


| My uncle lost his hat on Thursday when he was visiting his brother in law mai 'ıŋkl! lost hiz hæt pn ' $\theta$ : zzdeı wen hi: wnz 'vızıtıj hiz 'brıðər in ls: |  |
| :---: | :---: |
| Participant's code | Phonological transcription with IPA |
| 1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 | mai ' $\lrcorner \mathrm{jk}$ l lpst his hæt pn ' $\theta$ urzder wen hi: wnz 'vizitıg his 'brbðər in lo: mai ' $\wedge \mathfrak{k l}$ l lpst his hæt pn ' $\theta$ urzder wen hi: wnz 'vizitıg his 'broðər in lo: <br>  mai ' $\wedge \mathfrak{y}$ k! lost his hæt pn ' $\theta$ urzder wen hi: wnz 'vizitıg his 'broðər in lo: mai ' $\quad \mathrm{y} k!$ lpst hıs hæt pn ' $\theta$ urzder wen hi: wnz 'vızıtıy his 'broðər in lo: mai 'âpll lost his hat pn ' $\theta$ urzder wen hi: wdz 'vizitıy his 'broðər in lo: mai ' $\wedge \mathfrak{k l}$ l lost hıs hæt pn ' $\theta$ urzder wen hi: wbz 'vızıtıy his 'brbðər in lb: mai ' $\wedge \mathfrak{k l}$ l lost his hæt pn ' $\theta$ urzdeı wen hi: wnz 'vizıtıy his 'brbðər in lo: mai 'âpkl lpst his hat pn ' $\theta$ urzdeı wen hi: wnz 'vizitıg his 'broðər in lo: mai ' $\wedge \mathfrak{y}$ l lost his hæt pn ' $\theta$ urzder wen hi: wdz 'vizitıg his 'broðər in lo: mai ' $\wedge \mathfrak{y k}$ l lost his hat pn ' $\theta$ urzder wen hi: wnz 'vizitig his 'broðər in lo: mai ' $\quad \wedge \mathfrak{k l}$ l lost hıs hæt pn ' $\theta$ urzdeı wen hi: wnz 'vızıtıy his 'brbðər in lo: mai ' $\wedge \mathfrak{k l}$ l lost his hæt pn ' $\theta$ urzder wen hi: wnz 'vizıtıy his 'broðər in lo: mai ' $\wedge \mathfrak{\mathrm { k }}$ l lost hıs hat pn ' $\theta$ urzdeı wen hi: wnz 'vızıtıy his 'broðər in lo: mai ' $\wedge \mathfrak{k l}$ l lpst his hæt pn ' $\theta$ urzdeı wen hi: wnz 'vizıtıŋ his 'broðər in lo: |

## Appendix III: Field notes

## Field notes \# 1

DATE: May $13^{\text {th }}, 2016$
\# OF PARTICIPANTS: 32 students
RESEARCHER: Cristian Andres Martinez Castellanos

| OBSERVATION | COMMENTS |
| :---: | :---: |
| 1. At the beginning of the activity it can be observed students were interested in the activity because most of them were silent and paying attention, even when teacher asked students some questions related to the song students were actively participating and answering the questions. <br> When the teacher (the researcher) gave students the worksheet, some of them saw it and a student asked for the pronunciation of some words because he said "see and SI are pronounced in the same way". After students had finished the activity of the song I heard some students said that the activity was very hard because there was no difference between each couple of words. <br> When the teacher made feedback and he asked for first minimal pair -he said "What do you think it's the correct answer in the first one, see or SI?", he emphasized in pronunciation of the words and students understood there was a difference in pronunciation of the words, then, the teacher chose 5 students to read the song, in terms of pronunciation some of students did right and others wrong. Then, students asked teacher to play the song again and some of students sang the song (especially some girls). | - The first step of the Experiential Learning cycle was applied rightly, because students lived the experience through the song and activities around it, even it can be said that some students reflected about the topic (pronunciation of the minimal pair /i:/ VS /I/) in this exercise. <br> - At the first time students did not understand the difference in terms of pronunciation between the different minimal pairs in the song, but it can be told that students realized there was a difference in pronunciation of all minimal pairs in the song because some of them said, en 'see' es mas larga la ' $i$ ' que en SI igual que en feeling y filling. <br> - In this activity can be seen some pronunciation techniques which are worked in this research project (minimal pairs, reading activities and listening activities). <br> - When teacher asked students for reading the song only one student pronounced rightly the word because other 4 students pronounced the words with /i:/ and /I/ phonemes just like Spanish /i/ phoneme. |

2. After the song activity students lost the attention for some minutes. However, when teacher present the next activity about repetition students paid attention again.
When teacher said "guys, repeat after me", some students took the activity as a game or a joke and they repeat some sentences like the bubbling of babies.
Most of students couldn't pronounce the phoneme /I/, they replaced this phoneme by Spanish /i/ or /e/. For example, the sentence $<\mathrm{I}$ feel ill and I need a seat> the word 'ill' was pronounced /il/ or /el/
When the teacher gave students some minimal pairs (words), students pronounce words with /i:/ phoneme rightly, but words with /I/ phoneme are replaced by the Spanish /e/ phoneme.
When the teacher chose 5 students in order to pronounce sentences and words 3 of those students pronounce most of those words and sentences rightly.
3. When the teacher explained that there were two ways of " i " in English and he wrote the phonetic symbols on board some students were lost. However, the teacher wrote some words (used previously) under each symbol students understood what teacher meant and even a girl asked "teacher, ¿esos simbolos son los mismos que aparecen en el diccionario despues de cada palabra?" after that students got it.
After the teacher gave some ways to get to each phoneme, students start to talk among them and to practice how each sound were pronounced. Some students practiced the pronunciation of some words in the song and given sentences and words while teacher took notes.

- The 2 stage of the Experiential Learning cycle was applied here because students understood there was 2 different ways to pronounce English "i". However, students replace /I/ phoneme for Spanish /e/ most of the time or they even replaced /I/ phoneme by Spanish /i/.
- Some students caught the correct way to pronounce words and sentences which contain /i:/ and /I/ phonemes, however the later could be achieved for too few students.
- In this activity reading activities, listening activities and drilling as pronunciation techniques were applied.
- The $3^{\text {rd }}$ Experiential Learning stage was carried out in this moment of lesson and students understood the correct way to pronounce (/i:/ and /I/ phonemes).
- In this activity the drilling as pronunciation technique was used in order to take students to get to pronounce this minimal pair (/i:/ VS /I/).
- Students were very interested in the explanation, it could be see because they were paying attention and in the way some words were pronounced and even they started to repeat the phonemes and even some of them started to repeat and imitate me with sentences such as: "it is not pronounce /i:/ it's pronounced /I/" or "No, it isn't pronounced /i/ it is pronounce /I/"


Field notes \# 2
DATE: May $20^{\text {th }}, 2016$
\# OF PARTICIPANTS: 32 students
RESEARCHER: Cristian Andres Martinez Castellanos

| OBSERVATION |
| :--- |
| 1. Students were silent when the teacher played |
| the tongue twisters. Also, students were |
| interested in the explanation of the class, it can |
| be told because they were paying attention and |
| they participated actively. |
| When students had to repeat each tongue |
| twister, they pronounced /i:/ and /I/ exactly the |
| same just like a Spanish /i/. |
| When the teacher said "guys, repeat after me" |
| and after he read each tongue twister |
| emphasizing in the minimal pair students |
| realized about it. |
| At the moment the teacher asked 10 students |
| for reading the tongue twisters one student said |
| that she wanted to read. However, after the |
| teacher asked again she read the tongue twister. |
| Students who were chosen to read the tongue |
| twister doing well, but some of them did not |
| remember the difference in terms of |
| pronunciation of /i:/ and /I/. that because the |
| pronounced the tongue twister using Spanish |
| 'i |

- The first stage of experiential learning was carried out in this activity because students have to remember again how pronounce the words and sentences which contained /i:/ and /I/ phonemes through tongue twisters and drilling activities.
- In this activity were applied reading activities listening activities as phonetics and phonology pronunciation techniques so that students have an experience about how the minimal pair (/i:/ VS /I/) had to be pronounced.
- Some students realized about the pronunciation of the /i:/ and /I/ phonemes immediately they listened to the track.
- There were some students who did not remember phonemes worked in the previous lesson.
- The stage 2 of Experiential Learning cycle was carried out because students had to reflect about the pronunciation of the words said by the researcher in terms of the /i:/ VS /I/ minimal pair.
- In this activity listening activity and specially minimal pair discrimination were used as pronunciation techniques in order to identify the phoneme (/i:/ or /I/) in each word.

| Sit | - | 32 |
| :--- | :--- | :--- |
| Fill | - | 32 |
| Bin | 2 | 30 |
| It | - | 32 |
| Steal | - | 32 |
| Lip | 32 | - |
| Seek | 27 | 5 |

- It could be identified most of students identified rightly the phoneme in each word and there were few who make mistakes.

3. In this activity it could be identified students were interested in the explanation (the review of previous lesson) and students remember how each phoneme were pronounced, it could be observed because a student said "teacher, usted explico eso la vez pasada, pero expliquelo de Nuevo porque no me acuerdo como era, /i/ VS /e/, a no, era /i:/ VS /e/ o algo asi, expliquelo otra vez".
In a moment of explanation some students realized they had seen this in previous session. Also in this part of the lesson students had the same behavior of the last session and they repeated and imitated the pronunciation of each phoneme like the teacher.
4. Students were really interested in the activity because they related the activity to a game mde by some youtubers they have watched. Students practiced pronunciation and one of the students corrected the pronunciation of their classmates in some moments.

- The $3^{\text {rd }}$ Experiential Learning stage was carried out in this moment of lesson and students remembered the correct way to pronounce (/i:/ and /I/ phonemes).
- In this part of the lesson, drilling as pronunciation technique was used in order to take students to get to pronounce this minimal pair (/i:/ VS /I/).
- Students need to practice a lot what they have learned so that they become in an automatic process the pronunciation and the perception of the phonemes they have seen.
- In this part of the lesson was carried out the stage 4 of the Experiential Learning cycle and students corrected themselves the pronunciation errors they made.
- Reading activity was carried out as a phonetics and phonology pronunciation technique so that they practiced how to pronounce /i:/ and /I/ phonemes and at the same time how they are perceived.
- Students show more interest in activities which they may relate to things which catch their attention e.g. this activity was related to a famous game play made by youtubers who they like to watch.

Field notes \# 3
DATE: May $25^{\text {th }}, 2016$
\# OF PARTICIPANTS: 32 students
RESEARCHER: Cristian Andres Martinez Castellanos

| OBSERVATION |
| :--- |
| 1. Students were very excited for the lesson. At |
| the beginning of the lesson, students started to |
| remember the sounds of /i:/ and /I/ phoneme. |
| Students asked the teacher for the topic of the |
| lesson and the teacher draw an "a" on board. |
| At the moment of the activity students were |
| silent and they paid attention to the video and |
| especially to pronunciation of the minimal |
| pairs. When the teacher chose some students to |
| read some minimal pairs, students did not |
| participate. However, 3 students decided to |
| participate, but they ask the teacher to read the |
| minimal pairs first. Some words were |
| pronounced in the same way by the students, |
| but they could pronounce rightly some minimal |
| pairs. |

2. After the projection of the video, most of students lost the attention for some minutes. However, when teacher present the next activity about repetition students paid attention again.

- The 2 stage of the Experiential Learning cycle was applied here because students understood there was 2 different ways to pronounce English "a". However, students replace $/ \mathfrak{l} /$ phoneme for Spanish

When the teacher said "guys, repeat after me", some students took the activity as a game. They repeat some sentences like the bubbling of babies, just like in previous sessions.
Most of students couldn't pronounce the phoneme $/ æ /$, they replaced this phoneme by Spanish /a/ or /e/.
When the teacher chose students in order to pronounce sentences, most of them say it couldn't because the sound of the phoneme /æ/ was so hard to produce. However, they tried and some of them could pronounced the phonemes rightly.
3. When the teacher explained that there were two ways of "a" in English and he wrote the phonetic symbols on board some students were lost. However, the teacher wrote some words (used previously) under each symbol students understood what teacher meant.
When the teacher said a way to achieve the /æ/ sound was imitating the baaing of a sheep, the laughed and started to imitate the teacher.
After the teacher gave some ways to get to each phoneme students start to talk among them and to practice how each sound were pronounced. Some students practiced the pronunciation of some words in the projected video and given sentences while teacher took notes.
4. The teacher explain the activity and students started to create the dialogue. Most of them were focused on the dialogue, but others were talking among them
Some pairs asked the teacher for checking their dialogues and the teacher chose some of them to record their pronunciation in the performance of the dialogue.
/e/ most of the time or they even replaced /æ/ phoneme by Spanish /a/.

- Some students caught the correct way to pronounce sentences which contain $/ \Lambda /$ and $/ æ /$ phonemes, however, the later could be achieved for too few students.
- In this activity reading activities, listening activities and drilling as pronunciation techniques were applied.
- The $3^{\text {rd }}$ Experiential Learning stage was carried out in this moment of lesson and students understood the correct way to pronounce (/æ/ and $/ \Lambda /$ phonemes).
- In this activity the drilling as pronunciation technique was used in order to take students to get to pronounce this minimal pair (/æ/ and $/ \Lambda /$ ).
- Students were very interested in the explanation and in the way some words were pronounced, and even they started to repeat the phonemes and some of them started to repeat and imitate me with the baaing of a sheep.
- The experiential learning cycle was finished with the stage four performed in this activity.
- The pronunciation techniques carried out in this activity were reading activity and minimal pair.

|  | Most of students understood the <br> differences in the pronunciation of <br> the minimal pair worked in this |
| :--- | :--- |
| session. However at the moment to |  |
| read their dialogues some of them |  |
| forgot the differences in the |  |
| pronunciation of words with (/æ/ |  |
| and $/ \Lambda /)$, however, there were some |  |
| student who monitored themselves |  |
| and remember the baaing of a |  |
| sheep |  |

Field notes \# 4
DATE: June $3^{\text {rd }}, 2016$
\# OF PARTICIPANTS: 32 students
RESEARCHER: Cristian Andres Martinez Castellanos

| OBSERVATION |
| :--- |
| 1. Students were very excited for the lesson |
| because the lesson started with questions about |
| Halloween, and all of them wanted to answer |
| the questions. |
| When the teacher explained the activity |
| students were quiet and paying attention to the |
| instructions. After having played the track, |
| students asked the teacher for playing the track |
| again because they did not completed the |
| activity. |
| When the teacher made the feedback he |
| realized that students did not remember the |
| difference between phonemes $/ æ /$ and $/ \Lambda /$. |

2. At the beginning of this activity students started to remember the activity because one of them said aloud "ahhh... esos son los mismos sonidos de la clase pasada ¡recuerdan como hacen las cabras" and they started to imitate the baaing of a sheep.
When 5 chosen students repeated the fragments of the text most of they did not pronounce the phonemes (/æ/ and $/ \Lambda /$ ). However some of them monitored themselves and tried to pronounce the phonemes rightly.
3. In this activity it could be identified students were interested in the explanation (the review of previous lesson) and students remember how each phoneme were pronounced, it could be observed because a student said " Si !

- The 2 stage of the Experiential Learning cycle was applied here because students understood how these 2 English phonemes were produced. However, students replaced /æ/ phoneme for Spanish /e/ most of the time or they even replaced /æ/ phoneme by Spanish /a/.
- In this activity reading activities, listening activities and drilling as pronunciation techniques were carried out.
- The $3^{\text {rd }}$ Experiential Learning stage was carried out in this moment of lesson and students understood the correct way to pronounce (/æ/ and $/ \Lambda /$ phonemes),
recuerden como hacen las cabras o las ovejas, eso lo explico el Mr. la clase pasada".
Students repeated and imitated the teacher's pronunciation to get to pronounce phonemes rightly.
Some of students achieved the pronunciation of phonemes, but there were others who continued making the same mistakes, that is, they replaced the phoneme $/ \mathfrak{x} /$ by Spanish /e/ or $/ \mathrm{a} /$.

4. In this activity students were very excited because this activity was designed like a game. When students were creating their sentences some of them mispronounced the words but immediately they corrected themselves. However, some students continued mispronouncing some words which contained the phoneme /æ/ because they replaced it by Spanish /e/ or /a/.
it was observed because some students were able to pronounce some words which contained the minimal pair (/æ/ and $/ \Lambda /$ ) rightly.

- In this activity the drilling as pronunciation technique was used in order to take students to get to pronounce this minimal pair (/æ/ and $/ \Lambda /$ ).
- Students were very interested in the explanation and in the way some words were pronounced and even they started to repeat the phonemes and even some of them start to repeat and imitate me with the baaing of a sheep just like in session before.
- The experiential learning cycle was finished with the stage four performed in this activity.
- The pronunciation techniques carried out in this activity were reading activity and minimal pair.
- Most of students understood the differences in the pronunciation of the minimal pair worked in this session. However at the moment to say their sentences some of themm forgot the differences in the pronunciation of words with (/æ/ and $/ \Lambda /$ ).
- It is necessary students practice the pronunciation of this minimal pair several times because they need to become in a habit the production of the minimal pair.

Field note \# 5

DATE: June $10^{\text {th }}, 2016$
\# OF PARTICIPANTS: 32 students
RESEARCHER: Cristian Andres Martinez Castellanos

| OBSERVATION |
| :--- |
| 1. At the beginning of the activity students were |
| excited because they were remembering what |
| was worked in the last lesson; they were |
| imitating the baaing of a sheep. |
| When the teacher explained the activity |
| students were silent and paying attention. |
| When the tongue twisters were played a student |
| said "Mr. pero nosotros no podemos decir esos |
| trbalenguas asi de rapido". However, students |
| could pronounce each tongue twister. It is |
| important to say that at the beginning students |
| had some problems with the pronunciation of |
| the phonemes $/ \theta /$ and $/ ð /$ because they replaced |
| by /t/ and $/ d /$ respectively. |
| When the teacher asked some students to read |
| a tongue twister "thirty three thousand people |
| think that this Thursday is their thirtieth |
| birthday" could be noted they could pronounce |
| the phoneme $/ \theta /$ in some words. However, they |
| could not pronounce the phoneme $/ \delta /$ and |
| instead of it, they replaced by the phoneme $/ d /$ |

2. In this activity it could be seen most of students identified the th sound is pronounced in two different ways, that because one student asked the teacher "Mr. la th suena de dos diferentes maneras ¿verdad? Porque en papa suena como d osea /fa:dər/ y en 3 suena diferente como $\theta$ (she produced the proper sound) osea $/ \theta$ ri:/

- The 2 stage of the Experiential Learning cycle was applied here because students understood there was 2 different ways to pronounce the th. However, students replaced $/ \delta /$ phoneme by /d/.
- Most of students caught the correct way to pronounce words and

Most of students couldn't pronounce the phoneme / $\delta /$, they replaced this phoneme by the sound /d/ in the pronunciation of all sentences. When the teacher chose 5 students to read the sentences it could be noted that most of them pronounce properly the phoneme $/ \theta /$. However, the phoneme /ð/ was replaced by /d/ by all of students. Also, students who could not pronounce the sound / $\theta /$ replaced it by /t/ sound.
3. When the teacher explained that there were 2 ways to pronounce the th in English, students were silent and paying attention
When the teacher explained how to get to the proper pronunciation of / $\theta$ / a girl said "Mr. Yo ya sabía que en palabras como three y think se usaba ese sonido y que en palabras como mother y father se dice como una /d/
When the teacher drew the phoneme $/ \delta /$, wrote some words that contained the phoneme $/ \varnothing /$ and said that this words were not pronounced with /d/; students were taken aback. Then they try to pronounce the phoneme and some of them could achieved with no problem.
In the drilling exercise students actively participated and most of them achieved the pronunciation of the both sounds $/ \theta /$ and $/ \partial /$.
4. The teacher explain the activity and students started to create the dialogue. Most of them were focused on the dialogue, but others were talking among them
Some pairs asked teacher for checking their dialogues and the teacher chose some of them to record their pronunciation in the performance of the dialogue.
sentences which contain the phoneme / $\theta /$.

- In this activity reading activities, listening activities and drilling as pronunciation techniques were applied.
- The $3^{\text {rd }}$ Experiential Learning stage was carried out in this moment of lesson, and students understood the correct way to pronounce ( $/ \theta /$ and $/ \delta /$ phonemes).
- In this activity the drilling as pronunciation technique was used in order to take students to get to pronounce this minimal pair (/ $\theta /$ VS /ð/).
- Students were very interested in the explanation, it could be seen because they were paying attention to the way some words were pronounced, even they started to repeat the phonemes and even some of them started to repeat and imitate me
- The experiential learning cycle was finished with the stage four performed in this activity.
- The pronunciation technique carried out in this activity was reading activity.
- Most of students understood the differences in the pronunciation of the minimal pair worked in this

|  | session. However at the moment to read their dialogues some of them forgot the pronunciation of the phonemes $/ \theta /$ and $/ \delta /$, and they replaced them by $/ \mathrm{t} /$ and $/ \mathrm{d} /$. <br> - It is important that students are corrected after having received this lesson because they might forget what they have learnt in this session. |
| :---: | :---: |

Field note \# 6
DATE: June $16^{\text {th }}, 2016$
\# OF PARTICIPANTS: 32 students
RESEARCHER: Cristian Andres Martinez Castellanos

| OBSERVATION |
| :--- |
| 1. At the beginning of the lesson it can be |
| observed students were with scattered |
| attention, that because they did not want to |
| answer the questions made by the teacher. |
| However, when the teacher said that the |
| activity was about a song, students changed |
| their attitude. |
| Students asked the teacher for playing the song |
| twice because they said that the activity was so |
| hard; but when the teacher made the feedback |
| of the activity, most of the students had right |
| most of the answers |
| At the moment the teacher asked 5 students for |
| reading some fragments of the song one |
| students replaced phonemes $/ \theta /$ and $/ \delta /$ for $/ t /$ |
| and $/ d /$ respectively, but others remembered the |
| pronunciation of these phonemes. |

- The first stage of experiential learning was carried out in this activity because students have to remember again how pronounce the words and sentences which contained phonemes $/ \theta /$ and $/ \mathrm{\delta} /$ through the song.
- In this activity were applied reading activities listening activities as phonetics and phonology pronunciation techniques, so that students lived an experience about how the minimal pair / $\theta / \mathrm{VS} / \mathrm{\delta} /$ worked in a real context
- There were some students who did not remember phonemes worked in the previous lesson and at time to 5 students were chosen to read some fragments of the song was observed they replaced the phonemes $/ \theta /$ and $/ \delta /$ for $/ \mathrm{t} /$ and $/ \mathrm{d} /$ respectively.
- The stage 2 of Experiential Learning cycle was carried out because students had to reflect about the pronunciation of the words said by the researcher in terms of the $/ \theta / \mathrm{VS} / \delta /$ minimal pair.
- In this activity listening activity and specially drilling were used as pronunciation techniques in order to pronounce the sentences.
- It could be identified most of students identified rightly the

3. In this activity it could be identified students were interested in the explanation (the review of previous lesson) and students remembered how each phoneme were pronounced, it could be observed because they were silent and paying attention to the teacher's explanations.
4. Students were really interested in the activity because it was presented like a game which they had to create sentences with a word that contained one of the phonemes $/ \theta /$ and $/ \delta /$.
phoneme in each sentence. However, when they had the minimal pair / $\theta / \mathrm{VS} / \mathrm{\delta} /$ they changed them by $/ \mathrm{t} /$ and $/ \mathrm{d} /$ respectively. That probably because students have had as habit pronounce those words with phonemes /t/ and /d/.

- The $3^{\text {rd }}$ Experiential Learning stage was carried out in this moment of lesson and students remembered the correct way to pronounce phonemes $/ \theta /$ and $/ \delta /$.
- In this part of the lesson, drilling as pronunciation technique was used in order to take students to get to pronounce this minimal pair / $\theta / \mathrm{VS}$ /ð/.
- Students need to practice a lot what they have learned, so that they become in an automatic process the pronunciation and the perception of the phonemes they have seen, that because they can produce the phonemes $/ \theta /$ and $/ \delta /$ in words in isolation, but when they have to pronounce them in sentences they replace the phonemes for those that they have used.
- In this part of the lesson was carried out the stage 4 of the Experiential Learning cycle and students corrected themselves the pronunciation errors they made because some of them replaced the phonemes by $/ \mathrm{t} /$ or /d/, and immediately they correct their mistakes.

|  | - Reading activity was carried out as a phonetics and phonology pronunciation technique, although the idea of the game was students worked in the pronunciation of the sound whe they are in sentences. |
| :---: | :---: |

## Appendix IV: Activities and Worksheets

## 4.1.

$\qquad$
SESSION 1 (/I/ vs /I:/)
Innocence by Avril Lavigne
Choose and underline the correct word in brackets according what you listen to the track

Waking up I 1. (see / SI) that everything is okay
The first time in my life and now 2.( eats / it's) so great
Slowing down I look around and I am so amazed
I think about the little things that make life great

I wouldn't change a thing about 3. (it/eat)
This is the best 4. (filling /feeling)
This innocence is brilliant, I hope that it will stay This moment is perfect, please don't go away I need you now
And I'll hold on to 5. (eat /it), don't you let it pass you by


I found a place so safe, not a single 6. (tear / TIR)
The first time in my life and now it's so clear
7. (Feel / Fill) calm, I belong, I'm so happy here

It's so strong and now I let myself be sincere

I wouldn't change a thing about it
This is the best filling / feeling

This innocence is brilliant, I hope that it will stay
This moment is perfect, please don't go away
I need you now
And I'll hold on to (eat /it), don't you let it pass you by

It's the state of bliss you think you're dreaming
It's the happiness inside that you're 8. (feeling / filling)
It's so beautiful, it makes you wanna cry (x2)

It's so beautiful, it makes you wanna cry

This innocence is brilliant, it makes you wanna cry
This innocence is brilliant, please don't go away
Cause I need you now
And I'll hold on to (eat /it), don't you let it pass you by

This innocence is brilliant, I hope that it will stay (it's so beautiful, it's so beautiful)
This moment is perfect, please don't go away
I need you now, it makes me wanna cry
And I'll hold on to (eat /it), don't you let it pass you by

## 4.2.


(/I/ vs /I:/)
In pairs, create a short dialogue using the following words

Feel, fill, eat, it, see
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

Example:
Waiter: Good night! My name is Phil, How can I help you?

- Costumer: Oh! Good night! We want to eat a pepperoni pizza please.
- Waiter: Great! What else would you like?
- Costumer: I'd like a banana smoothie. It is good?
- Waiter: Oh I'm sorry! There is not banana smoothie, but... let me see what I can do.
- Costumer: Oh no, don't worry, I prefer a glass of orange juice.
- Waiter: Certainly. Is there anything else I can do for you?
- Costumer: Can you borrow me a pen please? I need to fill out some documents.
- Waiter: Sure, anything else?
- Costumer: Mm.... Yes, I'd like a slice of chocolate cake, I'm feeling good today! And... nothing else.


## 4.3.

## / $/$ / VS / $c$ /

## 1. Listen and choose the correct word

note: there are some words which don't exist but they fulfil with the correct opposite phoneme of the correct word e.g. 'had/hud', the second one does not exist, but it serves to complete the minimal pair haed VS had

## The Tale of Stingy Jack

Stingy Jack invited the Devil to have a drink with him, 1). $\qquad$ but/bat true to his name Stingy Jack didn't want to pay. Somehow, he managed to convince the Devil to 2). $\qquad$ tarn/turn into a coin so that Jack could use it to buy his round. However, as soon as the Devil did so, Jack decided to keep the money for himself and put the coin into his pocket next to a silver crucifix. This had the effect of preventing the Devil from changing 3).
$\qquad$ buck/back into his original form.

Jack eventually freed the Devil, 4). $\qquad$ bat/but he imposed several conditions beforehand. The first was that the devil would not bother Jack for one whole year and that - should Jack die - he would not be able to claim his soul. The Devil agreed and Jack let him go.

The following year, the Devil found Jack again and was determined to see him 5). $\qquad$ punished/panished after the trick that was played on him. However, Jack tricked the Devil again, fooling him into climbing into a tree to pick a piece of fruit. While he was 6). $\qquad$ up/app in the tree, Jack carved a sign of the cross into the tree's bark so that the Devil was unable to make his way 7). $\qquad$ buck/back down again. Once again the Devil had to remain there until he promised Jack that he would never bother him for a further ten years.

Soon after, Jack died, and 8). $\qquad$ as/us the legend goes God refused him entry into heaven because of his 9). $\qquad$ unsavory/an savory deeds. However, neither would the Devil allow him into Hell as he had already promised not to claim his soul. The Devil sent Jack back to the living, but he was only to appear at night with a piece of burning coal to light his way.

The story goes that Jack 10). $\qquad$ pat/put the coal into a carved out turnip and has roamed the Earth with it ever since. The Irish referred to this ghostly figure as 'Jack of the Lantern', but as the centuries 11). $\qquad$ passed/pussed it was eventually shortened to Jack O'Lantern.


## References:

Croghan Tom, (October 29th, 2009), The Tale of Stingy Jack [Video File] taken from https://www.youtube.com/watch?v=CvKPggWBC2k

## 4.4.

 / $\theta /$ VS / $/$ /

Create a short conversation using minimum 5 words from the next list:
$\left.\left.\begin{array}{|l|c|}\hline & \begin{array}{c}\text { List of the words } \\ \text { Weather } \\ \text { think } \\ \text { nothing } \\ \text { this }\end{array} \\ \text { that } \\ \text { brother } \\ \text { father } \\ \text { mother } \\ \text { month } \\ \text { throw }\end{array}\right\} \begin{array}{c}\text { bathroom } \\ \text { thank } \\ \text { birthday }\end{array}\right\}$

Example:

- Son: Mum! My best friend's brother's birthday is tomorrow and I have not bought his present yet. Can you help me please?
- Mum: Sure! What do you want to buy?
- Son: I think he will like a movie or a Xbox game, I think he likes more a movie
- Mum: Oh! It is a good idea, I'm sure he will tank you
- Son: Can you buy it for me?
- Mum: Of course! But in the afternoon because it is a rainy morning
- Son: Thanks mum! He likes horror movies
- Mum: Ok darling! I will choose an excellent horror movie
- Son: Thank you!


## 4.5.

::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
Fill in the gaps with the correct word (the words are in the right box)

## Stitches by Shawn Mendes

## VERSE 1 (STANZA 1)

I (1) $\qquad$ that I've been hurt before
But no one's ever left me quite (2) $\qquad$ sore
Your words cut deeper (3) $\qquad$ a knife
Now I need someone to (4) $\qquad$ me back to life

## PRE-CHORUS

Got a feeling (5) $\qquad$ I'm going under
But I know (6) $\qquad$ I'll make it out alive
If I quit calling you my lover
Move on

## CHORUS

You watch me bleed until I can't (7) $\qquad$
I'm shaking falling onto my knees
And now (8) $\qquad$ I'm without your kisses
I'll be needing stitches
I'm tripping over myself
I'm aching begging you to come help
And now that I'm (9) $\qquad$ your kisses
I'll be needing stitches

VERSE 2 (STANZA 2)
Just like a (10) $\qquad$ drawn to a flame
Oh you lured me in I couldn't sense (11) $\qquad$ pain
Your bitter heart cold to the touch
Now I'm gonna reap what I sew
I'm left seeing red on my own

## PRE-CHORUS

## CHORUS

VERSE 3 (STANZA 3) ---x3
Needle and the (12)
Gotta get you out of my head
Needle and the (13)
Gonna wind up dead

Needle and the (14)
Gotta get you out of my head get you out of my head

## CHORUS

OUTRO ---x2
And now that I'm (15) $\qquad$ your kisses
I'll be needing stitches

## Appendix V: Extra information

### 5.1. Textbook

The next information is related to the student's book used in Luigi Pirandello School which
is Up Beat by Freebairn I., Bygrave J., Copage J., \& Wakeman k.

(Freebairn I., Bygrave J., Copage J., \& Wakeman k., 2009)

As it can be observed the structure of the module is divided in several sessions. The picture above shows that there are nine main session: New Words, Get started, Read, Comprehension, Solve it, Speak your mind, Write, Listen, Speak. However, some modules have additional sessions which are Grammar, Vocabulary and Pronunciation. In the session of pronunciation a pronunciation feature is included (a phoneme, a minimal pair or even a supra-segmental feature), as can be observed in the next fragment:

```
Unit 3 Lesson 3C
Exercise 8/æ/ can, /a:/ party
a (35) Listen and repeat.
/æ/can /a:/party
```

b
listen and check.
and answer are arguments article as at
aunt can can't class dad exams father
had party relax that

| le/ | fa:/ |
| :--- | :--- |
| and | answer |
| c |  |
| the sentences. |  |
| Dad had an argument with my aunt. |  |
| Let's relax and have a party. |  |
| I can't do the exam, but my father can. |  |

(Freebairn I., Bygrave J., Copage J., \& Wakeman k., 2009).

### 5.2. Random sample generator (website)

The next picture shows the website which was used to generate a random sample of the population:


```
    GraphPad
        Software Scientific Sottware Data Analysis Resource Canter Cc
    QuickCalcs
    LSelecl satogoir 2 Choosecacutater 3.Enter dats 4 Vew resuits
    Random number generator
    Gonerate randam intngers
```



```
    Rlandandy sesct each velue wthn tivs nerga From }
        Do it!
```

As it can be observed, this website served only as a tool to determine the participants who were part of the simple.

## Appendix VI: consent letter

In here you will find the consent letter sent to Luigi Pirandello School in order to have their authorization to develop this research project implementation with a sixth grade group.

Respetado señor rector Jorge Hernin Naranjo

Yo CRISTIAN ANDRES MARTINEZ CASTELLANOS identificado con cedula de ciudadania 1.015 .444 .462 de Bogota. Me dirjo a usted con el fin de solicitar permiso para realizar una sesión semanal, en un total de 6 sesiones con un tiempo de una hora de clase por sesión; estas sesiones tendrán como objetivo la implementación de mi proyecto de grado, el cual estana enfocado en la explicaciôn de 3 pares minimos (campo de fonética y fonologia) en los cuales los estudiantes presentan mayor dificultad en el aprendizaje del ingles comso lengua extramjera, especificamente on las hubilidades de habla y escucha (speaking and listening). El proyecto estará dirigido a un solo grado con el fin de limitar la población de investigación y mostrar resultados con este proyecto investigativo. Con relación a la población, preferiria que fuera con un gnado sexto el cual está a su elección y del profesor titular; mas sin embargo el proyecto seril presentado a los demás cursos que entén a mi cargo en el momento de apertura de cada clase, tal cual como se venia realizando el semestre anterior.

Agradezco so atención y colaboración.

Cordialmente


Costian Aodres Marhozz Gi Cristian Andrés Martinez Castellanos
C.C. 1.015444 .462

Estudiante practicante Lic. Ingles Uniminuto
consotmpunema配


[^0]:    ${ }^{1}$ Oxforddictionaries:. (n.d.) Each of two or more words having the same pronunciation but different meanings, origins, or spelling (e.g. new and knew).

[^1]:    ${ }^{2}$ Translation from the Spanish "ahh ... those are the sounds we saw last class, I remember the baaing of goats or sheeps"

[^2]:    ${ }^{3}$ Translation from Spanish: "Teacher, th has two different ways to be produced, right? Because in the word 'father' it is pronounced like a 'd' sound. It means, /fa:dər/. On the other hand, in the word 'three' the th is pronounced different like ' $\theta$ ' (she produced the proper sound), it means, it is pronounced / $\theta$ ri:/"

[^3]:    ${ }^{4}$ Translation from Spanish "Teacher, I already know in words like 'three and think' the sound ' $\theta$ ' is produced and in words like 'mother and father' th is pronounced like a 'd'"

