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A tongue twister proposal to practice /θ//ð/ fricative dental phonemes pronunciation in university students' in Atlixco: practicing through e-learning

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“A tongue twister proposal to practice /θ//ð/ fricative dental phonemes pronunciation in university students’ in Atlixco: practicing through e-learning”

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Dedicatory

I want to dedicate this paper to God, my parents Esthela and Javier and my sweet sister.

Also, I want to dedicate this project to my aunt Margarita for always encouraged me to end it.

For Candelaria, my grandma, for her love and advices.

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Abstract

This present project is focus on practicing /θ//ð/ fricative dental phonemes pronunciation in university students. The problem is that participants do not practice pronunciation, this because the schools are more concerned about grammar. As a result, participants needs, they want to improve their pronunciation. Most of the participants did not know what is phonetics, phonology or what it is a phoneme, even what is IPA. This paper proposes the tongue twister as the material to improve the improvement the pronunciations of those phonemes. The purpose of the adapted tongue twister is to repeat it and to pronounce the fricative sounds as many times as possible without making a mistake. This work is used three instruments to collect the data, Voice Recording (recording), Transcribing and a Questionnaire. For instance, the voice recording is used to know their mistakes as it's the name says to transcribe the participants mispronunciation during the days of practices. The results of the mispronunciation for the first day and the last day are comparated and presented in charts, this to be explained in different colors to have a better understanding. Also, there is a chart which presents the total percent of the achievement. The questionnaire is because participants are tested to know what they think about the material. The data collected from the test is analyzed and presented in graphs. An important thing of this qualitative research is the use of technology to learn the English language, particularly, to improve /θ//ð/ fricative dental phonemes, this as connectivism as the approach of this work and as the methodology the e-learning.

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CHAPTER I

Introduction

1.1 Introduction

English as a Foreign Language (EFL) is when students or learners live in a place where English language is not their mother tongue and they want or need to learn it (Gebhard, 1996). Constantly, the focus of EFL learning is based on some external circumstance or some social condition to which the student responds (Spear & Mocker, 1981). Among the most important learning approaches, such as constructivism, there also exists the connectivism approach that has a positive impact in the learning process such as development of learning, increasing the significant learning by using technology. On one hand, Dee (2003) created a taxonomy of significant learning in which, significant learning “contains several more specific kinds of learning that are related in some way and have a distinct value for the learner” (p.31). Meanwhile, “Meaningful learning is active, constructive, and durable. It implies understanding. We must feel that the information is useful and not limit ourselves to only memorizing it” (para.7). Certainly, significant learning and meaning are based on Ausubel’s theory, “how we integrate information into our brain” (Salazar, 2017, para1.) or “The most important single factor influencing learning is what the learner already knows”. (Exploring your mind, 2018, para. 4). In other words, the previous knowledge will help students to learn and how to do it. In this case the previous technology knowledge is going to help

students to improve English language learning. Taking into account the concepts, the learning in general can be measured by using summative or formative assessments, even significant learning. Nevertheless, due to the pandemic of COVID-19 in 2020, the use of technology needed to be implemented just

as the connectivism approach suggests. Siemens (2004), defined connectivism as the theory of learning for the digital age and explains the effect that technology has had in the way we live, how we communicate and how the world is learning. Therefore, the researcher of this study believes that connectivism is the approach that can afford and improve students' competences, abilities and knowledge to learn effectively by using technology (Siemens, 2004).

This is a qualitative study developed in Mexico, particularly with university students from Atlixco, Puebla. The participants of this study are having difficulties pronouncing /θ//ð/ fricative dental phonemes. In fact, phonetics and phonology classes in English are not taught in this public school. Thus, they do not have the opportunity to learn and practice these phonemes. Moreover, Christina (n.d.) points out that this problem of EFL learners is that they “tend to learn more about the language and how the language is structured than to learn the language itself” (para.1). Therefore, this chapter is establishing the whole structure of this study project. Firstly, the rationale for the topic selection which is talking about the main reasons to develop this study is stated. Secondly, it presented the significance of the study which is about the importance of learning and producing the /θ//ð/ fricative dental pronunciation correctly. Then, as the third point, it is presented in the context of the research, the participants and the location. Fourthly, the aim of this study is presented followed by the objectives. Sixthly, the research questions are listed and this research will be focused on answering those questions. Finally, the

conclusion of this research is established and supported by authors and experts in this area.

1.2 Rationale for the topic selection

During the last months, the use of e-learning as a methodology to learn English as a Foreign Language (EFL) is the most used because of the pandemic of COVID-19. According to Fry (2001), e-learning refers to the use of information and communication technologies to enable the access to online learning/teaching resources to produce materials for learning, to teach learners, and also to regulate courses in an organization. Thus, in this study it is presented the e-learning teaching methodology to help students to learn English and to improve the skills, in this case the pronunciation by using resources and choosing appropriate materials during the pandemic that has affected the university students' all around the world (Aristovnik, 2020). As a matter of fact, the use of technology is indispensable. In fact, technology started to be used not only to communicate and connect people but learn. According to Pérez (2007):

connectivism is that the ability to acquire knowledge is more important than the already acquired knowledge. The only way to access information is through interaction and communication (synchronously or asynchronously). Learning is achieved through various sources of up-to-date and accurate information. This context develops imagination, skills and dexterity in connections (p. 6).

In other words, connectivism is the acquisition of new knowledge using a digital ecosystem. This means, the use of communication tools from e-learning such as e-mail, blogs, videoconferences, forums, educational platforms, among others, can be effective to learn EFL. In this point of life

where it is necessary to keep learning, teachers have to find the strategies and new ways to evolve according to the situation. An example of a methodology that lets people keep learning is e-learning. According

to British, (2020), it helps to deliver learning by “electronic means; it includes web- based learning, virtual classrooms, digital collaborations and delivery of content through the internet” (para. 1). As a matter of fact, the researcher of this study thinks that there should be implemented a study based on e-learning that allows students to practice pronunciation correctly. Thereby, English teachers can play many roles in teaching, for example, as a facilitator, as a resource, as an influencer in learning and motivating students to learn EFL phonemes pronunciation effectively. All this depends on the way that teacher develops the teaching-learning process using e-learning. And it is considered to “learn English online using high-quality resources to quickly improve your English” (British, n.d., para.1).

1.3 Significance of the study

This study is interested in implementing e-learning to teach pronunciation to EFL students. Specifically, to improve the pronunciation of /θ//ð/ fricative dental phonemes. According to Vrije Universiteit of Amsterdam (n.d.), people need to understand, and be understandable to speak and improve the pronunciation skill at work or personal lives. Since e-learning models provide resources to increase the knowledge and acquire durable significant learning, the researcher of this study aims to propose some material that helps participants to practice and learn those phonemes pronunciation correctly.

Also this study is relevant and important because teachers will have more materials to work and practice pronunciation with their students.

Thanasoulas (2002) points out that teachers should propose or think in goals that are appropriate for the communication needs of the learners. Thus, teachers should be like a coach of pronunciation to students and give them feedback to encourage them to improve their

pronunciation. Harmer (2001) emphasized that through pronunciation instruction, learners not only learn different sounds but also improve their speaking skill. Thus, focusing on sounds will help students to achieve their goal of comprehension and intelligibility as well since “pronunciation contributes to the perceived competence of a speaker”(Botley, 2017, para.6).

Finally, this material proposal will be adapted to the actual needs of a society that faced a pandemic, this means that this material will consider connectivism as its approach and e-learning as its methodology. Therefore, this work itself will be useful because it is focused on improving the pronunciation of students using new, interesting material and activities by using tools selected from e-learning, taking into account the needs and interests of the students. As a result, students will be able to prove the abilities and the competences to use e-learning to get the main objective which is to improve /θ//ð/ fricative dental phonemes.

1.4 Context of the Research

At this point, it is important to set the context of this research. This study is conducted in classes online, with university students in Atlixco, Puebla, with university students that have problems with the learning of the English as a Foreign Language, especially the pronunciation sub-skill. These participants are from different majors, the rank of ages is between 18 and 27 years old. Their motivation for studying EFL is different for each of them. In addition, the abilities and competences to work and to learn are different as well. These students started to take classes from level 1

without counting, they are pre-intermediate level from the school. The designed classes for this study are focused on improving students' pronunciation sub-skill by using e-learning. Thus, basing this study's roots on connectivism approach, there will be implemented a

computer, internet, platforms, resources online, and to organize a schedule to take classes online as tools that will contribute as sources of this study. Particularly, students take eight hours of EFL classes per week, these hours are to explain the grammar lessons. Four hours per week students have to practice with a software resource as homework, the links of activities and the recorded class are sent. The main point is to use technology such as video-calls to compare the answers. Mainly, the use of a webpage is important because in this way, teachers will know if the students' competencies were developed, also it is important to evaluate, if at the end, students have a significant learning to obtain evidence of it. For example, in this case the significant learning can be measured to know the progress of the pronunciation improvement.

Additionally, this group of students use websites that focus on learning English, like the British Council (2020). It provides resources, visual learning, assessment tools, videos, recordings, printable to work with pronunciation, mainly, it makes learning understandable. Students can develop not only pronunciation but also other English skills such as listening, speaking, reading and writing.

1.5 Aims of the study

To propose a material to practice and improve /θ//ð/ fricative dental phonemes pronunciation.

To explore if this study's participants can learn and to improve their knowledge by using tools of e-learning.

To test participants to know if using the material proposed helped them to improve

/θ//ð/ fricative dental phonemes pronunciation.

1.6 Objectives

The research of this study needs:

- To design the material that will be useful to students to improve their /θ//ð/ fricative dental plosive phonemes.
- To send the materials to the students during the class to practice the pronunciation.
- To apply the proposal material for one week.
- To record the student's learning after the proposed material has been applied in each season.
- To apply a questionnaire to know what participants believe about the material used.
- To test students to prove if the pronunciation of the phonemes was improved by participants. This last part will be recorded as well.

1.7 Research Questions

This paper sets out to answer the following questions:

- 1) To what extent were the participants able to improve the pronunciation of /θ//ð/ fricative dental phonemes by using the '*Something in a thirty-acre thermal thicket*' tongue twister and the e-learning methodology proposed in this study?
- 2) What are the participants' beliefs about the '*Something in a thirty-acre thermal thicket*' tongue twister to improve students /θ//ð/ fricative dental phonemes pronunciation?

1.8 Conclusion

As a conclusion, e-learning is a way of teaching that this COVID-19 pandemic is letting teachers know and update about. According to Amjad (2020), a Professor at The University of Jordan who has been using a platform to teach, says that e-learning “has changed the way of teaching. It enables me to reach out to my students more efficiently and effectively through chat groups, video meetings, voting and also document sharing, especially during this pandemic” (para. 14). On the other hand, Mahalakshmi and Radha (2020) mention that online education, through some platforms, has increased during these days through e-learning. Particularly, this work will focus on exploring the participants’ beliefs about a material proposal that helps them to improve their pronunciation of /θ//ð/ fricative dental phonemes in EFL throughout an e-learning methodology. Therefore, this chapter was introducing the main information related to this study and, in the following chapter, the literature review will be stated.

CHAPTER II

Literature Review

2.1 Introduction

According to ICEMéxico (2020) nowadays, the learning process is changing around the world and this is because the technology has arrived to stay. In other words, Education through technology is the one that best fits the reality of society in this digital age in education. For this reason, the use of e-learning in all this process becomes a tool to improve the learners' needs. E-learning is a methodology that provides a way of teaching through the internet, this means that it is a virtual environment to learn. Beamish (2002) described this process of e-learning as a set of applications that relates to learning and training through computer-based, online, virtual classrooms, and other digital collaboration learning. As previously stated in this work, this research aims to use e-learning as a methodology to make participants to practice and improve their pronunciation of /θ//ð/ fricative dental and /p//b/ bilabial plosive phonemes in English as a Foreign Language (EFL). In order to do so, this chapter will present the main literature review to support this study. First, the connectivism approach is described followed by the e-learning methodology and the significant learning which are mainly the teaching philosophies used in this study. Second, the language skills are stated followed by the pronunciation sub-skill. Later, the definitions of phonetics and phonology, basically where fricative-dental and bilabial-plosive phonemes are described as well. Finally, the material proposal of this

researcher is supported with the literature of teaching materials, types of teaching materials and the difference between traditional, digital, authentic and non-authentic material are discussed.

2.2 Language Teaching Methodologies

Learning is the way people acquire knowledge, it has lots of definitions, but in this literature the definitions will be taken from three experts. First, according to Smith (1992), learning refers to the mastery and acquisition of what is already known about something, this is what students already know before each class. Then, the clarification of the meaning is through their experience. Secondly Clark and Mayer (2002) support the previous definition by stating that:

Learning involves adding new information to memory. Learning involves making sense of presented material by paying attention to relevant information, mentally rearranging it, and connecting it with what you already know. This includes a change in the student's knowledge due to experience. (p.464).

At this point, *Learning* can be defined as the set of all experiences people face, all the ideas, the knowledge, the mastery of skills that gives way to a change for people's own benefit. However, it is necessary to know how to teach correctly in order to improve the learning of a foreign language. According to Postman (1995), "there was a time when educators became famous for providing reasons for learning; now they become famous for inventing a method" (p. 26). That means that teaching methodologies are an important procedure that teachers must take into account during the learning process of students. Nunan (2003) defines a language teaching method as "a single set of procedures which teachers are to follow in the classroom. Methods are usually based on a set of beliefs about the nature

of language and learning” (Nunan, 2003, p.5). For example, when the teacher is planning the class, it is necessary to have in mind what a method is and if it could be useful during the class.

According to Richards and Rodgers (1986), there are teaching methodologies that can be useful during the teaching-learning process of a language. For instance: *the direct method, grammar-translation, audio-lingual, structural approach, suggestopedia, total physical approach, communicative language teaching, silent way, community language learning, immersion, task based learning, natural approach and lexical syllabus.*

Particularly, first, the *Direct Method* is when the teaching process is entirely done in the target language, in this case in English as a Foreign Language. Here, the learner is not allowed to use his/her mother tongue so it is encouraged to practice the target language and grammar rules are avoided to let the student focus on improving his/her pronunciation (Frankfurt International School, 2020). Second, the *Grammar-translation* is a methodology to learn grammar rules. Mainly, it focuses on memorizing lists of vocabulary and translating from the target language to the mother tongue. There is no emphasis placed on developing oral ability (FIS, 2020). Third, FIS (2020) claims that the *Audio-Lingual* methodology lets students acquire habits. Students practice the new language through listening extensively before seeing its written form; later they repeat and repeat what they listened to several times. Fourth, the *Structural Approach* aims to teach the language through grammatical rules which are learned one at a time in a set order to be introduced. For example, the present is before the present continuous, and so on.

Fifth, *Suggestopedia* is a method where language can be acquired only when the learner has no mental blocks (FIS, 2020). It is suggested to

the student that the language is easy to learn and in this way, the mental blocks are removed and then the learning can be possible. Sixth, *Total Physical Response (TPR)* is a method that

shows how the learner learns through commands and movements such as "Stand up", "Sit down", "Open your book" and so on. Seventh, *Communicative Language Teaching (CLT)* uses communication to learn. For instance, inviting, suggesting, complaining or notions such as the expression of time, quantity, location can let the learner communicate effectively in an appropriate way in various situations (FIS, 2020). Eighth, *The Silent Way* is a method where the mother tongue is not used. The aim of the teacher is to say as little as possible, in order to let the learner have control in the class. Ninth, the *Community Language Learning* is a method where the mother tongue is used and translated by the teacher and student. During this method, to build strong personal links between the teacher and student is important. Tenth, the *Immersion* method is when EFL students are immersed into the English as a Foreign Language (EFL) during school days. Actually, so many schools use this method and expect students to learn maths, chemistry, and other subjects by using EFL in their subjects (FIS, 2020). Eleventh, *Task-based language learning* assumes that a topic can be studied during a period of time by developing tasks. For example, students are engaged in a number of tasks culminating in a presentation to the rest of the class. The tasks include reading, surfing the internet, listening to taped material, selecting important vocabulary and so on. Finally, according to FIS (2020), the twelfth method is the *Natural Approach*. This method allows students to learn EFL by stressing the similarities between how they learned the first language. Third, the *lexical syllabus* method focuses on teaching specific words by using them frequently in class and emphasizing its use in authentic materials.

According to FIS (2020), they are “the common and popular methods used in teaching English language of the last half- century” (p. 1). However, the methodology used in this study is known as *E-learning*.

It will be applied by using tongue twisters to make students practice and improve their pronunciation of specific phonemes.

2.3 Connectivism Approach

During the last few years, there have been many and different approaches to teach. Particularly, this study is focused on connectivism as the main approach. Siemens (2004) claimed that this approach helps to improve the pronunciation of the students, and in this case to improve the university students' /θ//ð/ fricative dental phonemes pronunciation by using technology. In other words, technology is changing society and "the current internet era is a substantial point change" (Siemens, 2006, p. 9). This is to say that education is changing; and nowadays, it is a fact that through the use of technology it has been allowed to be connected to the world. Using this approach is teaching and learning in a new way. According to Siemens (2006), searching and facilitating learner's knowledge through the internet has become a potential dynamic and modern way of learning. For example, teachers and students can interact during the training process, anyplace, everywhere, anytime. This means that it is not necessary to be gathered in the same place to teach and learn. Supporting the previous argument, Bell (2011) claims through the use of connectivism, if a global platform emerges, it increases the possibilities to dialogue locally and globally. Therefore, at this point, the use of networks is helpful for pedagogy and learning.

Another concept that helps to understand the term connectivism in this digital age is "the idea that knowledge is networked and so the act of

learning takes place inside virtual networks and communities through social interaction. It is a networked model of learning” (Torres, 2009, para. 9). In other words, Torres highlights that teaching through connectivism, in this time, makes possible a digital environment

where the students and teacher join the class, interchange ideas and participate within a virtual community. For example, Smidt and Abhari (2017) say that this type of social learning can help students to experience virtual knowledge such as discovering and surfing connections of ideas, entities, and events while social connections are nurtured and maintained. Additionally, interactivity and social experimentation will be possible by using the connectivism approach as well (McCloughlin and Lee, 2010).

Supporting the previous authors, Dunaway (2011) claims that the connectivism approach values opinions, the critical evaluation, synthesis of concepts, and perspectives that are in diverse nodes across social networks. This is to say that, this approach affords critical thinking, having social connections through technology and useful tools to learn. Consequently, there are principles of connectivism that explain more of this. Complementary, Abhari (2017) claimed that by using social technologies, connectivism can enable autonomy and advance in inclusive pedagogy in higher education. This could be possible through material and activities previously selected by the teacher, also, it should be focused on the purpose of the class, step by step using online sources and networks.

When talking about connectivism, there exist three authors who mention some of its principles. First, Siemens (2008) explains that one of the principles of connectivism is how thinking skills are activated when individuals can distinguish which of the abundant and diverse information

available online are reliable and useful. This principle is aligned with the Center for Advancement of Learning and Assessment (CALA). CALA's definition of higher order thinking skills establishes that the skills achieved by individuals who work in virtual environments facilitate "persistence, self- monitoring, open-minded, and flexible attitudes" (King, Goodson & Rohani, 2009, p.1).

Second, Kropf (2013) argues that people acquire information through modern day reservoirs of information through the following principles of connectivism:

- a) Classrooms including massive open online courses (MOOCs), these online courses can be identified in synchronous and asynchronous. The first one refers to learning in real time, and the second one when the classes can be recorded and then watched.
- b) Social networks including podcasts and video clips. Social networks are built on mutual understanding, or simply to be able to build and understand the knowledge of others. Podcasts and video clips are taken from music videos and postcards from daily life. This is to facilitate and to improve specific skills.
- c) Virtual reality platforms, these can be educational or not. It is a virtual environment, by using digital tools and materials, with the only purpose of providing knowledge or data information.

And third, Bell (2011) mentions that there are some other principles that can help to understand connectivism:

- a) The learning and knowledge are based on a diversity of opinions, it means that the knowledge can be provided by the whole class to enhance it.
- b) Learning is the connection of specialized nodes or information sources; this means that all learning is about connecting the information on the specific spaces.

- c) Learning can be enabled in non-human appliances; this refers to the fact that learning is not only in the human brain. It means, is made by humans but it is possible to find it in technology, mobiles, platforms, etc.
- d) Capacity to know more is more critical than what is already known; in this part, it means that it is really important to know more.

e) “The connections are needed to facilitate continual learning to be able to see connections between fields, ideas, and concepts; the intent of all connectivist learning activities and learning processes is accurate, up-to-date knowledge, including Decision-making” (Bell, 2011, p.103). That is, keeping connections with the world will be a powerful and useful advantage to teach in this age because every day the information changes, technology changes and it is part of life.

2.3.1 E-learning Methodology

To have a better idea about what is e-learning, this work presents various definitions of this methodology. Actually, during the last half-year most of the teachers used this as a tool. Beamish (2002) described this process of e-learning as a set of applications that relates learning and training through computer-based, online, virtual classrooms, and other digital collaboration learning. Similarly, the term e-learning refers to “learning done by studying at home using computers and courses provided on the internet” (Dictionary Cambridge, 2020, para.1). Both sources highlight that learning is acquired by using technology, the most important thing to study through technology is to have access to the internet in order to use applications, platforms, etc. During this methodology, the interaction between the teacher and students can be possible virtually. Particularly, this methodology is linked to this research because of the pandemic and because students are interested in improving their English as a Foreign Language (EFL) pronunciation.

Additionally, according to Muratorio M. (2020), most of the schools have been affected because of Covid-19. For that reason, the schools, teachers and students have to work online by using technology and any e-learning resources. Specifically, Zhang (2004) said that the advantages of e-learning are that it promotes the creation

of student centered and self-paced learning, flexibility of location and time, also it is potentially available to distance learners. It provides unlimited access to knowledge, and the encouragement of knowledge transfer and sharing. In other words, online learning or electronic learning (e-learning) can be achieved effectively while students can learn at home just using the internet and technology. Students can have access to materials or sources online at any place and time. Therefore, it can be stated that “online learning is not the next big thing, it is now the big thing” (Abernathy, 2020, para.1).

E-learning can be achieved in two ways, synchronous and asynchronous.

Hrastinski (2008) compares the two concepts in a table presented below:

	Asynchronous E-Learning	Synchronous E-Learning
When?	<ul style="list-style-type: none"> ■ Reflecting on complex issues ■ When synchronous meetings cannot be scheduled because of work, family, and other commitments 	<ul style="list-style-type: none"> ■ Discussing less complex issues ■ Getting acquainted ■ Planning tasks
Why?	<ul style="list-style-type: none"> ■ Students have more time to reflect because the sender does not expect an immediate answer. 	<ul style="list-style-type: none"> ■ Students become more committed and motivated because a quick response is expected.
How?	<ul style="list-style-type: none"> ■ Use asynchronous means such as e-mail, discussion boards, and blogs. 	<ul style="list-style-type: none"> ■ Use synchronous means such as videoconferencing, instant messaging and chat, and complement with face-to-face meetings.
Examples	<ul style="list-style-type: none"> ■ Students expected to reflect individually on course topics may be asked to maintain a blog. ■ Students expected to share reflections regarding course topics and critically assess their peers' ideas may be asked to participate in online discussions on a discussion board. 	<ul style="list-style-type: none"> ■ Students expected to work in groups may be advised to use instant messaging as support for getting to know each other, exchanging ideas, and planning tasks. ■ A teacher who wants to present concepts from the literature in a simplified way might give an online lecture by videoconferencing.

Figure 1. When, why and how to use Asynchronous vs. Synchronous E-learning (taken from Hrastinski, 2008, p.54)

As it is described, *synchronous e-learning* is when the meetings or classes are in real time. This is face-to-face virtual meetings. There are chats, videoconferencing, exchanging ideas, and all the activities and

instructions that can be given during an online class. The very important thing in this type of e-learning is that synchronous offers the opportunity to engage directly with the instructor. On the other hand,

asynchronous e-learning is when tasks and classes cannot be taken in real time. For example, the class can be recorded by the teacher and uploaded to a platform, and then, the class can be taken by the students on a different schedule (Hrastinski, 2008). According to Abernathy (2019):

Online learning often manages to solve the numerous challenges adult learners face during studies. Online learning allows them to progress at their own pace, to submit assignments and take assessments at times best suited for them. This kind of flexibility is especially beneficial for adult learners because often they are forced to balance employment, family duties and online learning altogether (p. 16).

In other words, adults as learners have more responsibilities or duties, but at the same time, students look for time to progress according to their needs. But in this research, both categories could be used. That is because the classes are taken in real-time, and because the schedule is set by the teacher and students. In some cases, it is not possible for students to be connected, that is why the video class and presentations will be allowed on the platform to take the class later and they can do the activities and homework whenever they can.

2.3.2 Negative and Positive aspect of using Connectivism Approach

There are different points of view regarding the Connectivism Approach. There can be negative or positive situations or experiences when using this approach. On one hand, regarding the negative aspects of

connectivism, it highlights the lack of access to technology or the internet in certain communities or places. Also, even when there is access to technology, sometimes the internet can be slow or students can have problems with the connections at home. According to some authors like Moriña (2017),

this lack of access to technology can be associated with ethnicity, socioeconomic status, age, or geographical regions. Consequently, e-learning is affected. Moriña (2017) claims that racial, cultural, socio-economical, intellectual and linguistic diversity of learners are crucial factors that might affect learning development. In fact, it is known that a lot of students have left the school because they work. In some cases and regions, to have access to the internet is expensive. For example, the real problem is that "The lack of internet suffered by 39% of Latin American households, the differences in opportunities to access computers and the little stimulation at homes of vulnerable children will give rise to school groups with highly varied academic and emotional conditions" (Expansión política, 2021, para.19). So, with Mexico included in the problem, this is why this study is exploring the application of e-learning in order to propose materials where students can improve and practice their pronunciation skills, at least the ones that have access to technology luckily. On the other hand, there are some positive aspects about connectivism. For example, Brill (2008) says that greater access to hardware, software and Internet will generate successful, motivated, engaged and creative learners. Even if these learners come from varied regions and socioeconomic backgrounds, with the access to e-learning and connectivism, they can enter the job market. They can become self-advocates; this means that the use of technology is good for the students' learning. Moreover, connectivism makes that information constantly updated as a result of modern technology. It makes that learning and knowledge actualized as well.

2.4 Language Skills

English language involves four skills: reading, listening, writing and speaking. All of them are very important for learning a foreign language, and according to the concept

that the dictionary of Cambridge (2020) provides, a skill is “a particular ability that you develop through training and experience and that is useful in a job” (para. 4). To enhance this, Vernier, Barbuzza, Giusti y del Moral (n.d.) say that:

“to acquire a new language it is necessary to involve the developing, and combinations of these four modalities in varying degrees, such as knowledge of vocabulary, spelling, pronunciation, phonetics, syntax, meaning, usage. If these language skills are effectively interwoven, EFL students are likely to become communicatively competent” (p. 266).

In other words, students should combine their effort to develop those skills. Moreover, Gallagher (2015) claims that the skills are divided into Receptive and Productive skills. The receptive skills are listening and reading and the productive skills are speaking and writing. Also, Gallagher (2015) says that listening skill is the first language skill developed by humans, this is “because it is received by the person, not produced by the person” (para.4). This means that speaking and listening are related to sounds. For example, the most common activity inside the classroom is to listen and repeat, listening to a song or a word, and then students repeat it. “The second language skill that humans develop is speaking” (para.1). So, according to Gallagher (2015) “speaking is a human ability that is attained only if the human has heard others speak. The more we hear others speak, and the greater the vocabulary of those who speak to us, the better we will be able to speak” (para. 2). For example, the most

common way to improve speaking is listening when the teacher is speaking. The third skill is reading. According to Career Guide (2021), "reading skills are abilities that pertain to a person's capacity to read, comprehend, interpret and decode written language and texts" (para. 3). Additionally, "when second language learners read for pleasure, they

develop the competence they need to move from the beginning ordinary conversational level to a level where they can use the second language for more demanding purposes" (Krashen in Effortless English Club, n/d, p.2). For example: by reading magazines and newspapers people can also learn vocabulary. Finally, the last skill is writing. According to Widdowson(2001), "writing is the use of visual medium to manifest the graphological and grammatical system of the language" (p.62). In other words, writing is a productive skill which means that the student has to know elements of writing such as the system of the language, the alphabet, words, sentences and grammar. This study is focused on the speaking skill; particularly, it is focused on the pronunciation sub-skill which will be stated in the following part of the literature review.

2.4.1 Pronunciation sub-skill

As Hancock (2021) writes "Pronunciation in the English language classroom is more than just 'listen and repeat" (para.1). This is because pronunciation includes other elements of language such as vocabulary and grammar sub-skills and speaking and listening skills. This means that the sub-skill of pronunciation is not to repeat and repeat, pronunciation needs other skills. According to Dalton and Seidlhofer (1994), "particularly, pronunciation skill is the way how sounds are articulated and pronounced by speakers" (p.3). They continue by claiming that "sound is significant because it is used as part of a code of a particular language" (p.3) such as French, Spanish, English, and so on. "Second, sound is significant because it is used to achieve meaning in context of use and

then to combine with other factors to make the communication possible” (p.3). This means that one sound combined with a second one makes a third one. This depends on the language because every language has its own alphabet, sounds and grammar rules, etc. So, if a sound is pronounced

incorrectly the meaning of the word can change or the communication cannot be achieved. Roach (2009) says that “it is particularly important to learn to think of English pronunciation in terms of phonemes rather than letters of the alphabet” (p.2). In other words, it is better to learn the phonemes and their pronunciation because it is close to a correct and standard pronunciation. On the other hand, pronunciation is related to the sound system of any language integrated by phonetics and phonology fields. This research is focused on IPA which means International Phonetic Alphabet and will be presented in a further section.

2.5 Phonetics and Phonology

Roach P. (2009) says that “only by studying both the phonetics and the phonology of English is it possible to acquire a full understanding of the use of sounds in English speech” (p.35). This is why Phonetics and Phonology are concepts really important to understand the main purpose of this work. English language as a Foreign Language (EFL) has sounds that other languages do not have and those sounds are difficult to pronounce for some people. Jakarta-Batam (2012) explains that to pronounce the sounds in English, people need to produce the alphabet with symbols that represent sounds. This alphabet is called the *phonetic alphabet*. This means that every symbol has a specific sound.

On the one hand *Phonetics* is “the general study of the characteristics of speech sounds” and at the same time points articulatory phonetics “which is the study of how speech sounds are made or articulated” (Jakarta-Batam, 2012, p.3) by using various parts of the vocal

track. Similarly, according to FIS (2020), Phonetics is the term for the description and classification of speech sounds, particularly how sounds are produced, transmitted and received". (para. 1). Meanwhile, Kim (2021) mentions that

phonetics is the study of physical speech sounds. On the other hand, “all the speech sounds are made in the lips, tongue, teeth, pharynx and lungs” (FIS, 2020, para. 1). Thus, depending on the location of the tongue, it is also important how sounds are listened to by students and then they can be able to re-pronounce the sounds. On the other hand, Pennington (2007) states that “the study of how sounds are organized into systems and utilized in languages is the central concern of phonology” (p.1). In other words, *Phonology* is related to stress, rhythm, and intonation. Also, Pennington (1996) claims that “phonology analyzes and describes the series of sounds in a natural way in individual languages” (p.23). Meanwhile, the Cambridge dictionary (2021) defines it as “the study of sounds in a particular language or in languages generally” (para. 1). Another definition is given by Hickey (n.d.) who claims that “phonology is the classification of the sounds within the system of a particular language or languages” (p.21). To sum up, phonology is the study of the speech sounds in a particular language. In this case, this study is focused on phonemes which are produced in English language. Therefore, the following section of literature is focused on describing what *phonemes* are.

2.5.1 Phonemes

The most common definition of a phoneme could be “one of the smallest units of speech that makes one word different from another word” (Dictionary of Cambridge, 2020, para. 1). An example of this is the difference between *put* and *pot*, it depends on the vowel. This means, the different phonemes /ʊ/ and /ɑ:/. In other words, if one phoneme is

changed by another, the meaning changes. Moreover, “a phoneme may consist of several phonetically distinct articulations” (CollinsEnglishDiccionary, 2021, para. 2). This means that a phoneme can affect the meaning of mispronounced. The

International Phonetic Alphabet (IPA, 2015) “is an academic standard created by the International Phonetic Association. This Association was founded in 1886 and is the oldest organization for phoneticians to “promote the scientific study of phonetics”. (para.1,). IPA is divided into vowels and consonant sounds, specifically, “English has

26 letters to convey the 44 syllable sounds of the English language” (para 2).

Therefore, “there are only 5 vowels, but could be 6 if it is counted as the occasional /y/ to convey over a dozen vowel sounds” (International Phonetic Alphabet, 2021, para 2). In other words, the phonetics sounds are as many as the chart shows:

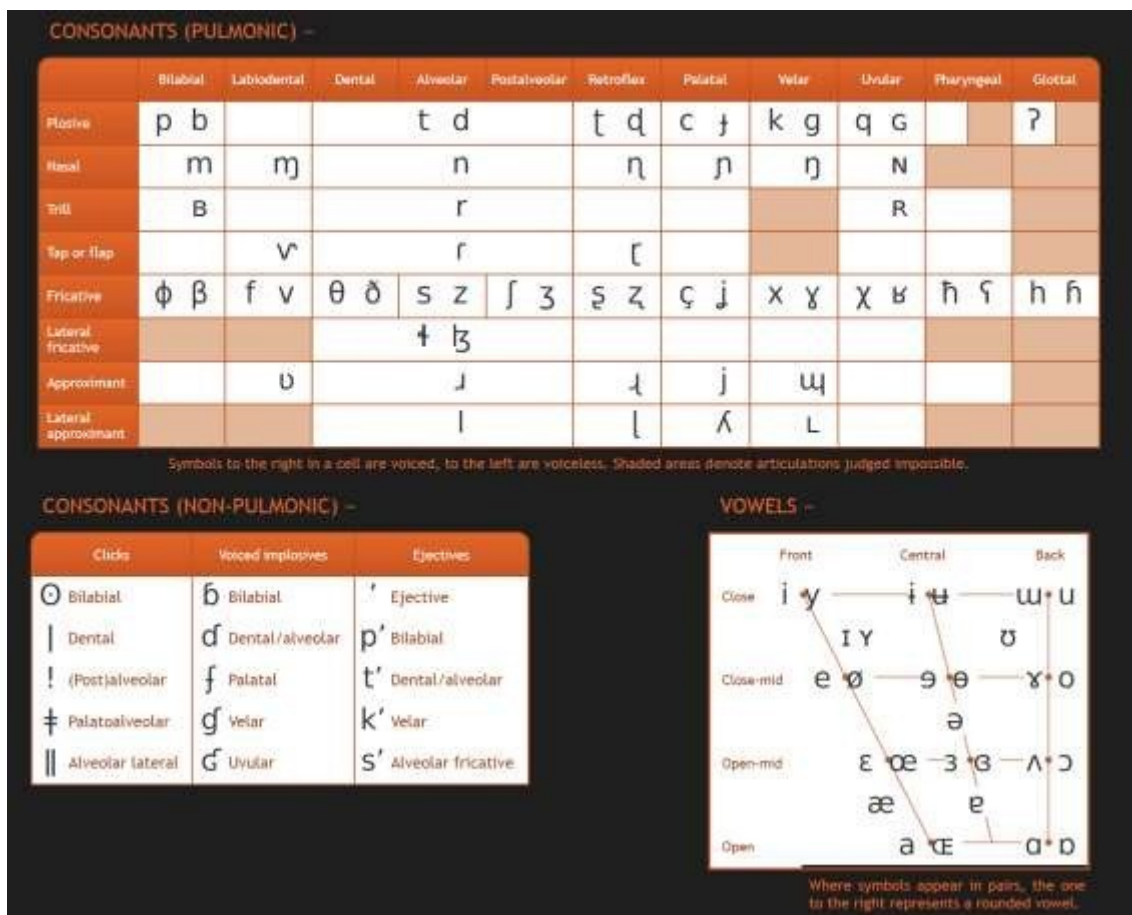


Figure 2. International Phonetic Alphabet (Taken from International Phonetic Association, 2018)

As the reader can see, Figure 2 presents three charts. These charts show the manner in which the phonetic sounds are divided. In the first part are the consonants (pulmonic), at the same time are divided into voiced sounds and voiceless sounds. In

the second part are the consonants (non-pulmonic), and the last part are the vowels. Particularly, this study is focused on $\theta//\delta/$ fricative dental phonemes.

2.5.1.1 $\theta//\delta/$ fricative dental phonemes

Roach (2009), says that English language pronunciation has a complex system of fricative phonemes, such as Labiodental, Dental, Alveolar, Post-alveolar and Glottal. All these phonemes are divided into fortis (voiceless) and Lenis (voiced). Also, Roach's (2009) defines Fricative phonemes as "consonants with the characteristic that air escapes through a narrow passage and makes a hissing sound" (p.39). Additionally, an explanation on how to produce the fricative phonemes is given by The Sound of English (2020). They say that "fricative consonants are made by squeezing air between a small gap as it leaves the body". (para. 1). This is that the fricative sounds are produced using exhaled air, but this air needs to be squeezed depending on the sound that is going to be pronounced. Also, The Sound of English (2020), explains that this type of sounds are divided into voice sounds which are produced with a vibration in the vocal cords, and voiceless sounds which are produced only with air.

As previously stated, this study is focused on improving $\delta/$ and $\theta/$ fricative phonemes. For example, some common spelling words of these phonemes are: "think"

$\theta/$ and "those" $\delta/$. The pronunciation of these two phonemes, according to Collins and Mees (2013), is produced with the tip of the tongue and the rear of the upper front teeth, as is shown in the following Figure 3:

- 1 Bilabial (lower lip ↔ upper lip)
- 2 Labio-dental (lower lip ↔ upper front teeth)
- 3 Dental (tip of tongue ↔ rear of upper front teeth)
- 4 Alveolar (tip/blade of tongue ↔ alveolar ridge)
- 5 Palato-alveolar (blade/front of tongue ↔ rear of alveolar ridge/front of hard palate)
- 6 Palatal (front of tongue ↔ hard palate)
- 7 Velar (back of tongue ↔ velum)
- 8 Glottal (glottis)

Figure A5.1 English consonants: places of articulation

Table A5.2 Manner of articulation – stricture types

<i>Nature of stricture</i>	<i>Effect of stricture</i>
Complete closure	Forms obstruction which blocks airstream
Close approximation	Forms narrowing giving rise to friction
Open approximation	Forms no obstruction but changes shape of vocal tract, thus altering nature of resonance

Figure 3. English consonants and the chief places of articulation (taken from *Practical Phonetics and Phonology*, 2013)

Taking into account the concept of phoneme, this study suggests tongue twisters as a strategy to improve student’s pronunciation of dental-fricative phonemes. So, in the next section of literature, tongue twisters are going to be described.

2.6 Tongue Twisters

According to Cambridge Dictionary (2021), a tongue twister is “a sentence or phrase that is intended to be difficult to say, especially when repeated quickly and often” (para. 1). An example of tongue twister is;

“Something in a thirty-acre thermal thicket of thorns and thistles thumped and thundered threatening the three-D thoughts of Matthew the thug - although, theatrically, it was only the thirteen-thousand thistles and thorns through the underneath of his thigh

that the thirty year old thug thought of that morning” (Course Hero, 2021, para. 1).

The purpose of a tongue twister is to repeat it and to pronounce the fricative sounds as many times as possible without making a mistake. Education First (EF, 2020) says that "for English learners, tongue twisters are a fun way to work one or two sounds at a time to achieve correct pronunciation" (para. 1). That is why many English teachers use tongue twisters to improve student's pronunciation. Moreover, The Editors of Encyclopaedia Britannica (2021) define tongue twisters as "a group of words made difficult to articulate by a close sequence of similar consonantal sounds. Tongue twisters are often passed on for generations, becoming a rich part of folklore" (para.1). In other words, with the use of tongue twisters the improvement of the pronunciation is a fun way to teach sounds. Also, learning by using tongue twisters is interactive and enjoyable. Additionally, there are many widely known Tongue twisters in English, some are easy and others are difficult to pronounce. In the following section, it will be described how tongue twisters can work as a strategy to improve English language pronunciation during EFL classes.

2.6.1 Tongue twisters as teaching strategy to practice pronunciation

Smart words (n/d), mention that tongue twisters are words that are difficult to pronounce, including native speakers, "therefore require a high level of concentration" (para. 3). That is why the use of tongue twisters are used as articulation exercises, and that is why there are experts that mention the use of tongue twisters as a strategy to improve English as a Foreign Language (EFL) Pronunciation. Pearson (2021) mentions that they are "often used by speech therapists, actors and public speakers, tongue

twisters help to improve diction, pronunciation and clarity of speech” (para.5). Moreover, the researcher of this study believes that students can learn a lot of new words besides learning how to pronounce them correctly. FluentU English Educator

Blog (2021) presents different ways to teach pronunciation by using tongue twisters and recommends EFL teachers to create worksheets, games and competitions when using tongue twisters.

As can be seen, the use of tongue twisters is very popular to improve pronunciation, even in other languages, not just for EFL but for others as well. For example, Spanish language has its own tongue twisters to improve the pronunciation of a specific Spanish sounds (Olaya, 2020), “I propose different ideas to work with the tongue twisters in Spanish, they are always a good SOS material to work in class and tongue twisters are very well received by the students” (Olaya, 2020, para.3). So, definitely, tongue twisters are a good option to practice and learn pronunciation. The following chapter will present the methodology and how tongue twisters make possible the purpose of this work.

CHAPTER III

Methodology

3.1 Introduction

This chapter provides specific information about the methodology that is going to be applied in this research. The methodology used is described along with the participants, and the instrument to carry out this work. First of all, this study implies the use of a questionnaire in order to collect the data information.

3.2 Methodology

Firstly, the Qualitative approach is mentioned by Kothari (2004) which is concerned with subjective assessment of attitudes, opinions, behavior and is not subjected to rigorous quantitative analysis. As it is told, this paper considers the Qualitative Approach and this is because this research explores the participant's opinions by using a specific questionnaire by the teacher based on the needs of the students, which is to explore if students can improve their pronunciation, specifically /θ//ð/ fricative dental phonemes pronunciation. Guest & Namey & Mitchell (2013) say that in fields as diverse as education, psychology, and so on, the researchers and practitioners regularly use qualitative methods to address questions about how people organize, relate to, and interact with the world. In other words, in this approach, the Qualitative Researchers are interested in understanding the meaning people have constructed, that is, how people make sense of their world and the experiences they have in the world.

(Merriam, 2009, p. 13). Related to this, Denzin & Lincoln (2005) define this concept:

Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that makes the world visible. These practices transform the world. They turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings, and memos to the self. At this level, qualitative research involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the meanings people bring to them (p. 3).

To understand this qualitative research, it involves collecting and working with people. In this way the researcher can collect information from students such as pictures or videos, audios, tests. All of these will help to have a clear idea how students improved their pronunciation during classes. Thus, as the authors mention, the data is useful to research, to know and to help students during the development of this study.

3.3 Context of the Research

This study is developed in a city called Atlixco, in Puebla, Mexico. First, to understand more about EFL in México, in 2009 when the Secretaría de Educación Pública (SEP) launched the Programa Nacional de Inglés en Educación Básica (PNIEB) to increase the English proficiency of public schools, English as a Foreign Language (EFL) learning in Mexico was considered accelerated (Hartman M., 2020). So, with the implementation of EFL, students are supposed to develop the four language skills;

however, some teachers do not have the English language proficiency to speak or at least to keep a conversation with a native speaker of English language. At this point the motivation and school needs to keep learning English, made them find out for help.

Participants of this research were asked to take an EFL test to be able to finish their degree, while others wanted to improve their English skills. Consequently, these students (participants) asked for help and private EFL classes having, as a result, the current group of participants in this study. They are enrolled in an EFL basic level group. Additionally, something important to mention is that from April 2020 the English classes are given online due to the pandemic of COVID-19. This is also because of the motivation or the interest of the students to learn English as a Foreign Language (EFL). As a matter of fact, this class turned out to be developed through e-learning teaching methodology.

3.4 Participants

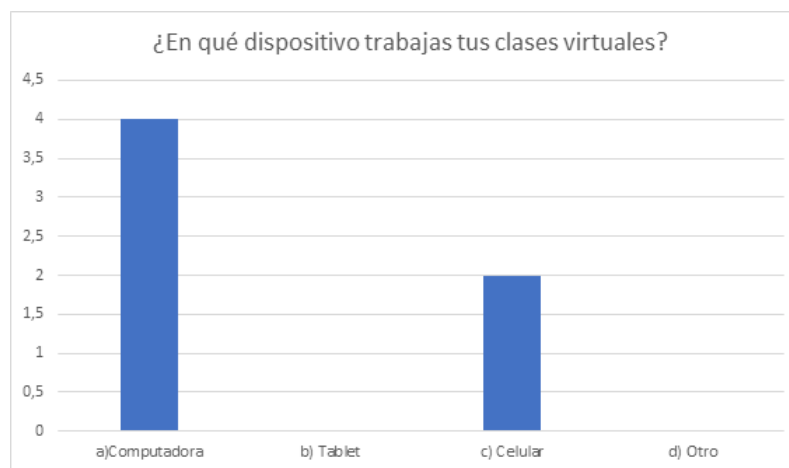
The participants in this research are students from university level. They are 2 males and 4 females between 17 to 27 years old. The participants are from different universities such as ITSA (Instituto Tecnológico Superior de Atlixco), UDES (Universidad de Ciencias y Desarrollo), UNID (Campus Atlixco), CUBA (Centro Universitario del Valle de Atlixco) and BUAP (Benemérita Universidad Autónoma de Puebla). As can be seen in chart 1, the information from the participants is presented:

STUDENTS	FEMALE (F)	MALE (M)	YEARS OLD	SCHOOL	LOCATION
Student 1	F		18	BUAP	Atlixco
Student 2	F		17	BUAP	Atlixco
Student		M	23	UNID	Atlixco

3					
Student 4		M	27	ITSA	Atlixco
Student 5	F		25	UDES	Atlixco
Student 6	F		19	CUBA	Atlixco
TOTAL	4 Female s	2 Male s		-2 from BUAP -1 from UNID	6 from Atlixco
				-1 from ITSA -1 from UDES -1 from CUBA	

Chart 1. Students' personal information

Additionally, this study's participants mentioned that they would like to learn English as a Foreign Language because it would help to obtain it. Conversely, some others mentioned that they dislike it because it is difficult to learn. Finally, four students have a computer and two students use their cellphone to study EFL in class (See graph 1).



Graph 1: What devices do you use for your virtual classes?

3.5 Instrument

In this study, three different instruments in order to triangulate the data, such as the Voice Recording (recording), Transcribing and a Questionnaire. First of all, Computer Hope (2020) defines the voice recorder as “any device capable of recording a voice. For example, a tape recorder is an example of a voice recorder” (para. 1). With this instrument, any sound can be recorded. In this particular study, students recorded their voice by themselves and sent it to the EFL professor as a task. In fact, Moore and Llompart (2017), claim that “the latest smartphones can collect some excellent data in the right environmental conditions” such as voice recordings. (p. 407).

Regarding the second instrument, according to Bailey (2008), “a transcription involves close observation of data through repeated careful listening (and/or watching), and this is an important first step in data analysis”. (para.22). Also, the author follows by stating that:

Transcribing is an interpretive act rather than simply a technical procedure, and the close observation that transcribing entails can lead to noticing unanticipated phenomena. It is impossible to represent the full complexity of human interaction on a transcript and so listening to and/or watching the ‘original’ recorded data brings data alive through appreciating the way that things have been said as well as what has been said. (para. 34).

Thus, transcribing implies listening to the recordings several times to interpret and do the best transcription of phonetics. So, at this point, transcription is one important thing in this study. These particular transcriptions are comparing the first student's recording and the last one in order to find an improvement of pronunciation.

The last instrument used in this study was the Questionnaire. Lavrakas (2008) claims that questionnaires are a set of questions, often called items. They follow a fixed scheme in order to collect individual data about one or more specific topics. So, to know more about this method of collecting data Burns (2010) claims that “the questionnaire also called a survey, checklist or schedule” (p.81) can obtain different types of information such as factual or demographic, Behavioral and Attitudinal. So, according to this author, the first type (factual) is about the

backgrounds and experiences of the students. The second one (Behavioral), is about what students did in the past, and the third one (Attitudinal) is about the opinions, beliefs, interests, values and attitudes of the students. In other words, participants' information collected

by using the questionnaire is going to be classified into factual or demographic, behavioral, and attitudinal.

The structure of this questionnaire is having closed-ended and open-ended items. Mathers, Fox and Hunn (2009) says that “a closed question is one where the possible answers are defined in advance and so the respondent is limited to one of the pre-coded responses given”, (p.20). According to Burns (2009), for these items the main types are yes/no (or true/false); rating scales; numerical scales; multiple choice; and ranking scales. Analyzing the data you get from closed-ended items involves calculating overall quantities and scores” (p.82). On the other hand, according to Mathers, Fox and Hunn (2009), in the open-ended item the students or “the respondent is allowed to interpret the question in their own way” (p.20). Burns says that “these are items that look for a free-form response” (p.96). These types of items are divided into guide items and structured items. This means that in this type of item, the participants will be free to answer depending on what participants want to answer.

Another feature of this questionnaire is that it was designed in Spanish language because it was the way to make participants feel comfortable when answering it. Finally, this questionnaire counts with seventeen questions divided into four sections in order to obtain certain information. The first part was about participants’ background, *sección conociendo a los estudiantes*. The second section was about *e-learning*. Later, there is a section about *pronunciation*. And finally, section number four is

about the use of tongue twisters as a strategy to practice pronunciation,
sección trabalenguas (See Appendix A).

3.6 Overall Research Design

During the development of this study, there were three main steps. First, to diagnose how the students were in their pronunciation of /ð/ and /θ/ fricative phonemes. Therefore, participants were asked to make a voice recording about a tongue twister as homework. The instructions were that every student had to read the tongue twister aloud while the cellphone was recording their voice. As is the first try, participants do not have the model of the correct pronunciation, this is because of the participant's diagnosis. So, participants pronounced it and sent the recording number 1. After class, the model with the correct pronunciation is provided and uploaded by the teacher on the platform. This means that the correct pronunciation is available all the time, any time participants decide to practice, they can download it and listen to it. It is important to mention that in this first class, the model is a video adapted and taken from YouTube. Clearly, as it can be heard, the speaker is a native the speaker.

During the next classes, all students were asked to make a voice recording with exactly the same tongue twister. This was for them to practice their pronunciation. Participants were practicing during the following six days. At the end, there were 6 recordings, particularly, two per participant which are the first day and the last day of pronunciation. Finally, all the voice recordings were analyzed one by one, throughout a very concentrated listening of the recording. This means that the researcher had to listen to it too many times to be able to do the phonemes transcription.

During the transcriptions, the researcher listened to the first and the last sound in the recording. This was because, for this research, the comparison between the first day of pronunciation and the last day should show an improvement. In order to do the transcription, a chart was needed in the Word Office. This means that the results were

typed in the computer. Every word had its literal phonetic transcription, just exactly as the students pronounced. This was the same process for each student in both recordings, their first and last day of practicing with the same tongue twister. The final step in this study was the application of the questionnaire. Every student was connected in our normal scheduled class and the professor asked them to answer it. Later, the questionnaire was uploaded in Google Drive by the professor and students sent the answered version by mail or messenger. During the application just one student asked about the level of English. This was because students did not know it.

3.7 Conclusion

As it is observed in this chapter, the use of the voice recording, the transcription and the questionnaires were very useful instruments to obtain the data for this research. In the following chapter, it is going to present the obtained results.

CHAPTER IV

Results

4.1 Introduction

This chapter presents the results of this research. Therefore, the first section of this chapter is about the obtained results. It includes a chart of phonemes transcription and graphs to explain all the information gathered by the research instrument. Next, the research questions of this study will be answered. Then, the used activities to practice /θ//ð/ fricative dental phonemes with a tongue twister is shown. Finally, at the end of this chapter is presented a discussion of the results.

4.2 Obtained Results

This section of the results is showing two types of results. The ones obtained from the phonemes transcription by practicing EFL of /θ//ð/ dental fricative phonemes with a tongue twister. The second result is presenting the data obtained from the survey (See Appendix A).

4.2.1 Phonemes Transcription Results

In this section, there are six transcription-charts, one per participant. Firstly, participant 1's transcription chart shows the comparison between the first day without practicing the tongue twister and the final version of their pronunciation after practicing it for six days. Chart 2 demonstrates that the first day of pronunciation, this participant presented several mistakes of pronunciation with the dental fricative /θ//ð/ phonemes:

NAME	WORDS 32	CORRECT PRONUNCIATION	FIRST DAY TRANSCRIPTION	LAST DAY TRANSCRIPTION
Participant 1	Something	/ˈsʌm.θɪŋ/	/ˈsʌm.tɪŋ/	/ˈsʌm.θɪŋ/
	Thirty	/ˈθɜː.ti/	/ˈθɜː.ti/	/ˈθɜː.ti/
	Thermal	/ˈθɜː.məl/	/ˈθɜː.ti/	/ˈθɜː.məl/
	Thicket	/ˈθɪk.ɪt/	/ˈtɪk.ɪt/	/ˈθɪk.ɪt/
	Thorns	/θɔː.nz/	/tɔːnz/	/θɔːnz/
	Thistles	/ˈθɪs.əls/	/ˈθɪs.əls/	/ˈtɪs.θəls/
	Thumped	/θʌmpɪd/	/θʌmpɪd/	/tʌmp/
	Thundered	/ˈθʌn.dəd/	/tʌndə/	/ˈθʌn.dəd/
	Threatening	/ˈθret.ən.ɪŋ/	/θɪrtɪn/	/ˈθret.ən.ɪŋ/
	The	/ðə, ði/	/de/	/de/
	Three-D	/θriː/	/triː/	/θriː/
	Thoughts	/θɔː.tz/	/θɔː.tz/	/θɔː.tz/
	Matthew	/ˈmæθɪuː/	/mætiu/	/ˈmæθɪuː/
	The	/ðə, ði/	/de/	/de/
	Thug	/θʌɡ/	/tʰɔɡ/	/θʌɡ/
	Although	/ɔːl.ðəʊ/	/ɔːl.ðəʊɡ/	/ɔːl.ðəʊ/
	Theatrically	/θi.æ.tɪ.kəl.i/	/tri.æ.tɪ.kəl.i/	/tɜæ.tɪ.kəl.i/
	The	/ðə, ði/	/de/	/de/
	Thirteen	/θɜːˈtiːn/	/θɜːˈtiːn/	/θɜːˈtiːn/
	Thousand	/ˈθaʊ.zənd/	/ˈtʰz.zənd/	/ˈtʰaʊ.zənd/
	Thistles	/ˈθɪs.əls/	/ˈtɪs.əls/	/ˈθɪs.əls/
	Thorns	/θɔː.nz/	/tɔːnz/	/θɔːnz/
	Through	/θruː/	/θɜɔɡ/	/θruːɡ/
	The	/ðə, ði/	/de/	/de/
	Underneath	/ˌʌn.də.niːθ/	/ˌʌn.də.niːθ/	/ˌʌn.də.niːθ/
	Thigh	/θaɪ/	/tʰaɪɡ/	/θaɪɡ/
	That	/ðæt/	/ðæt/	/ðæt/
	The	/ðə, ði/	/de/	/ðə/
	Thirty	/ˈθɜː.ti/	/ˈθɜː.ti/	/ˈθɜː.ti/
	Thug	/θʌɡ/	/tʰɔɡ/	/tʰɔɡ/
	Thought	/θɔː.t/	/tʰɔɡ/	/tʰɔ.q/
	That	/ðæt/	/ðæt/	/ðæt/
% mispronunciation			65.62%	28.12%

Chart 2. Participant 1 pronunciation improvement

As it can be seen, Chart 2 shows 65.62% of mispronunciation at the time of pronouncing the tongue twister for the first time. The transcription of the mispronounced words is in orange color. In contrast, green color phonemes represent the last day of some mispronounced words. Students were practicing for six days and Participant 1 had 28.12% of mispronounced words the very last day of practice. As a result, it can be said that using this tongue twister made this Participant 1 improve 37.5% of her failure when pronouncing /θ//ð/ dental fricative phonemes.

NAME	WORDS 32	CORRECT PRONUNCIATION	FIRST DAY TRANSCRIPTION	LAST DAY TRANSCRIPTION
Participant 2	Something	/sʌm.θɪŋ/	/sʌm.θɪŋ/	/sʌm.θɪŋ/
	Thirty	/θɜː.ti/	/tɪrti/	/θɜː.ti/
	Thermal	/θɜː.məl/	/tɜrməl/	/θɜː.məl/
	Thicket	/θɪk.ɪt/	/tɪk.ət/	/θɪk.ɪt/
	Thorns	/θɔː.nz/	/tɔːnz/	/θɔː.nz/
	Thistles	/θɪs.əls/	/tɪtsəls/	/θɪs.əls/
	Thumped	/θʌmpɪd/	/tʌmp/	/θʌmp/
	Thundered	/θʌn.dəd/	/tʌn.dər/	/θʌn.dəd/
	Threatening	/θret.ən.ɪŋ/	/tret.nɪŋ/	/θret.ən.ɪŋ/
	The	/ðə.ði/	/de/	/de/
	Three-D	/θriː/	/tɪː/	/θriː/
	Thoughts	/θɔːts/	/Tɔːgs/	/θɔːts/
	Matthew	/ˈmæθjuː/	/ˈmæθjuː/	/ˈmæθjuː/
	The	/ðə.ði/	/ðə/	/de/
	Thug	/θʌɡ/	/θʌɡ/	/tʌɡ/
	Although	/ɔːl.ðəʊ/	/ɔːl.ðəʊ/	/ɔːl.ðəʊɡ/
	Theatricaly	/θi.ætrɪ.kəl.i/	/t.ætrɪ.kli/	/træθˈtrɪkli/
	The	/ðə.ði/	/de/	/de/
	Thirteen	/θɜː.ti.n/	/θɜː.ti.n/	/θɜː.ti.n/
	Thousand	/θaʊ.zənd/	/ˈtau.zənd/	/θuː.zənd/
	Thistles	/θɪs.əls/	/tɪs.əls/	/θɪsθəls/
	Thorns	/θɔː.nz/	/θɔːnz/	/θɔː.nz/
	Through	/θruː/	/trouɡ/	/θruːɡ/
	The	/ðə.ði/	/de/	/de/
	Underneath	/ˌʌn.dəːniːθ/	/ˌʌn.dər.niːt/	/ˌʌn.dəːniːθ/
	Thigh	/θaɪ/	/θaɪɡ/	/θaɪɡ/
	That	/ðæt/	/dæt/	/ðæt/
	The	/ðə.ði/	/de/	/ðə/
	Thirty	/θɜː.ti/	/θɜː.ti/	/θɜː.ti/
	Thug	/θʌɡ/	/θʌɡ/	/θʌɡ/
	Thought	/θɔːt/	/θɔːt/	/tɔːt/
	That	/ðæt/	/ðæt/	/ðæt/
% mispronunciation			62.5%	25%

Chart 3. Participant 2 Pronunciation improvement

Chart 3 shows the result of participant 2. As we can see, the percentage of mispronunciation in her first attempt to pronounce the tongue twister was 62.5%. The last day of practice, she showed 25% of mispronunciation in all words from the tongue twister. This means that at the end of the week this participant improved a lot. Specifically, she mispronounced thirty two words, and at the end of the week, she only mispronounced 8 words.

NAME	WORDS 32	CORRECT PRONUNCIATION	FIRST DAY TRANSCRIPTION	LAST DAY TRANSCRIPTION
Participant 3	Something	/sʌm.θɪŋ/	/sʌm.θɪŋ/	/sʌm.θɪŋ/
	Thirty	/θɜː.ti/	/θɜː.ti/	/θɜː.ti/
	Thermal	/θɜː.məl/	/θɜː.məl/	/θɜː.məl/
	Thicket	/θɪk.ɪt/	/θɪk.ɪt/	/θɪk.ɪt/
	Thorns	/θɔː.nz/	/θɔː.nz/	/θɔː.nz/
	Thistles	/θɪs.əls/	/θɪs.təls/	/θɪsləls/
	Thumped	/θʌmpɪd/	/θʌmpɪd/	/θʌmpɪd/
	Thundered	/θʌn.dəd/	/θʌn.dəd/	/θʌn.dəd/
	Threatening	/θret.ən.ɪŋ/	/θret.ən.ɪŋ/	/θret.ən.ɪŋ/
	The	/ðə, ði/	/ðə/	/ðə/
	Three-D	/θriː/	/θriː/	/θriː/
	Thoughts	/θɔː.tz/	/θɔː.tz/	/θɔː.tz/
	Mathew	/mæθjuː/	/mæθjuː/	/mæθjuː/
	The	/ðə, ði/	/de/	/ðə/
	Thug	/θʌɡ/	/tʌɡ/	/tʌʊɡ/
	Although	/ɔːl.ðəʊ/	/ɔːl.ðəʊ/	/ɔːl.ðəʊ/
	Theatrically	/θɪ.ætr.ɪ.kəl.i/	/θɪ.ætrækəl.i/	/θɪ.θrɪkəl.i/
	The	/ðə, ði/	/de/	/ðə/
	Thirteen	/θɜː.ti.n/	/θɜː.ti.n/	/θɜː.ti.n/
	Thousand	/θəʊ.zənd/	/təʊ.zənd/	/θəʊ.zənd/
	Thistles	/θɪs.əls/	/θɪs.tɪs/	/θɪs.tɪs/
	Thorns	/θɔː.nz/	/θɔː.nz/	/θɔː.nz/
	Through	/θruː/	/tʀuːɡ/	/tʀuːɡ/
	The	/ðə, ði/	/de/	/de/
	Underneath	/ʌn.də.niːθ/	/ʌndərnɪd/	/ʌndərnɪd/
	Thigh	/θaɪ/	/θɪɡ/	/θaɪɡ/
	That	/ðæt/	/dæʔ/	/θæt/
	The	/ðə, ði/	/de/	/de/
	Thirty	/θɜː.ti/	/θɜː.ti/	/θɜː.ti/
	Thug	/θʌɡ/	/tʌɡ/	/θʌʊɡ/
	Thought	/θɔː.t/	/tɔːɡ/	/θəʊʊɡ/
	That	/ðæt/	/ðæt/	/ðæt/
% mispronunciation			68.75%	37.5%

Chart 4. Participant 3 Pronunciation improvement

Chart 4 shows that participant 3 improved almost half of the mispronounced words after practicing with the tongue twister. For example, on the first day of trial, his percentage was 68.75% of words mispronunciation; in contrast, on the last day the participant had only 37.5% of mispronunciation. As the reader can see, this chart had positive and motivating results for this participant.

NAME	WORDS 32	CORRECT PRONUNCIATION	FIRST DAY TRANSCRIPTION	LAST DAY TRANSCRIPTION
Participant 4	Something	/ˈsʌm.θɪŋ/	/ˈsʌm.tɪŋ/	/ˈsʌm.θɪŋ/
	Thirty	/ˈθɜː.ti/	/ˈtɪrti/	/ˈtɪrti/
	Thermal	/ˈθɜː.məl/	/ˈtɜrma/	/ˈtɜrma/
	Thicket	/ˈθɪk.ɪt/	/ˈtɪkɪt/	/ˈtɪk.ɪt/
	Thorns	/θɔː.nz/	/tɔrns/	/tɔː.n/
	Thistles	/ˈθɪs.əls/	/ˈtuɪs.tɜr/	/ˈtuɪs.tɜr/
	Thumped	/θʌmpɪd/	/tʌmpɪd/	/tʌmp/
	Thundered	/ˈθʌn.dəd/	/ˈtʌn.dəd/	/ˈtʌn.dəd/
	Threatening	/ˈθret.ən.ɪŋ/	/ˈtrɪt.tɪŋ/	/ˈtrɪ.tenɪŋ/
	The	/ðə, ði/	/ðə/	/de/
	Three-D	/θriː/	/triː/	/triː/
	Thoughts	/θɔː.tz/	/tɔu.tz/	/θɔts/
	Matthew	/ˈmæθjuː/	/ˈmætu/	/tɔu.tz/
	The	/ðə, ði/	/de/	/ˈmætuː/
	Thug	/θʌɡ/	/tɔɡ/	/tʌɡ/
	Although	/ɔːl ðəʊ/	/ɔl toɡ/	/ɔːl ðəʊ/
	Theatrically	/θiː.ætrɪ.kəl.i/	/teætrɪ.kæli/	/teætrɪ.kæli/
	The	/ðə, ði/	non-pronounced	/ðə/
	Thirteen	/θɜːˈtiːn/	/tɜˈtɪn/	/tɪrˈti/
	Thousand	/ˈθaʊ.zənd/	/ˈtau.zænd/	/ˈtau.zænd/
	Thistles	/ˈθɪs.əls/	/ˈtuɪstɜr/	/ˈtuɪstɜr/
	Thorns	/θɔː.nz/	/tɔrns/	/θɔː.nz/
	Through	/θruː/	/trɔung/	/trɔuː/
	The	/ðə, ði/	/ðə/	/ðə/
	Underneath	/ˈʌn.dəˈniːθ/	/ˈʌn.dəˈniːθ/	/ˈʌn.dəˈniːθ/
	Thigh	/θaɪ/	/tɪɡ/	/taɪɡ/
	That	/ðæt/	/ðæt/	/ðæt/
	The	/ðə, ði/	/de/	/de/
	Thirty	/ˈθɜː.ti/	/ˈtɪrti/	/ˈtɪrti/
	Thug	/θʌɡ/	/tʌɡ/	/tɔɡ/
	Thought	/θɔːt/	/tɔɡ/	/tɔɡ/
	That	/ðæt/	/ðæt/	/ðæt/
% mispronunciation			81.25%	71.87

Chart 5. Participant 4 Pronunciation improvement

Chart 5 presents the results of Participant 4. As we can see, Participant 4 mispronounced 81.25% of the words with /θ//ð/ dental fricative phonemes in the assigned tongue twister (See orange column). The last day of practice, he mispronounced 71.87% of the same words. At the end, words like *something* and *although* were two of the words that this participant could improve. In this practice, Participant 4 mentioned 3 more correct words out of 32 before.

NAME	WORDS 32	CORRECT PRONUNCIATION	FIRST DAY TRANSCRIPTION	LAST DAY TRANSCRIPTION
Participant 6	Something	/ˈsʌm.θɪŋ/	/ˈsʌm.θɪŋ/	/ˈsʌm.θɪŋ/
	Thirty	/ˈθɜː.ti/	/ˈθɜː.ti/	/ˈθɜː.ti/
	Thermal	/ˈθɜː.məl/	/ˈθɜː.məl/	/ˈθɜː.məl/
	Thicket	/ˈθɪk.ɪt/	/ˈtɪk.ɪt/	/ˈtɪk.ɪt/
	Thorns	/θɔː.nz/	/θɔːnz/	/θɔːnz/
	Thistles	/ˈθɪs.əls/	/ˈθɪsləls/	/ˈθɪsləls/
	Thumped	/θʌmpɪd/	/θʌmpɪd/	/θʌmpɪd/
	Thundered	/ˈθʌn.dərd/	/ˈθʌn.dərd/	/ˈθʌn.dərd/
	Threatening	/ˈθret.ən.ɪŋ/	/ˈtrɪnɪŋ/	/ˈtrɪtɪŋ/
	The	/ðə, ði/	/de/	/de/
	Three-D	/θriː/	/triː/	/θriː/
	Thoughts	/θɔːts/	/θɔːts/	/θɔːts/
	Matthew	/ˈmæθɪuː/	/ˈmæθɪuː/	/ˈmæθɪuː/
	The	/ðə, ði/	/de/	/de/
	Thug	/θʌɡ/	/θʌɡ/	/θʌɡ/
	Although	/ɔːlˈðəʊ/	/æɪˈtrəʊɡ/	/ɔːlˈðəʊ/
	Theatrically	/θiˈætrɪ.kəl.i/	/tiˈtri.kli/	/tʰæˈtri.kli/
	The	/ðə, ði/	/de/	/de/
	Thirteen	/θɜːˈtiːn/	/θerˈtiu/	/θerˈtiu/
	Thousand	/ˈθaʊ.zənd/	/ˈθaʊ.zənd/	/ˈθaʊ.zənd/
	Thistles	/ˈθɪs.əls/	/ˈθɪs.əls/	/ˈθɪs.əls/
	Thorns	/θɔː.nz/	/θɔːnz/	/θɔːnz/
	Through	/θruː/	/trəʊŋ/	/trəʊː/
	The	/ðə, ði/	non-pronounced	/ðə/
	Underneath	/ˌʌn.dəˈniːθ/	/ˌʌn.dɛmɪˈd/	/ˌʌn.dɛrnɪd/
	Thigh	/θaɪ/	/θaɪ/	/θaɪ/
	That	/ðæt/	/dæt/	/dæt/
	The	/ði/	/de/	/ðə/
	Thirty	/ˈθɜː.ti/	/ˈθɪr.ti/	/ˈθɪr.ti/
	Thug	/θʌɡ/	/θɔʊɡ/	/θʌɡ/
	Thought	/θɔːt/	/θɔʊɡ/	/θɔːt/
	That	/ðæt/	/dæt/	/dæt/
% mispronunciation			50%	37.5%

Chart 7. Participant 6 Pronunciation improvement

Finally, the results for participant 6 are presented in Chart 7. Particularly, for this participant the words *Thug* and *Thought* are pronounced similarly at the first practice. In fact, this participant mispronounced 50% of all words in the tongue twister. However, for the last day of practicing this participant improved her pronunciation by showing only 37.5% of mispronunciation.

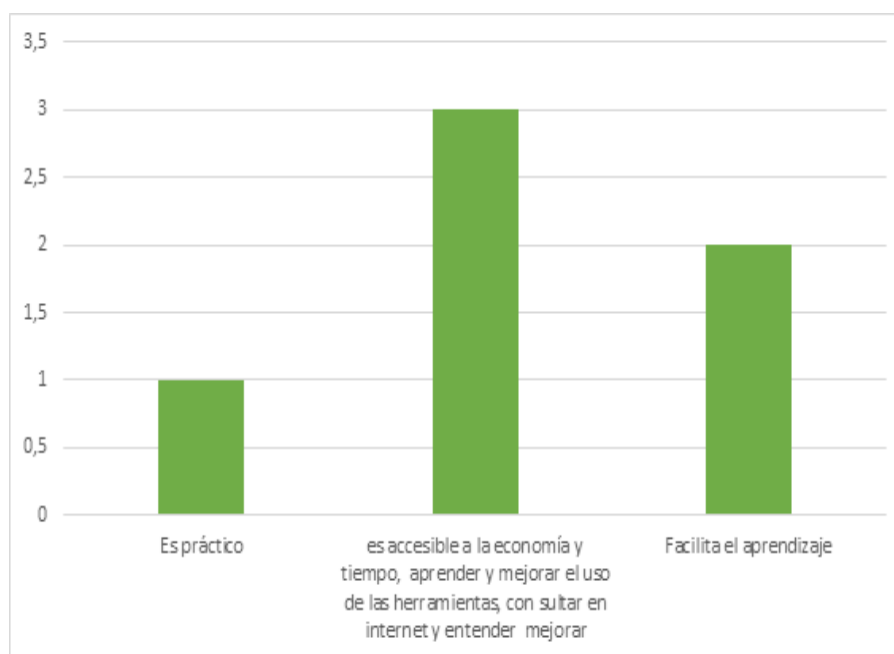
4.2.2 Survey's Results

Regarding the section of e-learning results, Rosell (2020), who is a specialist in this area, mentions that technology stimulates student's learning. She claims that "learning English in a classroom is much more effective when complemented with educational technology" (para. 9). This

means that e-learning is a good methodology to teach English as a Foreign Language. One of the questions in the survey asked: *Do you like*

using technology to learn English? Six participants answered affirmatively. Graph 2 demonstrates the reasons for them to support their answer.

For example, one participant claimed that using technology is a practical way to learn EFL. Three students affirmed that technology makes EFL learning accessible. Particularly, one of them refers to time and expenses, the other one mentioned access to TICs, and the last one mentions the accessibility to the internet in order to improve EFL knowledge. Finally, the last participant said that it just facilitates EFL learning.



Graph 2. Reasons why participants like using technology

In the following question of this section, all participants mentioned that they did not have trouble when using technology in virtual classes. Generally, their reasons to believe it are: it is *easy, fast, dynamic, not tedious or boring* at all and they are *accustomed to it*:

"because it depends of the method is being used to learn"

(P1) "I have always used it" (P2)

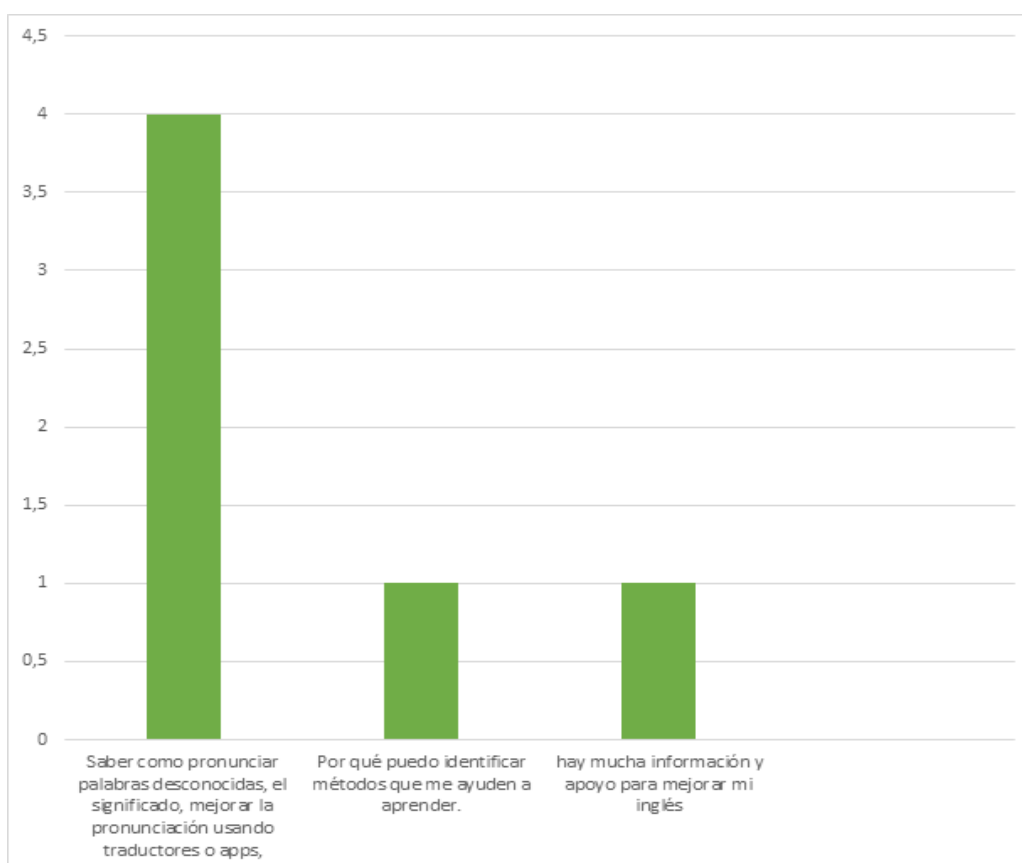
"Personally, it is easy because of the fact I can learn in different ways, with videos, games, applications, etc, and that does not make it tedious or boring" (P3)

“In some aspects it is easy because I can resolve my doubt through digital tools, but at the same time it is hard because I get distracted easily in my online classes and sometimes I can get trusted and making my assignments faster with an application” (P4)

“I have already have the necessary equipment”

(P5) “It is easy” (P6)

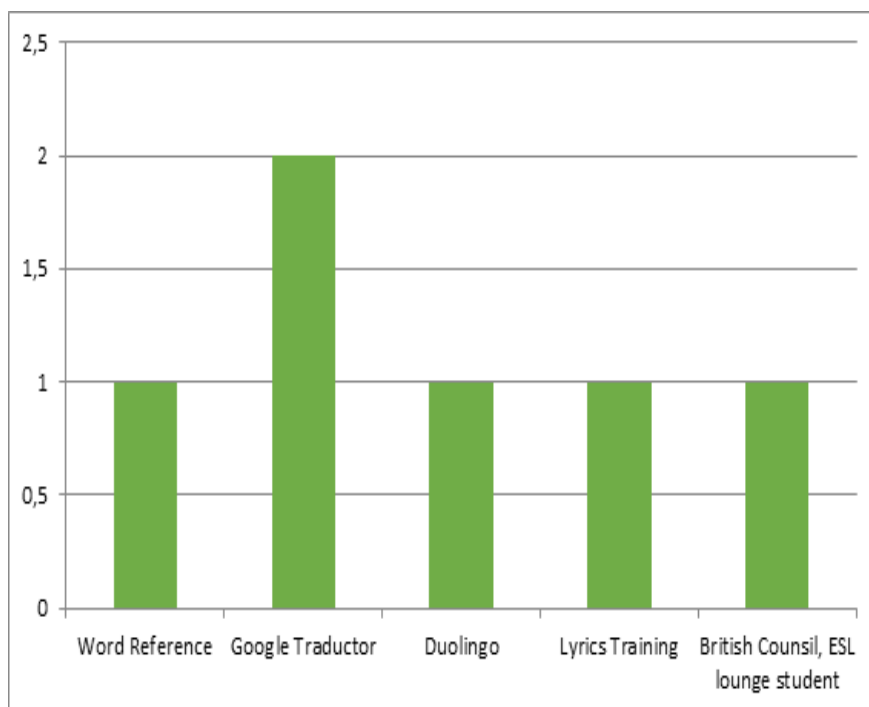
As it is presented in Graph 3, participants claimed how helpful technology is to improve their EFL pronunciation. In Particular, four participants said that it helped them to realize how to pronounce unknown words and their meanings by using translators or applications (apps). Meanwhile, one student said that technology is helpful at identifying methods to learn and another one said that it was useful to improve the English language knowledge.



Graph 3. Participant's thoughts on why technology helps to improve English pronunciation.

The following result demonstrates that participants name some applications or websites they know and they use to practice English language pronunciation.

Specifically, Graph 4 shows that two students use *google translator*. On the other hand, there are apps such as *Word Reference*, *Duolingo*, *Lyrics training*, *the British Council* and *ESL Lounge Students* which are mentioned once.

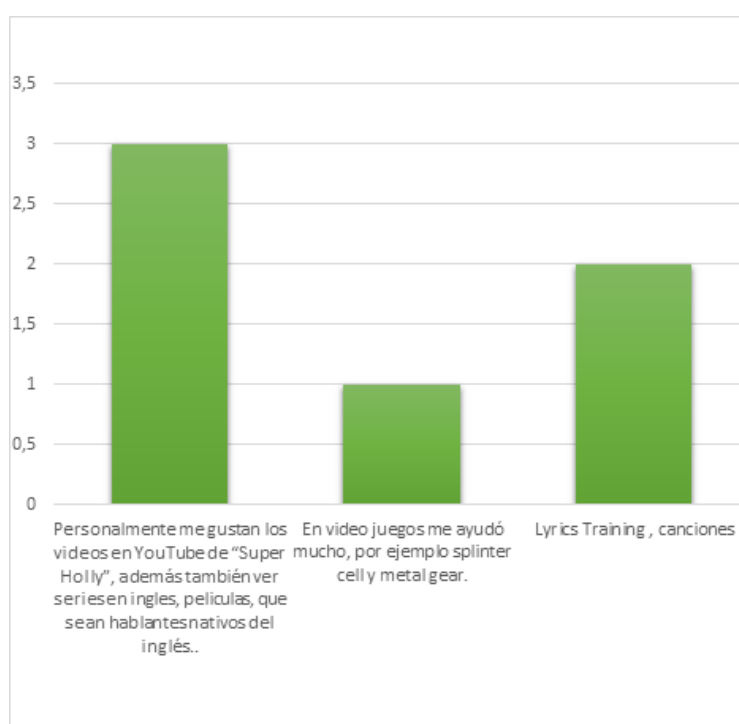


Graph 4. APPs and websites to practice pronunciation

Regarding the pronunciation teaching resources' section in the survey, three participants suggested that videos can help them to improve pronunciation in EFL. Varanasi (2012) states that in the teaching-learning process "The e-resources hold great potential in higher education. It can innovate the higher education system and make it more productive and efficient" (para.5) and "the role of e-resources in higher education is becoming more and more important and its importance will continue to grow and develop in the 21st century" (para.1). In other words, there are several electronic resources like videos which are useful to teach and practice skills and sub- skills in a language. Basically, e-resources such as multimedia videos are dynamic, accessible and digital material from

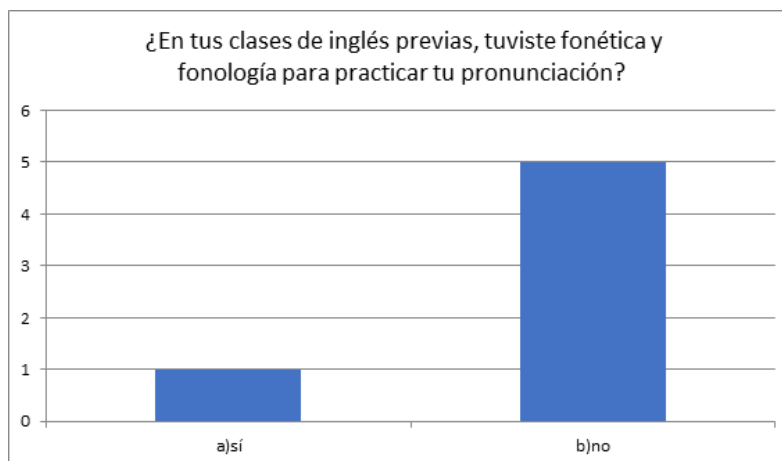
teachers. Moreover, CAPMAN Testing Solutions (2021) suggests exercises to improve and practice pronunciation such as “listening

conversations, movies, music” (para. 10). Particularly, three participants recommend the use of *English native videos, movies and TV series* to practice pronunciation. Two participants recommended the use of *lyrics training app or songs*, and one more mentioned *video games* as a source to practice EFL pronunciation (See Graph 5). In other words, participants recommended the useful tools they have used to practice pronunciation having good results that is why these tools were mentioned by them.



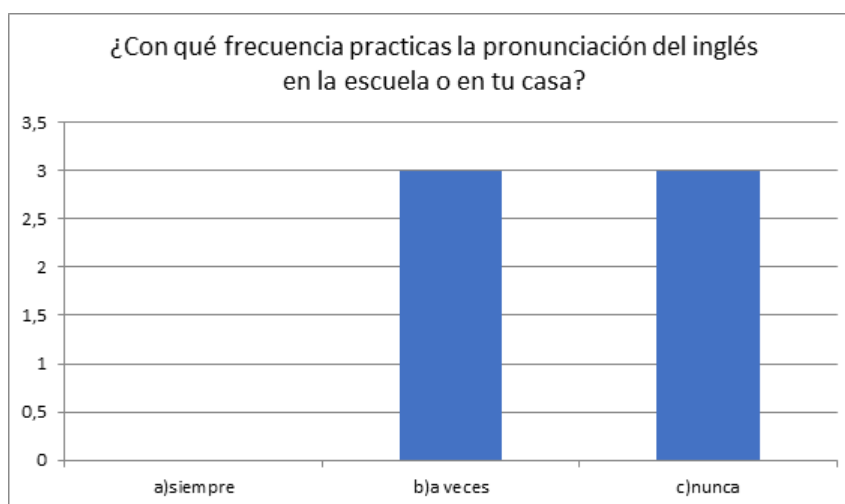
Graph 5. Participant’s recommendations to practice pronunciation

Regarding pronunciation, participants mentioned that they did not know what the International Phonetic Alphabet (IPA) is only one participant knew the function and how to use it. This is because, during previous classes, he had phonetics and phonology classes. (See Graph 6).



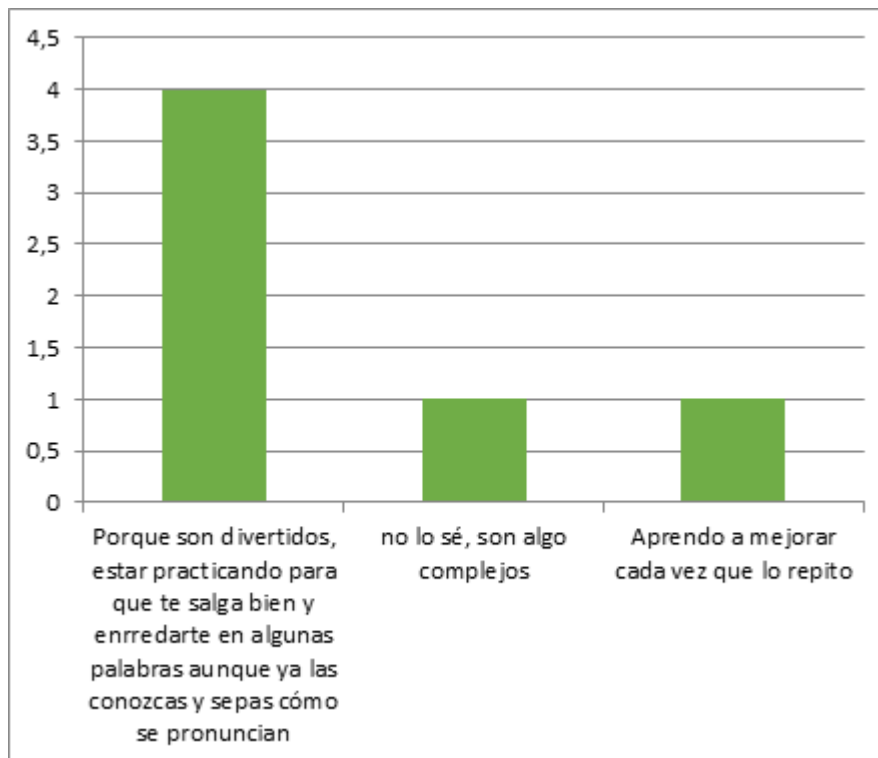
Graph 6. Knowledge about IPA

As it can be seen in Graph 7, just three participants mentioned that they *sometimes* practice EFL pronunciation, while the other three said they *never* practiced their EFL pronunciation before this study.



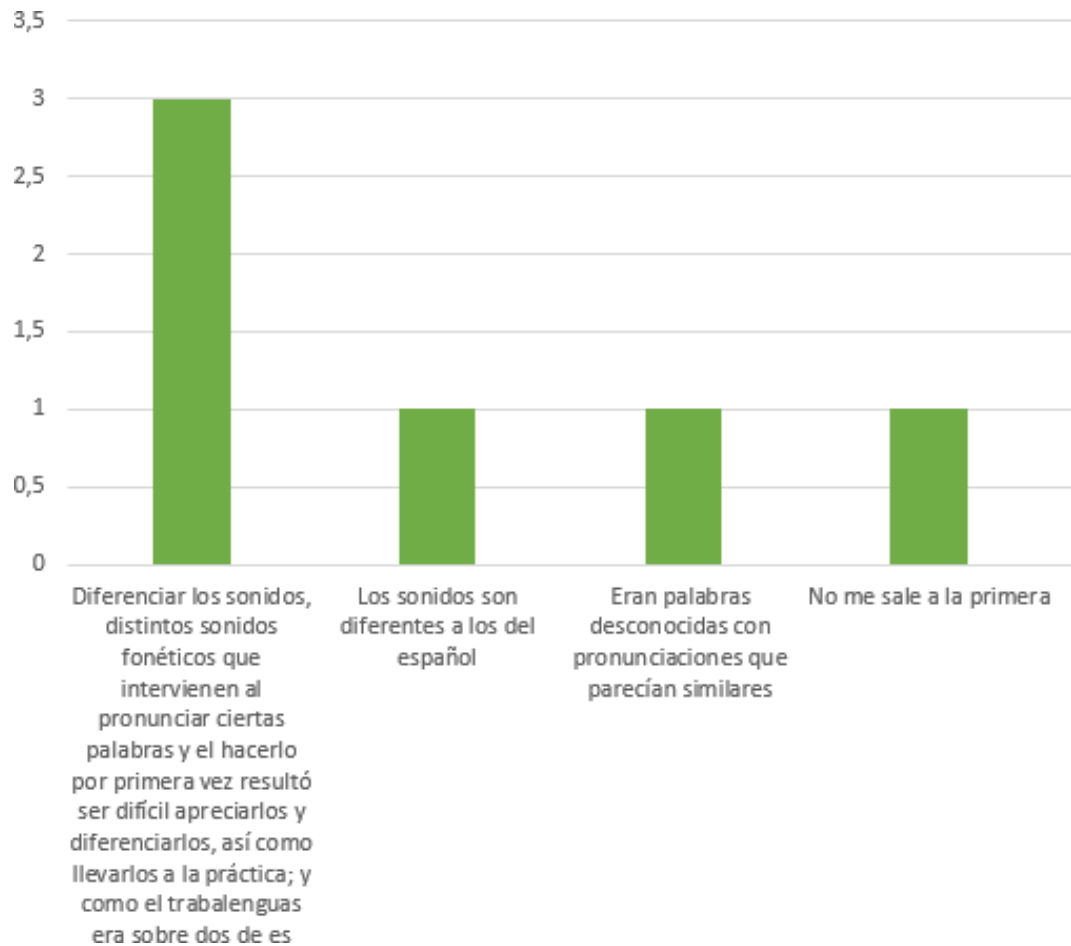
Graph 7. How often do participants practice the English pronunciation?

Regarding the 'Something in a thirty-acre' tongue twister as the proposed material to practice pronunciation, five participants liked it. Four participants pointed out that tongue twisters are funny. One of them mentioned that it is complex to use them so she does not like them. The last participant said that it helps to learn and improve pronunciation (See Graph 8).



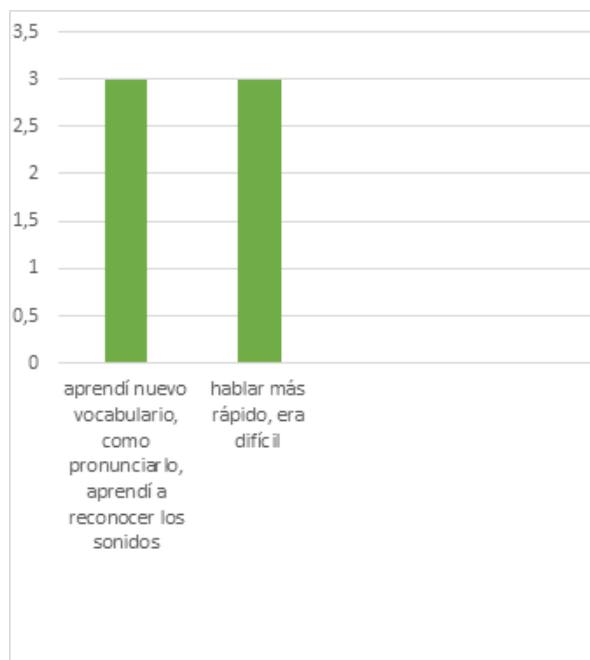
Graph 8. Reasons to use tongue twisters to practice pronunciation.

Specifically, participants mentioned that they practiced their pronunciation by repeating the tongue twister as follows: two answered 15 minutes, two answered a half hour and two more answered that practiced for more than one hour. They specified that the chosen tongue twister was difficult to pronounce. In Particular, three participants said that English phonemes were similar and it was difficult to distinguish them. One participant said that the sounds are different in contrast with Spanish. One more said that it is difficult to practice with unknown vocabulary and try it for the first time (See Graph 9).



Graph 9. Difficulties when pronouncing tongue twisters

Graph 10 shows the results about the improvement of their pronunciation with the tongue twister. Even with all the mentioned difficulties, all the participants would have liked to practice their pronunciation more by using tongue twisters. Specifically, three participants pointed out that they learned new vocabulary and how to pronounce it by using the tongue twister; they were able to recognize the new sounds. The other three participants stated that the tongue twister was difficult, but at the end, they were able to say it faster. This made them feel motivated regarding their pronunciation improvement.



Graph 10: Participant's reasons about the improvement of the tongue twister pronunciation

4.3 Research Questions' answers

This study proposed two research questions that aim to be answered in this section. First, *to what extent were the participants able to improve the pronunciation of /θ//ð/ fricative dental phonemes by using the 'Something in a thirty-acre thermal thicket' tongue twister and the e-learning methodology proposed in this study?*

In order to answer this research question, it is necessary to look at a comparative table where pronunciation achievement of phonemes from the first and the last practice of the tongue twister were tracked.

% ACHIEVEMENT OF THE PARTICIPANTS										
Participants	FIRST DAY				LAST DAY				TOTAL ACHIEVEMENT	
	mispronunciation	words	achievement1	words	mispronunciation	words	achievement2	words	(achie2)-(achie1)=	TOTAL ACHIEVEMENT
Participant 1	65.62%	21	34.38%	11	28.12%	9	71.88%	23	(71.88)-(34.38)	37.5%
Participant 2	62.5%	20	37.5%	12	25.00%	8	75.00%	24	(75.00)-(37.5)	37.5%
Participant 3	68.75%	22	31.25%	10	37.5%	12	62.5%	20	(62.5)-(31.25)	31.25%
Participant 4	81.25%	26	18.75%	6	71.9%	23	28.1%	9	(28.1)-(18.75)	9.35%
Participant 5	75.00%	24	25.00%	8	56.25%	18	43.75%	14	(43.75)-(25.00)	18.75%
Participant 6	50.00%	16	50.00%	16	37.5%	12	62.5%	20	(62.5)-(50.00)	12.5%
			196.9				343.8%			146.9%
AVERAGE	67.19%		32.81%		42.71		57.29%		(57.29)-(32.81)	24.48%

Chart 8 shows participants' achievement after practicing the pronunciation of /θ//ð/ fricative dental phonemes by using the 'Something in a thirty-acre thermal thicket' tongue twister. The first column of the table shows participants' numbers. It is followed by the percent of mispronunciation columns which have the percentage of mispronunciation that presents all the results of the participants from the first day (orange color) till the last day (green color). Each column is followed by the number of words that were pronounced incorrectly.

After the mispronunciation columns and their amount of words, there are the columns of achievement (1 and 2 in grey color). They are followed by the column of the number of correct words that participants pronounced. The very last column is showing the total achievement result (blue color) which is the difference between the last day (achievement 2) minus the first day (achievement 1) effective pronunciation. For example, Participant 1 had 65.62% of mispronunciation (21 words). However, on the last day, this same participant mispronounced only 28.12% (9 words). This means that her correct pronunciation (achievement 1) on the first day was 34.38% (11 words) and for the last day (achievement 2) was 71.88% (23 words). So, the improvement of achievement in this practice to pronounce the tongue twister is 37.50%. Another example is participant 4, his achievement for the first day was 18.75% (6 words) meanwhile he pronounced correctly 28.1% of the tongue twister (9 words) on the last day of practice. This means that his pronunciation improved 9.35% at the end of the week.

It can be concluded that the average of improvement in participants' pronunciation of /θ//ð/ fricative dental phonemes pronunciation by using the 'Something in a thirty-acre thermal thicket' tongue twister and the e-learning

methodology was 24.48%. This conclusion is supported by Verner (2021) who claims tongue twisters are “a tool to help your students to achieve better pronunciation in English” (para.2). Even if EFL students are not good at tongue twisters, they can improve their pronunciation. For example, Verner (2021) also states that “not every ESL student has the same struggles, but most do have something they need to improve when it comes to their spoken English. That is where tongue twisters enter in” (para.1). In other words, the use of tongue twisters to improve EFL pronunciation in this study was useful, fun and a challenge for some of the participants. Surprisingly, most of them (Graph 8) were able to enjoy, to learn and to improve their pronunciation in /θ//ð/ fricative dental phonemes during one week of practice. Another element that helped to improve participants’ pronunciation was E-learning. Soliman (2014) states that:

E-learning is an essential tool that should be used to supplement the EFL face- to-face class. It includes various activities and resources that, if used by the students and monitored by the teacher, could enhance the students’ language proficiency and independent learning. As the world progresses, we need to utilize technology and to synchronize ourselves with it (p.756).

E-learning methodology was used during the development of this study due to COVID- 19 pandemic. This methodology allowed participants to practice in a useful, funny and enjoyable way. In other words, participants were able to improve their pronunciation, in an effective, independent and

virtual way by using technology and activities related to the 'Something in a thirty-acre thermal thicket' tongue twister.

The second research question is: *what are the participants' beliefs about the 'Something in a thirty-acre thermal thicket' tongue twister to improve students /θ//ð/ fricative dental phonemes pronunciation?*. According to questions 9 and 10 in the questionnaire, it can be assumed that participants liked to practice pronunciation by using this tongue twister (See Chart 9).

PARTICIPANT'S BELIEFS ABOUT TONGUE TWISTER			
QUESTION 9 ANSWERS	NUMBER OF PARTICIPANTS	QUESTION 10 ANSWERS	NUMBER OF PARTICIPANTS
Different sounds	2	I learned new vocabulary, how to pronounce it and to recognize sounds.	3
The first time was difficult	2	To speak faster but it was difficult.	3
Difficult to differentiate the sounds	1		
Unknown words with similar pronunciation	1		

Chart 9. Participant's beliefs

Participants believe that this tongue twister in English had different sounds from the ones in their mother tongue. In fact, Verner (2021) recommends tongue twisters and activities to improve EFL pronunciation in nonnative students since “tongue twisters are a great blend of fun and function” (para. 8). Moreover, participants pointed out that it was difficult to pronounce the ‘Something in a thirty-acre thermal thicket’ tongue twister due to the similar sounds and unknown words it has. Also, participants' believe that tongue twisters have a positive impact on their pronunciation learning in EFL because they could learn new vocabulary, pronounce it and recognize new sounds. Additionally, they mentioned that

they felt they could increase their speaking speed. Particularly, Castillo & Almeida & Chiliza & Mejia (2017) recommend to use tongue

twisters, not only to improve just /th/ sounds but “to improve the production and development of the phonemes (/dʒ /, /ʃ /, /ð/, /θ/, /r/ ” (p.iv).

4.4 Material proposal

Vargas (2018) mentions that, in ancient Greece, “wise people invented riddles, paradoxes, and word games for educational purposes” (para. 1). The “Greek Culture considered that the person who pronounced, without stumbling, the tongue twisters should be admired for his knowledge and his good reading” (para. 3). Since then, tongue twisters are pronounced not just in Greek, also in English and other languages. Taking into account this, it can be assumed that the transcendence of the tongue twisters is not due to certain authors, it is a culture’s folklore and can be translated from one language to another. Considering this, the proposal material in this work is a tongue twister named ‘*Something in a thirty-acre thermal thicket*’ and according to Mr. Twister (2018), was created and named by Meaghan Desbiens. As a fact, there exist many websites where it is possible to find this tongue twister, actually, it is a popular one. This tongue twister was selected carefully to practice /θ//ð/ fricative dental phonemes. The complete tongue twister is:

Something in a thirty-acre thermal thicket of thorns and thistles thumped and thundered threatening the three-D thoughts of Matthew the thug - although, theatrically, it was only the thirteen-thousand thistles and thorns through the underneath of his thigh that the thirty year old thug thought of that morning (CourseHero, para.1).

Through e-learning and the material proposal was performed in several different ways to practice /θ//ð/ fricative dental phonemes pronunciation. This included adapted videos, presentations, audios, etc. According to Facebook for education

(2021), “everyone has the opportunity to take part in a global learning community. We want to enable people to activate around change, collaborate in more meaningful ways, and explore innovative new technologies” (para. 2). That is why a private group was created on Facebook in October 2020, and just students were asked to join it. The group’s name (See Figure 4) was “PHONEMES PRONUNCIATION”. It is important to say that most of the students did not know the meaning of the word phoneme.



Figure 4. Group in Facebook

Figure 5 shows the pre-activity, the *vocabulary* of the tongue twister in a PowerPoint Presentation (PPP). The main idea was that every participant had to look at the screen for a few minutes. After those minutes, the teacher turned off her screen while participants had to write most of the words they could recall. Then one random participant was asked to pronounce the 32 words that appeared on the screen.

Pre: VOCABULARY		
thirty	that	thistles
thoughts	the	although
threatening	thumped	
theatrically	thigh	Matthew
thistles	the	thorns
thermal	thirteen	the
through	thug	the
thug	thirty-acre	thicket
thundered	three-D	that
underneath	thousand	thorns
Something	thought	the

Figure 5. Vocabulary chart

Later, in the same PPP participants had to say aloud the tongue twister for the class (See Figure 6).

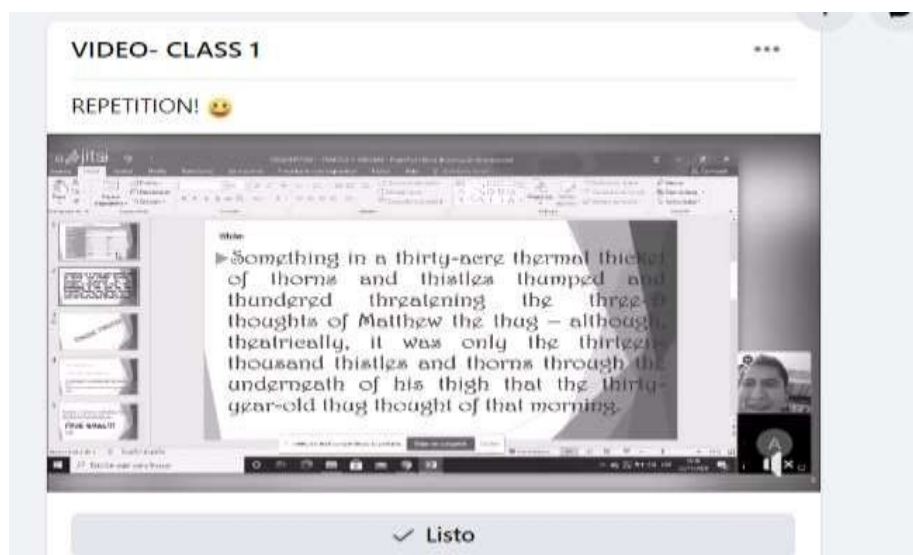


Figure 6. Tongue twister PPP presentation

As a post-activity each participant had to make a voice recording saying the tongue twister as they were able to do it. Afterwards, everyone sent it to the teacher through WhatsApp. After, the teacher played the video: *Improve your English Pronunciation with English Tongue Twister #75* (Let's

Pronounce, 2019). This video presents the correct pronunciation of the tongue twister. (See Figure 7).



Figure 7. Correct pronunciation of the tongue twister

The next and final activity was to answer *Questionnaire 1* as it is shown in Figure 8. Also participants were asked to watch the VIDEO-CLASS 1, which is the repetition of the recorded class if it is necessary.



Figure 8. Questionnaire 1 tongue twister

For the second class a video was created by using PowToon which is a video maker. This presentation needed a video taken from Easy Native English (2018) in YouTube, two parts of this video were edited and adapted for the presentation of phonemes. The first part is from minute 0:00 till minute 1:12. Then, the teacher stopped and explained the /th/ sounds, the differences and some examples using a piece of paper. Participants had to put it on the top of the tongue and then pronounced

the words. The purpose of this activity was to identify if it was vibration or not in the vocal cords. The

second part of the video starts from minute 0:53 and finishes in minute 2.33, where it is shown how to pronounce the words while the whole class repeats after each exercise of the video as is shown in Figure 9.



Figure 9. Class 2 voiced and unvoiced

Participants were suggested to translate the tongue twister in World Reference (2021) to know the meaning of the words and to choose only six words to do the pronunciation exercise using a piece of paper. Finally, participants were told to send the voice recording as the last activity. They had to read the tongue twister again, but this time with the new semantic knowledge of the words.

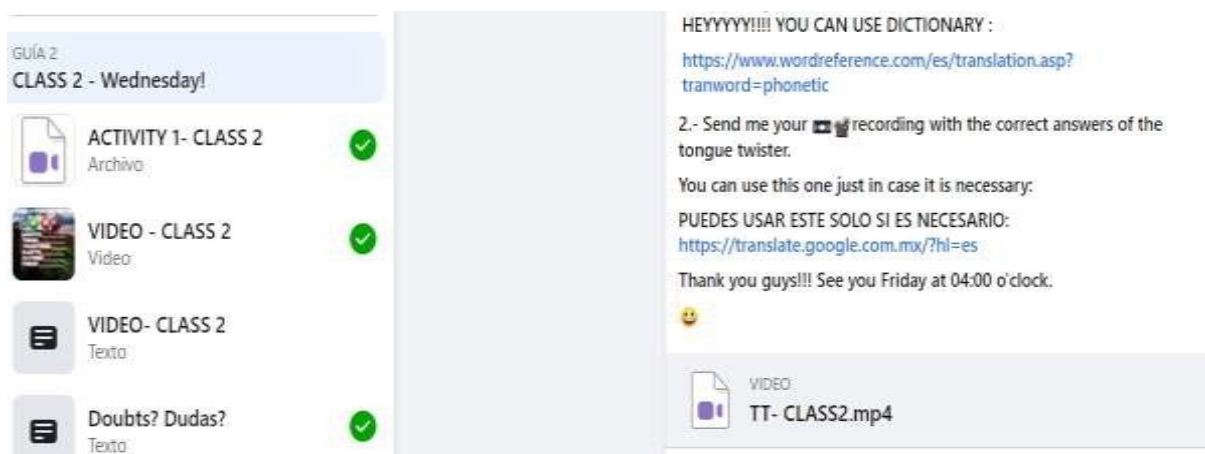


Figure 10. TT- CLASS2

Teacher explained about the International Phonetic Alphabet (2021). Particularly, the

/θ/ sounds appear in a red circle and were practiced in class as well as the repetition of the tongue twister.

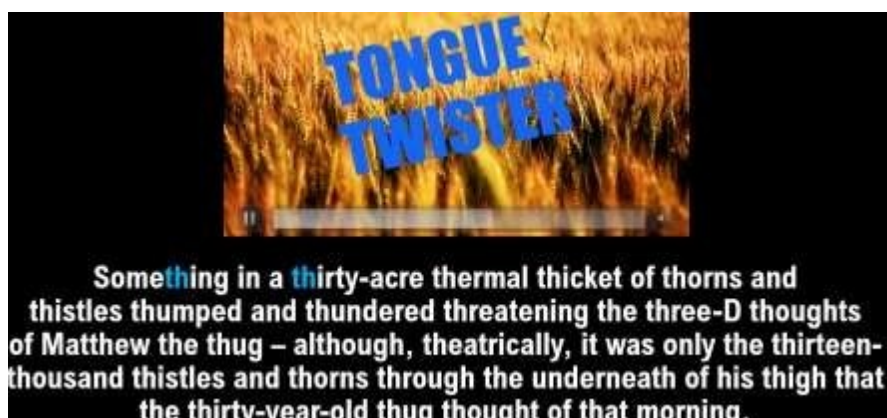


Figure 11. IPA image

Another activity was developed by using the AudioClass (2015) application. This app is available in Playstore and can be downloaded on smartphones. It contains vocabulary divided into topics such as sports, food, audios and language rules, etc. Participants could practice the pronunciation of the /θ//ð/ dental fricative phonemes pronunciation there (See Figure 14).



Figure 12. Audioclass app

Finally, there was a test for the students about the meaning of the words from the tongue twister. This was to motivate them to do their best in every try.



Figure 13. Class 3 Quiz

4.5 Conclusion

Participants in this study had the opportunity to explore a new way to learn. The results of this study were shown in charts and graphs. In general, the e-learning methodology helped to teach, practice and do activities to achieve the objective of this research. Technology, internet, smartphones, applications and platforms made it possible to have

activities to practice pronunciation with the use of a specific tongue twister. The following chapter is presenting the conclusion of this thesis.

Chapter V

Conclusion

5.1 Introduction

This chapter is divided into five parts. Firstly, the research contributions are stated. Also, the limitations of this study and the suggestions for the further research are presented. Finally, the reflection and the conclusion of this study are mentioned as well.

5.2 Research Contributions

The internet and technology make people connect around the world. Students want to learn easily and dynamically during classes and this can be possible by using the correct teaching methodology and techniques to improve pronunciation skills. The primary objective of this work is to practice /θ//ð/ dental fricative phonemes pronunciation with a tongue twister through e-learning. This research result demonstrated that, positively, a specific tongue twister helped participants to improve their pronunciation. Also, this work contributed to realizing that the use of technology is important for EFL learning. The combination of tongue twisters and technology made students challenge themselves to improve their pronunciation. Additionally, teachers have to be able to create material to use it virtually, not only for face to face classes. According to Boudreau (2020), “excellent online teaching isn’t based on the ability to navigate a Zoom room or create a Google doc. excellent instruction is based on decision-making” (para.2.). In other words, Boudreau explains

how teachers can take the decision to create something new and to make the interaction between the teacher and students in an effective way. Particularly, the importance of teachers

being able to create virtual material is a reality and a need. Therefore, the proposal material used to make this study possible was a selected tongue twister called *something in a thirty-acre*, it was taken from the internet. Specifically from an online page dedicated to tongue twisters. The main idea was to make participants practice the tongue twister and make exercises, quizzes, and watch videos edited by the teacher in charge of the EFL class. The most important thing using this tongue twister as proposal material is that, after all the explanations, participants were able to improve their pronunciation. Most exactly how to pronounce nearly the /θ//ð/ dental fricative phonemes. The most exciting part of this was the challenge they had to do while learning EFL because of the different phonemes that some students listened to for the first time.

5.3 Limitations of the Study

This study had some limitations. First, the time to implement the proposal material was limited. Every class was not enough to make all participants practice during the class. Actually, time was not enough to present more tongue twisters or do more activities. For that reason, in some cases the participants were not able to improve in more words and it seems that the results were almost the same. Another limitation is that not all students had not a computer to work with, some of them practiced EFL with their own cell phones and this made the activities slower. Therefore, generalization about this study's results cannot be made. Even with all this, there exist positive aspects to point out.

Another limitation of this study is the creation of a virtual classroom for this study. This EFL teacher's knowledge about google tools and other sources that Facebook offers were the e-learning platforms that were used. This limitation made

this study limited in e-learning tools for the participants. More interactive and different activities with this tongue twister could be used and results would have changed.

5.4 Suggestions for Further Research

The main suggestion for further research would be to improve this work by using more tongue twisters to practice different phonemes, even the vocabulary can be changed that allows to know new knowledge and new sounds. Another suggestion for practicing pronunciation would be the use of lyrics from music videos could be a good idea to improve EFL pronunciation. Moreover, the implementation of tongue twisters had good results in university students. Most of the participants were women, only two men were involved. One possible variable to replicate this research would be to implement it to only men or women, the results might be different or not.

Also, instead of adult participants, this study could be applied to children. Participation and motivation in children is different than in adults. Actually, there are many options and so many tongue twisters to practice the same phonemes or even other phonemes. Teaching vocabulary through tongue twisters can be really interesting for them. It is important to clarify the instructions in homework or any activity because not all the participants understand what the teacher wants them to do. As a final suggestion, the use of a microphone during the recordings of the tongue twisters could provide a better understanding to make accurate transcriptions, and the results could be more exact.

5.5 Reflection

My main reflection of this work is that every student learns in a different way. Professionally, I learned more about how to select pages and web sites from the internet. Copying resources is not enough, instead teachers should create and

improve their use of platforms. Patience and motivation from the participants and every person involved was important to achieve this study. Now I can say that teaching, with tongue twisters as a technique, is a different way to improve English pronunciation. At the beginning it was not easy but during the development of the practices, it was becoming easier. I was not sure if this material proposal would be suitable for students or if it would work out. However, I am satisfied because the result was effective. Furthermore, students were happy to be able to speak a little faster. Now, they are able to pronounce more words correctly, even words they did not know. On the other hand, personally, I felt pressured because of the time to finish this research. I did not know where to read or look for information, it was a challenge. Definitely, I am really happy to be here, writing this last chapter.

5.6 Conclusion

As it was already mentioned, the purpose of this research was to improve the pronunciation of /θ//ð/ dental fricative phonemes by using a tongue twister in university students through e-learning in Atlixco, Mexico. Many authors such as Amjad (2009), Mahalakshmi and Radha (2020) claimed that e-learning has changed education. For instance, English language pronunciation can be less tedious with the use of resources or platforms. As a result, all the skills can be improved, not just the pronunciation sub-skill like in this study. To sum up, this research demonstrated the importance of using technology and tongue twisters as the material.

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Appendix A

Research Instrument

Instrucciones: Contesta las siguientes preguntas, lee cuidadosamente y responde de acuerdo a tu criterio y/o experiencia.

Sección conociendo a los estudiantes

Nivel de Inglés: _____

Universidad de procedencia:

1.-¿Te gusta el idioma Inglés?

a) Si b) No

¿Por qué?_

2.- ¿Tienes acceso a internet en casa?

a) si b) no c) otra _

___ 3.- ¿En qué dispositivo trabajas tus clases virtuales?

a) computadora b) tablet c) celular d) otro:_____

Sección e-learning

4.- ¿Te gusta usar la tecnología para aprender inglés?

a) si b)no

¿Por qué?_____

5. Para tí, es fácil o difícil usar la tecnología para aprender virtualmente el inglés?

¿Por qué?_

6.- ¿Crees que la tecnología te ayuda a mejorar tu pronunciación en inglés?

a) si

b) no

¿Por qué?

a) si

b) no

¿Por qué? _____

16.- ¿Te hubiera gustado practicar con más trabalenguas para mejorar tu pronunciación en inglés?

- a) si b) no

17.- ¿Piensas que tu pronunciación mejoró al terminar la semana practicando pronunciar un trabalenguas?

- a) si b) no

¿Por qué? _____