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Licentiate' Degree in English Teaching

Thesis

The impact of Recording App in improving pronunciation in virtuality in students of tenth level at Liceo de Turrúcares, Alajuela during the 3rd quarter 2021 to 2nd quarter 2022

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Heredia, Costa Rica.

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i Dedicatory

The research is dedicated with love to my family and friends who have supported me lovingly with encouraging words and actions to complete this research paper and my studies.

I also dedicated this research paper to all the professors who have helped me in my educational journey so far, they have been inspiring, supporting and always kind to me.

ii Abbreviations

IPA = International Phonetic Alphabet

L1 interference = first language interference

MEP = Ministerio de educación pública = Ministry of public education

CVC = Color vowel chart

iii Letters

Sworn declaration

Publishing authorization

Tutors' Letter

Lectors' Letter

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He revisado y he hecho las observaciones relativas al contenido analizado, particularmente lo relativo a la coherencia entre el marco teórico y análisis de datos, la consistencia de los datos recopilados y la coherencia entre éstos y las conclusiones; asimismo, la aplicabilidad y originalidad de las recomendaciones, en términos de aporte de la investigación. He verificado que se han hecho las modificaciones correspondientes a las observaciones indicadas.

Por consiguiente, este trabajo cuenta con mi aval para ser presentado en la defensa pública.

Atte.

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De los resultados obtenidos por el postulante se obtienen la siguiente calificación:

	<i>Descripción</i>	<i>%</i>	<i>% Obt</i>
a	Originalidad del tema	10%	10%
b	Cumplimiento de entrega de avances	20%	20%
c	Coherencia entre los objetivos, instrumentos aplicados y los resultados de la investigación	30%	30%
d	Relevancia de las conclusiones y recomendaciones	20%	18%
e	Calidad detalle del marco teórico	20%	20%
	Total	100%	98%

En virtud de la calificación obtenida, se avala el traslado al proceso de lectura

Yanory Arguedas Carballo
108710072

Chapter I

Introduction

1.1. Introduction

The year of 2020 was full of surprises and many hardships for most of the people on the entire world. From wildfires, almost war and a terrible global pandemic it was quite eventful and has changed people, institutions, and many more because of its individual challenges to their processes and normal functioning. Now, especially the pandemic due to Covid 19, caused many deaths and sick people, which caused much grief and anxiety among many of the people directly and indirectly affected. These events led to the governmental institutions around the world to create specially designed containment plans to stop the virus from spreading and save as many lives as possible, as well as preventing the infection of new people.

The most common measurement was to announce lockdowns, quarantine sick or in risk people and encourage the population to practice social distancing. This meant that more people started to work from home and many students of all type of educational institutions were sent home to receive online classes. As of the year 2021, students have been in online classes, some of them could return traditional presential classes, however not all of them have returned. Additionally, to only online classes, many students are attending presential classes and online classes, creating a duality to adapt to the new reality of the world. Moreover in 2022 most of the students have returned to regular presential classes, since the efforts to contain and stop the virus have been successful for the moment.

Therefore, putting as many processes as possible in an online environment has been the most prevalent solution for this specific pandemic. But which effects could have this done to the students or teachers which only had been learning or teaching in a

presential and traditional way their whole life? The effects specially on the students, have been positive and negative in many ways and are bound to the individuals experience with the distance online class way of teaching. Therefore, the effectivity of distance learning and online classes should be watched closely in investigations regarding this topic and its implications. Furthermore, one has to consider the effects on the student's mental health as well, since this could affect positively or negatively the educational performance and hinder a significant learning experience.

The Costa Rican government and the MEP (Ministerium of Public Education) decided, as many other countries, that the best they could do was to begin online classes due to the pandemic. This to lower the infection rates and safeguard high-risk students as well as their family members. The online classes have been in some cases quite effective and in some not. Therefore, in this investigation a specific part of the online classes is analyzed, and a possible solution proposed. The specific part of the teaching process that is analyzed is the teaching of phonetics especially how to pronounce them properly.

Pronunciation of phonetics is a crucial part of any language and should not be neglected in any way, since a good pronunciation helps to ensure a better communication and mutual understanding. Great communication skills are one of the most important skills to master a foreign language since communication is the main goal after all.

To teach pronunciation in a meaningful and proficient way the teacher should use a variety of techniques and these techniques are usually based on mimicking the pronunciation of the teacher. However, the classes being online means that the

students and the teachers are not in face-to-face contact and these techniques based on mimicking may not work as proficient as before, hence the teacher needs to adapt to these conditions. Therefore, one may think that in a distance learning environment these teachings, due to the lack of human interaction and time, could be severely neglected. So, what could a teacher do to improve and adapt this specific part of teaching and therefore improve the learning process of the students.

Online classes are a difficult and unknown terrain for everyone involved, therefore proposing new and adapted techniques is crucial for a better experience and learning outcome of the students. Therefore, to improve the pronunciation skills of the students a recording tool will be introduced to the class; in order to ensure that the vast majority of the population have access to this application, the one recording app which is already preinstalled on most modern mobile phones will be used. The recording tool is free of cost and can be used easily with a basic explanation by the students and the teachers.

This research is conducted at the Liceo of Turrucares located in Turrucares in the province of Alajuela, Costa Rica. Turrucares of Alajuela is a small town in a rural area. It is a normal high school which offers tourism, secretary, and conversational English as technical optional subjects, which is a great way to enrich the students' imaginations and make them think about possible future careers. The high school has many green areas and plants which draws they eye and can help the students and staff to be calmer and more relaxed due to the positive effects that nature and the color green can have on humans. Also, they are very open to help the community of Turrucares, where they

reside, and they like to help students at the university to make their projects in the high school.

Moreover, this research contains five chapters, which revolve around the topic of improving pronunciation with the use of the recording app. It contains a literature review, the research methods and their corresponding results and analysis of said data and some conclusions about the findings of the topic, as well as recommendations for future investigations of this topic.

1.2 Problem Statement

1.2.1 Background

Distant learning has always been a quite difficult topic to manage, teachers have been debating over the effectivity and learning outcome of this method and many people have different opinions of this topic. During the pandemic due to Covid 19 and its variants, many teachers and students have been thrown into the reality of distance learning and what it implies in on an everyday basis. Distance learning is defined by Merriam Webster as “a method of study where teachers and students do not meet in a classroom but use the Internet, e-mail, mail, etc., to have classes.” This means that the students and teachers do not meet in person and sometimes not see each other for the entirety of the classes. For some people this learning environment can be a problem since there is less human contact which is crucial for the learning process of some students.

In addition, some teachers do not have the necessary training to teach properly online, since teachers are traditionally trained to impart a class in a presential manner.

Therefore, the Covid 19 pandemic has proven that online distant learning is a very difficult task to master for everyone involved in the educational process. It has also highlighted some of the issues that people involved in the educational process have with technology in any way of form, this affecting negatively the teaching process as well as the proper learning of the students. Therefore, this pandemic has been creating many gaps to fill and consider in the current curriculum that is being taught to future teachers at the universities as well as creating spaces to further educate teachers on technology to impart classes.

Therefore, having the previous reasons in mind, the teaching of pronunciation and phonetics could have suffered greatly due to the lack of real human contact between the students and the teachers, since phonetics and pronunciation of such, are highly based on the instruction of the teacher and the imitation of the students. Moreover, the learning process could also have been affected negatively due to the lack of implementation of suitable techniques or the technology to create a proper online environment for great classes.

Undoubtedly, pronunciation is one of the most important skills to learn and master when acquiring knowledge on a foreign language, and teaching phonetics is a quite difficult task to handle for the teachers. Even more so in a distant learning setting where the traditional techniques may not be applicable in the same manner. In this specific learning environment, many variables are different and need to be taken into consideration when planning the class and its objectives to improve the pronunciation of the students.

Nevertheless, distance learning is a great method of teaching if implemented correctly, with the right tools and engagement activities it could be even as effective as the traditional classroom teaching. Therefore, the teachers must find these tools and implement them for the learning process to be a success and the goals for the students could be met even in this specific scenario.

Additionally, distance learning is a great way of providing education for students that live, for example, in remote areas and have a large commute to the educational institution. It is also a great option because the classes can be held and received anywhere, whether the student is at home or in another place is quite irrelevant to the outcome of the class. Usually, the only thing the students and teachers need is a device like a laptop, desktop or even a cellphone and a good and stable internet connection. Also, in an economic sense of view, the classes can be much less expensive, since the students and teachers do not need to spend money on transportation, food, and other emergencies that they have on their way to the educational institution and in it. Which is great for students that have monetary issues and must prioritize other expenses than studying. In addition, safety wise, it is also an advantage for students and teachers that take or impart classes at night and need to travel home. In this educational environment the students, teacher and staff could avoid many dangers that are prevalent when returning from the educational institutions to their houses and vice versa.

Nevertheless, distance learning has its downsides and negative aspects as well that need to be taken into consideration. For example, in case that the internet connection of the teacher breaks off, it affects the whole class and can sometimes not be fixed, so this would be a waste of time and money for everyone involved. Also, if the

electricity goes out, which is often the case in some remote parts of the countries due to heavy rain fall, the students and teachers could be left without an entire class. Also, all participants of the class should have some sort of device to attend the class and a stable internet connection, which can be expensive and not available for everyone. Then there is also a high chance that the students get severely distracted during the class, and only understand half of what is said by the teacher and other classmates. Also, some students may not feel comfortable and don't know if they should ask questions or not, since distance learning could worsen as well as improve anxiety of the students. This could lead to lack of understanding, no significant learning experience, and bad grades.

Furthermore, to participate in a distance learning setting, both teachers and students should be prepared and aware to know what awaits them in this specific modality. Some requirements, apart from the technology required to participate and impart distance learning, are being a proactive teacher, who knows its way around technology and understands perfectly well that distant learning as well as teaching is not the same as traditional in classroom teaching but totally different from it. Also, the students should be aware of the troubles and hardships of distance learning, having in mind that they will need to do much more hours of individual and independent learning and understanding of the material given in class, since the classes are less immersive in practice and more focused in the presentation of content and material. In addition, this modality can cause difficulties for some students since independent and individual learning is bound to a great sense of self-discipline and resilience that need to be

present in the student or must be further developed. This to ensure that the students will succeed in their objectives.

Therefore, the teacher should find methods and tools specifically for distant learning which are effective for the students and use the error-result way to see its effectivity and find other ways of teaching. Since it is crucial to create a successful and significant learning outcome for the students.

1.3 Problematization

1.3.1 Problem justification

As previously mentioned, online classes have caused positive and negative effects on the students learning process and outcome. In this investigation, the negative effects on one specific topic will be studied and a possible solution to it will be proposed. The specific topic is the pronunciation skill, and the possible solution is the use of a tool; the recording app. Said app would be there to help the students to improve their pronunciation skill, through the listening and speaking skill using mimicking as the technique to be implemented.

The subject English, specifically the skill of speaking and pronunciation is quite the challenge for some students in Costa Rica and of course all over the world. In traditional presential classes the students had usually more hours of exposure and practice of the English language than in the online classes. In addition, the speaking skill could have been neglected due to the students not wanting to participate as much in the online classes than in the presential manner, as well as other issues. For example, lack of technological devices, bad internet connection, interruption due to family members, or not having a suitable space to receive the online classes, and many

more factors. Therefore, these and many more factors could negatively affect the speaking/pronunciation skill and the overall learning experience of the students, which likely would have not happened if the class was in a presential way.

One of the most common problems in virtual classes are that the students do not participate due to various reasons, some might speculate that it is because they are lazy, shy or have internet or device troubles, but some could also define it as lack of confidence, when pronouncing a word wrong or fear of being wrong. Mainly teenagers are often bullied because of many things and get anxious when speaking in general and even more when enouncing in English as a second language. This because of the fear they have of facing laughter and bullying of their classmates when making mistakes in any form. Therefore, they might not want to talk and participate for that specific reason, so this is one of the many reasons to develop this research to improve the pronunciation of the students and therefore boosting their participation and improving their language skills.

Finally, finding information on the phonetical side of the English language to use as base to help the students to improve their pronunciation, specifically emphasizing on the phonetic symbols that are difficult to pronounce and differentiate by the students in Costa Rica, which mother tongue is Spanish. Therefore, this research intend is to implement a specific tool in distant learning where the students can participate and improve their pronunciation in a gradual manner with the help and collaboration of the teacher.

1.3.2 Problem formulation

The general issue that this research intends to solve are the gaps or deficiencies in distant learning and teaching, referring specifically to the phonetics and pronunciation part of teaching. These areas suffer specially from the lack of face-to-face contact and could experience an improvement with a tool and method which focuses on the practice of pronunciation. This for the students to have a better learning experience and outcome in the proficiency of the spoken English language.

1.4 Objectives of the investigation

The objective of this research is to create an investigation to know about the impact that has had the virtuality in teaching speaking skills and which tools could be proposed to see a difference in students' performance. It shows how the teaching of pronunciation of the English language can be improved, so that the student will acquire an improved communicative competence to convey meaning and speak with an improved pronunciation.

1.4.1 General objective

Enhance the pronunciation of students in tenth grade of high school which partakes in distance learning, specifically of vowels diphthongs and consonant clusters, through the preinstalled recording app on their phones.

1.4.2 Specific objectives

- a- determine the pronunciation level of the students by using the preinstalled recording app on their phone's recordings
- b- implement the use of the color vowel chart for phonetics teaching

- c- propose online pronunciation feedback method for improvement of the pronunciation skills of vowels

1.5 Scope and Limitations

1.5.1 Scope

The population is a small group of 10 students of the conversational English class, of the Liceo de Turrucare. These students are from a public institution and are in tenth grade. Their ages range from 15 to 17 years old; fortunately, they have access to a reliable internet connection and possess the necessary devices to participate in class and in the activities for the research. Since the class is conversational English, they take the course in a distance learning setting as well as in classroom setting.

Therefore, this research pretends to find enough data, with this population, about the influence of the preinstalled recording tool in a conversational English class and phonetics teaching during the process of acquiring English as a Second Language in a distant learning environment.

The information will help to determine if the recording tool can help improve some aspects of teaching phonetics in a distant learning setting that could improve scholars' proficiency during this crucial and difficult process for both parties.

1.5.2 Limitations

The limitations of this research can be the lack of technological devices from the students and the teacher as well as an insufficient internet connection or sudden problems with it. Problems could also occur due to thunderstorms, which affect the internet connection of both parties and could cause electricity black outs, these are

common in Costa Rica, therefore it must be taken into consideration for the distance learning setting.

Also, the lack of knowledge and clear instructions when it comes to using tools such as the recording tool, which uses the microphone of any device it records on as well as the other devices like a laptop. This could affect immensely an accurate outcome of the research.

Therefore, the teacher needs to immerse him/herself in the various functions of the tool and the other technological devices to explain and instruct the pupils in the proper use of the tool.

Chapter II

Theoretical Framework

2.1 Distance Learning

Distance learning has been present for quite some time, even before the pandemic caused by Covid 19 hit, and there are numerous educational institutions which teach with this specific method for various reasons, such as accessibility, cutting expenses, time issues and comfortability as well as many other reasons which are as valid for people considering learning in this special setting.

According to Schneider and Council, “Distance or online learning is not a new concept; however, for many of us as physicians—particularly academic physicians—it is a shift away from our traditional classroom teaching model for trainees.” (p.1), this referring to the overall distance learning and online classes implemented in many educational institutions for its nature of imparting classes. But distance learning has been prevalent as well because of the impact that the pandemic has had on the usual processes of teaching traditionally in the classroom with human contact and realia, which the students can generally relate to. This special learning method takes teachers and their students out of their usual traditional environment and puts them in this new reality and its implications can have serious consequences and an impact on everyone involved in the educational process. This impact can be positive or negative, depending on how the teachers and students are managing and immersing themselves in this special learning environment.

Distance learning is defined by the dictionary Merriam Webster (2021) as “a method of study where teachers and students do not meet in a classroom but use the Internet, e-mail, mail, etc., to have classes.” This means that the students will not see the teacher, nor their classmates during this period of distance learning, the contact only

occurs via various online platforms, which the teacher or the educational institutions chooses depending on the functions it offers. Undoubtedly, having the social contact cut provides the students with protection against for example the virus Covid 19, however it can restrict them and could make them feel lonely in their learning journey. Humans are social beings used to interact with each other. Therefore, some form of contact is needed and encouraged to learn and perform tasks, also people need a bond with others to not feel alone and abandoned. Not seeing any classmates for extended periods of time, or not seeing them at all can have negative effects on some of the students that would need contact or companionship to achieve a positive learning outcome.

The ways in which distance learning takes place are numerous and some of the ways are more effective than others, usually some sort of online platform is used to meet each other and teach the class. In addition, these platforms usually have various useful functions that facilitate the teaching process and are crucial for the development of the class. Some of these functions consist of having the possibility to write each other in public and/or private chats, to share documents and links, to share the screen and many more creative and useful functions to facilitate the creation of a proper online class.

Some functions that Microsoft Teams has for example are the assignments which are very helpful for the students to remember to do their homework and upload it in its designated space. Also, the functions of chatting and creating groups with the classmates are very important, so that they can create collaborative learning environments which are a great way of improving morale and general knowledge of the

students. Another great function of Microsoft Teams is the compatibility it creates with all the other Microsoft apps, many people can work on one Word document within the app of teams. This helps the teachers to create a proper learning environment for the students to achieve a great learning outcome and helps to achieve the goals established in the curriculum.

Even though, these learning platforms are great to create an adequate and effective distance learning environment, the human contact factor in teaching is irreplaceable and important for classes to be successful most of the time. Therefore, according to Markova (2017)

It is reported that the delivery media for instructional content is unlikely to dramatically impact the learning outcomes, whereas content, teaching methods, communication, and learner support are extremely important for student satisfaction. Opponents, however, express concerns that students in online environments tend to feel more confused, isolated, and frustrated, and as a result their learning effectiveness and satisfaction can be reduced.

Undoubtedly, this author highlights crucial negative factors that can impact the students well-being as well as their proper educational development in a distance learning environment. Therefore, the students may be learning in this environment, however their frustration and isolation is a frequent and important issue to take into consideration. The wellbeing of the students should not be neglected in any way when being in a distance learning environment, these prevalent issues that need to be addressed accordingly for the benefit of the student's wellbeing and to ensure their educational success.

Therefore, teachers who work in distance learning need to adapt and create helpful strategies and methods to ascertain what would be suitable in this specific learning environment. Researching, investigating, and experimenting is a great way for teachers to understand more about the distance learning environment and what it entails, as well as finding possible solutions or improvements for their newfound difficulties in the online classes. In this way, the teachers can expand their knowledge of distance learning and go beyond the established activities or methods and so apply new and improved ones they found while investigating or created by themselves by experimenting with the methods given by the educational institutions established guidelines.

Certainly, the human contact in a traditional classroom environment is crucial in the development of any knowledge acquisition or significant learning and should never be underestimated or neglected. Therefore, the premise of the investigator is that distance learning in its very basic form, which means teaching classes as they usually are taught in a presential manner without any adaptations, is not as effective as the traditional way of teaching the language. Distance learning certainly has many issues, but as previously also mentioned many advantages which should all be taken into careful consideration when considering applying for any distant learning program or teaching at an educational institution which imparts its classes in an environment set with the distance learning method.

Some of the reasons for some of these specific educational institutions to implement and provide distance learning opportunities is to create a more accessible education for the students. Of course, the possible lack of time, their location and

monetary income of the students can be part of the crucial factors to consider distance learning a great opportunity to further the student's education. Therefore, students may choose a distance learning setting to help them save money and time, which they can use for what they see fit. However, some disadvantages of the distance learning are also, that people of less economic income cannot afford buying the necessary equipment for the distance learning to be effectively executed and performed. Clearly, they also save money by not going to the educational institution and cutting transportation and food costs. On the other hand, the cost of proper equipment for distance learning can be too much for some households that suffer from poverty or struggle to manage their financial situations. Lastly, students as well as teachers who reside in remote areas, may be affected by less, insufficient, or unstable internet connection, which is one of the most important parts to participate in a satisfactory and proper distance learning experience.

2.2 Requirements to partake in distance learning

Many students and teachers preferences incline toward the more traditional way of teaching, sitting in a classroom full of people and listening to the professor teaching the class, however not everyone prefers or wants to participate in this teaching method. Nevertheless, those students who are more interested and desire to partake in a distance learning environment need to take certain requirements into careful consideration to choose accurately distance learning as an alternative to traditional learning.

Of course, the students and teachers need to have the equipment necessary to participate properly in the class, so they can be immersed satisfactorily in this special

learning environment. Therefore, this equipment can be technological devices like laptops, desktops, and cellphones. As well as microphones, webcams, speakers, and other essential devices to make the adequate participation of the class possible and easier for everyone involved in the educational institution.

Furthermore, the students as well as the teachers need a stable and good internet connection for the development of the class. Since it is of the utmost importance to have an appropriate internet connection which supports all the online platforms functions that will need to be executed for the class to be a learning success for the students.

In addition, students and teachers who wish to participate in online classes should take into careful consideration, that they would need to dedicate a specific space of their home to the online classes. Since distance learning can occur everywhere, the students could choose an inadequate setting which may have many distractions and would not be suitable for learning properly. Therefore, the students should carefully choose a space where they feel comfortable in, with sufficient light, a desk, chair, and all the educational supplies they may need to participate in class. Also, the noise factor can be crucial for the student's concentration, therefore a quiet ambiance is preferable where no family member can interrupt the pupil unwillingly.

Finally, the student should inform him/herself about the reality of distance learning what it exactly entails and the implications of it. The students should be aware that it is not an easy process and will need many additional hours of practice and studying than normal classes may not require. Also, the student should be informed about the educational institutions approach to the distance learning way of teaching and

should confirm that they provide the quality needed for a great learning process, experience, and the very crucial learning outcome. Therefore, the student should be informed about distance learning as well as the institution and commit to this special learning method by immersing themselves in the experience and learn as the process goes.

2.3 Methods in Distant learning

Certainly, distant learning is not a completely new concept in the world of education, many educational institutions have been working quite successfully with this system for many years and continue doing so because of its clear benefits. These institutions have made experience with it and implemented new methods to improve its effectivity for the benefit of the students.

Of course, due to the pandemic caused by the virus Covid 19, many educational institutions which were primarily using the traditional presential method of teaching had to adapt to a distance learning setting in a matter of months. Therefore, during the years that the pandemic has been active, many new methods have been implemented and a positive progress has been made for the future of distance learning, proving that the distance learning as well as work from home, can also be a great alternative to the traditional way of operating.

According to Cigdem (2010)

Due to the advantages of distance learning, schools and companies are adopting these new learning technologies and increasing their investments in it. However, along with the advantages, installation and support costs appear to be big

disadvantages compared to a traditional learning environment. These disadvantages can be reduced to a great extent by the use of open-source software which provides further gains (p.175)

Indeed, analyzing this means that the implementation of distance learning in this time is crucial for the development and further teaching process of the educational institutions as well as many other business models. Moreover, the modernization of teaching was long overdue and the implementation of these online platforms into the learning process are most likely only the beginning of technology overtaking many aspects of the future of education and maybe improving certain aspects of it in the proceeding

Certainly, one of the most used tools for distance learning are Microsoft Teams, Zoom and Moodle which are crucial for the proper development of the online classes during the pandemic, they made social distancing possible which is crucial in this pandemic. Moreover, many educational institutions used the platform Moodle to allow the classes to be more interactive and organized with the options it offers. Moodle has many functions to help make distance learning easier for everyone involved in the process, these functions are for example that the teacher could create assignments so that the students would know and upload it when they are done. Another very useful function is the exam or quiz activity, where the teacher creates an online exam, and the students can take it on the platform.

Furthermore, according to Cigdem (2017) "The modular design of the Moodle environment guarantees its flexibility: depending on the modules employed, it can lend support to any type of teaching style or educational mode." Certainly, this highlights the

importance of using this platform to its fullest potential for distance learning and teaching and to consider its great flexibility for the class types. As previously mentioned, the educational platform Moodle has many functions which are beneficial for the development of the online classes to ensure a great distance learning experience. These special functions are how easy and helpful the platform presents itself, with a calendar type design which helps the students visualize their learning journey and what is in the plans next for them. In each learning segment, the teacher can add the didactic material as well as assignments and further practice sessions for the students to revise later. Also, there are functions to create exams and quizzes, these evaluations can be modified so that the students get different questions at the time. These functions are a great way of preventing and ensuring that the students are not cheating on the exam, which they easily could do if the teacher sends a Microsoft word document for them to work with.

2.4 Definition of Phonetics

This research focuses primarily on distance learning as well as the teaching of phonetics in this special educational environment and how this can be improved with the implementation of techniques. These techniques must be as suitable as possible for the distance learning environment; therefore, the technique should be adapted taking into consideration distance learning as well as the importance of phonetics in language acquisition and the teaching of phonetics. To design and apply such technique one must first consider phonetics as a whole and the way phonetics is traditionally being taught in a presential learning environment. Therefore, it is important to ascertain what one should know about phonetics, in order to teach it accordingly and with great

success, for a positive learning outcome for the students in this difficult and new learning environment.

Firstly, it is crucial to define what phonetics are, according to Lazlo (2014) Phonetics "...is a discipline of linguistics that focuses on the study of the sounds used in speech." Certainly, the sounds in speech are a crucial component of the language as a whole and should be undoubtedly a priority when it comes to the teaching process of language acquisition. The sounds are interpreted as words and then as full sentences that carry meaning and are used for communicating ideas which are crucial for the proper use of the language.

In addition, one can also describe phonetics as a way of representing speech into written symbols, specifically the phonetic symbols of the IPA, which stands for International Phonetic Alphabet. These phonetic symbols are not usually taught at normal schools, since it is quite complicated for some students, however most curriculums for studying the English language are asking for the phonetic symbols to be taught implicitly by using the sounds and associating them to everyday objects. Moreover, practicing the speaking skill consistently by reinforcing and being aware of phonetics is important to ensure that the goal of a satisfactory communication is met, so that the students can speak confidently and freely to native speakers, without having to worry about their pronunciation or possible misunderstandings.

As previously mentioned, the study of phonetics oversees the examination of sounds used in any spoken language. Therefore, teachers should be knowledgeable and aware of phonetics and how to teach it in an implicit way so that the students can reach their goals in language acquisition. Furthermore, phonetics and pronunciation

should never be overlooked or neglected by the teachers or students, since it is a significant part of the English language and it's needed to be proficient and subsequently master any given language.

Moreover, the study of phonetics is divided into three different subfields, which are the following:

Auditory phonetics, this is in charge of how the sounds are perceived by people; acoustic phonetics, this is in charge of studying the waves that are involved in speech sounds as well as how these are interpreted by the human ear; finally, there is the articulatory phonetics, which focus on how the vocal tract used to produce speech sounds (Lazlo, 2014).

In order to elaborate on these subfields of the study of phonetics one may describe auditory phonetics as a more medical study of how phonetics is perceived by humans, therefore this part of phonetics does not apply directly to the knowledge and teaching of phonetics that is needed for the professor. Not only does acoustic and articulatory phonetics correlate with how language is made but also should be taken into careful consideration by the professor when teaching a class, since they are crucial for the development of the students speaking skills.

Furthermore, acoustic phonetics describe the study of the physical properties in the sounds of spoken language, in teaching it can be used in activities where the teacher plays various words, and the student identifies the differences between them in sound and speech. On the other hand, the branch of phonetics that concerns itself with the vocal organs as well as their positions and movements is the study of articulatory

phonetics. Specially in education are articulatory phonetics applicable when learning how to move the vocal organs, such as the mouth, lips, tongue, to produce sounds which are sometimes not present in the native language of the student. These phonetic sub-branches are of the utmost importance for the proper development of the student's speaking skill as well as their pronunciation in the new acquired language. The proper implementation of these phonetic sub-branches in the distance learning environment can decide if the classes are going to be a success for the development of the pronunciation of the students or a failure.

Undoubtedly, phonetics plays a significant role when learning English as a second language, since it is crucial to learn about phonetics and its segmental and supra-segmental features; as Ogden (2009) states "In acquiring language...we learn to link words and sentences to meaning; we learn how to use these structures to tell what the speaker want to say how we feel" (p.1). It means that these features help the speaker to give different kinds of meanings to the message he/she wants to convey, and the listener can catch that exact transmitted meaning.

These skills are crucial when learning a language, since a proper communication entails exactly that all parties understand the meaning of speech, so that they can answer accordingly without having to worry about not understanding or saying something in an incorrect way. Many people may not engage in conversations with native speakers out of fear of not understanding or not being understood.

2.5 Teaching of phonetics

Undoubtedly, teaching phonetics is a difficult task to master since there are many aspects that the teacher must consider creating a class that is phenomenal for the

student's development of the speaking and pronunciation skills, which are incredibly important for the mastering of communication and the language itself. Furthermore, teaching phonetics in a distance learning environment presents even more difficulties and hardships for the teachers and the students, which they should take into careful consideration when deciding to choose distance learning as their preferred education method.

Usually, in public high schools the subject conversational English has been taught in a presential manner, therefore the implicit implementation of phonetics and their corresponding pronunciation is somewhat easier to manage for the professor, since teaching it requires immediate communication and feedback of students and teachers. The communication and subsequent feedback between teacher and student are crucial for the proper development of the conversational English class and should be one of the main focuses of the teacher.

As previously mentioned, having this immediate communication is more accessible in a traditional classroom setting. Therefore, in distance learning environment certain factors need to be changed or adapted in pursuance of an improved and higher quality online education in the best interest of the students and the prestige of the educational institution.

Consequently, to accomplish a great proficiency in pronunciation it is desired that the classes contain as much meaningful communication as possible, therefore contact and imitation is crucial so that the student can build their knowledge, skill, and proficiency of pronouncing new phonetic symbols in new words and sentences. The student being as knowledgeable as possible in pronunciation of the English language

will facilitate the desired communication goals. On the grounds of the importance of imitation as a primary of the teacher, the correct placement and movement of all the organs involved in the creation of sounds are crucial for the adequate development of pronunciation. This imitation is a component of the in-classroom classes, since there is a direct connection between the teacher and the students, in this way the students can directly imitate the teacher and create the desired sound and word in a sentence to convey significant meaning.

Nonetheless, in a purely distance learning environment there is sadly no such connection between the students and the teacher, there is usually only one active member which is the teacher, and the students are commonly a passive audience. Therefore, in online classes the imitation and communication process are very limited or sometimes even neglected and consequently cannot be developed properly. In consequence, teachers must find other more effective ways to implement or maintain these proven to be successful teaching methods, to improve the pronunciation skills of the students in this distance learning environment.

Undoubtedly, the speaking and listening skills are of the utmost importance for the desired and proper development of the pronunciation and communication proficiency goals established by the specific educational institution. Those distinct skills are essentially responsible for the quite natural process of mimicking sounds, and subsequently forming words and sentences with said sounds to transmit meaning in communication.

As previously mentioned, the listening and speaking skills are crucial for the development and improvement of the pronunciation skills. Therefore, by listening to the

teacher and watching their distinctive mouth placement and movement, the students can imitate and produce their own sounds and succeed and improve their pronunciation efficiency. However, reiteratively in online classes the previously stated process, which is proven to be effective, is hardly possible to apply due to the nature of distance learning. Thus, teachers sometimes do not use the camera, or the internet is slow and makes the image stop and move without concordance to the audio which interrupts the imitation process of the students, this can create major issues for the students to reproduce properly the sound in speech.

In addition, instant feedback is an excellent method to improve the previously mentioned skills of pronunciation and communication. Instant feedback is used by the teachers to correct the students' minor mistakes in any given language's speech, to achieve an instant correction and possible improvement in the student's pronunciation of sounds.

Consequently, the proper usage of the instant feedback of the teacher to the students is not very much used in the online class environment since the setting does complicate such instant communication, in comparison to the traditional classroom environment this method is used constantly to correct the pupils' minor mistakes on sounds in speech. In the in-classroom environment the usage of feedback immediately when a word is being said incorrectly is a given, however, in the online classroom the immediate feedback is rarely used. Since many students do not want to participate or have such a bad internet connection that is makes it impossible for such fluid conversations to take place between teacher and student.

In addition, some online classes have restricted or reduced time for teaching and the established curriculum is so substantial that the teacher unknowingly sacrifices the already short time to cover as much actual class material as possible. Moreover, the teachers do this without taking into careful consideration that the students need to cover and improve their speaking and communication skills, and that it is important to dedicate a substantial amount of practice and time to these crucial skills which are imperative for the proper development of the students' skills as well as for mastering the foreign language.

Consequently, professors that teach in a distance learning environment should search for methods that maximize the time and functions that this special learning setting has to offer. Furthermore, investigation and experimentation are crucial and always present throughout the long career of teaching. Since truly dedicated teachers strive consistently for the best significant learning results as possible and try to improve every aspect of education.

2.6 Tools for distant learning that could help with the improvement of phonetic skills

Undoubtedly, any educational environment can be improved in some areas where there may be deficiencies. Therefore, the distance learning environment should be always reviewed and new methods as well as techniques implemented, so that positive progress can be made in overall education for the benefit of the future generations of students.

Therefore, teachers as well as the educational institutions need to implement tools, techniques, or methods to improve the phonetic and pronunciation skills of the students they have enrolled in the programs. The implementation of a tool to improve

these skills in distant learning needs to meet certain criteria to be useful and realistic in the scenario of a distant learning environment. Therefore, one of the most important one is that the tool is free and easy to use, as well as user-friendly and available online. Also, the tool should be and on almost all smartphones already preinstalled or downloadable so that the students, teacher as well as the educational institution can utilize it without any inconveniences.

The already preinstalled recording app of most smartphones is the tool proposed to help with the development and possible improvement of the pronunciation of the students, which partake in distance learning. The recording app is a tool which has many useful functions, that should be taking into consideration when teaching a foreign language class. The functions of the app are to record audios, add other recordings to preexisting ones, and to cut and create new audios. Therefore, the app is great for a significant learning and practicing experience of the students and their classmates in distance learning.

In addition, the functions of the app can be used by the teacher as well, for example to give feedback and examples of audios spoken by the teacher to the students. So that the students can hear and compare the teachers' audios to their own recordings and determine through listening if they sound similar and improve their pronunciation of sounds used in predetermined speech, as well as their listening skills. The app does not have many functions, but the ones necessary for the development and possible improvement of the pronunciation skill. Also, if the students do not have a smartphone, they can find the tool online. Since these applications are 100% online available, downloadable and can be used on various technological devices like laptops,

desktops, and tablets, which makes the usage of it even more accessible and easier for both parties.

Certainly, the students need to upload their voice recordings to an online educational platform, so that it can be reviewed and possibly graded by the teacher. Therefore, educational institutions should provide a specific educational online platform to assemble the classes, post assignments and upload the class material. There are several educational platforms that can be used for these purposes, however the MEP decided to use Microsoft Teams as the official educational platform to be used during the pandemic where distance learning was the norm for social distancing and health safety reasons.

Undoubtedly, using Microsoft Teams as an educational platform has been mostly a success, it is a great platform to work as a team to share, meet and collaborate on any projects. Therefore, using Microsoft Teams for education is a great way of using its functions and benefits to enrich distance learning as well as traditional presential education. Microsoft Teams has many useful functions; meetings can be conducted, with integrated chats where the students and teachers can share files, links, and chat, which is a crucial function for distance learning. Then, the functions of sharing files, as well as using the calendar to set up meetings and assignments or exams. Also, the functions of creating groups are an excellent way to organize the group sections and help the teacher to oversee processes more easily.

Certainly, Microsoft Teams is a great tool for distance learning and supports immensely the improvement of it. Therefore, the usage of Teams in education is a great

implementation and should be taken into careful consideration by the teacher to enrich the students significant learning experience and language skills simultaneously.

Therefore, the use of Microsoft Teams, for the purpose of this investigation, will be that of an educational platform to upload and download the voice recordings of the teachers and students. Thereby ensuring a better development and possible improvement of the pronunciation and speaking skills, for the benefit of the student and the future of education. Since, implementing these new technologies are crucial to further and improve education, not only in distance learning but also in presential in classroom education. The platform can be possibly used in the future to create a hybrid form of teaching and using distance learning as a method for further practice and improvement of the student's overall language skills. Moreover, with constant new technological advances education may transform itself in the near future in something entirely different, more innovative and discovering of new methods than maybe ever before.

Consequently, the implementation of Microsoft Teams is crucial not only for the development of education in the future, but also specially for this investigation. This research's general objective lies in improving specifically the pronunciation and speaking skills of the students which study in a distance learning environment. Therefore, the functions of being able to upload and download files of any type to Microsoft Teams, as well as the function of working collaborative as a group in Teams are crucial components for the development of this specific investigations' methods of data acquisition and exploration of the recording tool technique in itself.

Certainly, for this research the usage and implementation of Microsoft Teams relies on the previously mentioned functions and its usefulness for the application of the recording application. Consequently, the audio recordings are going to be uploaded and downloaded through the Microsoft Teams program and then analyzed by the teacher by using the collaborative working function. Therefore, the students and teacher create a environment of collaborative working to improve the pronunciation and speaking skills of everyone involved in the distance learning process. Moreover, the students can use Teams as a way of listening to the audio recordings of the teacher and mimic it as well as self-examine their own recordings.

Certainly, the students can improve several skills through constant practice on Microsoft Teams and the recording app. Following this, these specific skills are specially the speaking and listening skills. Which are receptive or passive as well as productive or active skills.

2.7 Color vowel chart for improvement of pronunciation

Certainly, to improve the pronunciation of the students in a distance learning setting the recording app is a great tool to implement. However, to help this tool in its effectivity and outcome another tool can be added to assist in the outcome.

Furthermore, this tool is the color vowel chart, it is based on a chart where every color represents a specific vowel, moreover it is also based upon the IPA chart which concerns itself with the vowels and their proper placement in the vocal organs of English-speaking person. This color vowel chart uses colors and the colors pronunciation in a playful way to teach and hopefully improve the pronunciation and

most importantly phonetic awareness of the students learning English as a second language.

Certainly, this tool designed to improve the pronunciation of the students in a playful way is quite useful for these purposes and requires not much instruction for its usage in the distance learning environment. Moreover, the teachers can make great use of the color vowel chart by using it also in everyday classes, to improve the pronunciation and speaking skills of their pupils.

Furthermore, the color vowel chart is an easy to use and playful tool, which can be implemented in any grades and on any levels of proficiency. Since the colors are almost always part of the basic curriculum in educational institutions. Moreover, the color vowel chart is used to instruct the students through the usage of the colors names the correct pronunciation of various vowel sounds. For example, the color red represents the color but as well the phonetic transcription of: / rɛd /. The vowel that is being taught in this example is / ɛ /, this sound will appear on the color vowel chart in the color red, so the students can make this connection between the color and the corresponding sound.

Now to use the tool color vowel chart in everyday classroom the teacher can create a drill activity where the teacher points on the color, enunciates the color and the students repeat the word properly. Then, after having established that the colors represent vowels as well, the teacher can introduce this activity of pointing to the color and the students saying the color to practice in an implicit and playful way the pronunciation of various vowels. Another activity which can be implemented with the color vowel chart is a competition of how knows more colors, since the color vowel chart

includes not only the basic colors but also some more elaborate colors as well. An example, of these more elaborate colors are auburn and turquoise, it is important to notice that with colors that have more than one vowel sound, the vowel that is most emphasized is the one to pay attention to.

Therefore, the color vowel chart is a great way of introducing students to the phonetic sounds and even symbols at a younger age. Since teaching phonetic symbols at younger ages is a quite difficult task to master for all people involved in the teaching and learning process. Moreover, being able to teach the students the proper pronunciation of vowels through the playful color vowel chart can make the process easier for everyone involved and could lead to a successful and significant learning experience.

Moreover, implementing the color vowel chart in specifically conversational English classes could make a great difference in the students' pronunciation as well as speaking skills. For example, using the color vowel chart as a warmup activity could be a great way of starting the class, practicing pronunciation as well as proper placement of mouth, tongue and all the organs involved in speaking properly English.

Furthermore, for this specific research paper the color vowel chart can be implemented with the previously mentioned preinstalled recording tool to improve the students' pronunciation of vowels in the usage of minimal pairs. Since the color vowel chart requires minimal instruction for proper usage, this tool can be used in a great way in the distance learning environment. Using the color vowel chart to improve the students' pronunciation of vowels could clearly help the students' pronunciation of minimal pairs as well. In addition, the application of the color vowel chart can be only

focused on the vowels which need more development for the benefit of the minimal pairs. Therefore, the application of the color vowel chart simultaneous to the recording tool could be beneficial for the students' pronunciation proficiency.

2.8 The use technology in the teaching-learning process

Certainly, technology is nowadays an all to present topic in the conversations of the present and future of education, its implementation has been first gradually with much time to decide if the impacts been positive or negative. However, since the unfortunate start of the pandemic, due to the virus Covid 19 and its subsequent variants, the implementation of technology got executed quite abruptly and unexpectedly. Consequently, with the certain progression of the pandemic and the return of students and teachers to traditional in class teaching, one may wonder; how an ideal and adequately planned implementation of technology in education should take place. As well as the possible impact, which this hypothetic ideal implementation could have on education and its subsequent development for the future and benefit of the students learning.

Undoubtedly, it is quite important to start by examining how technology affects the teaching-learning process, according to Croitoru, Florin, and Radu (2011) integrating the use of technology in nowadays teaching process, focuses on meeting the current century requirements, some of those are: achieving communication skills, developing creativity, critical and systematic thinking, efficient management of information and media abilities, identifying, composing and solving problems, and the capacity of self-education and self-improvement.

Therefore, in the sole interest of this specific investigation, some of the most important requirements or functions of technology applied to education are the achieving communication skills since they are one of the most difficult but also important skills to develop to achieve peak proficiency in the language. Then, there is the capacity of self-education and self-improvement, which is crucial for the development and enhancement of the students' knowledge on everything, but especially in the area of learning a second language properly and with great success.

Certainly, the other functions help as well to improve the language skills of the students in distance learning and traditional presential education. However, these technological functions are not as crucial for the purpose of this investigations as the other ones since they do not have a direct impact on the method and technique to be applied in this specific research papers direction.

Moreover, thanks to the innovative implementation of technology in the educational field, students have unlimited resources that they can use in the learning process to enrich themselves, this is based on Shatri (2020): "Technology enriches educational experiences by providing limitless learning options that can guide students on their quests to learn." Therefore, this quote highlights not only the importance and great options that technology in education can bring to students' developmental improvement, but also the limitless knowledge the students can have immediate access to.

Furthermore, the implementation of technology in the educational field can certainly lead to a positive impact on the student's learning and improvement of English as a Second Language development. Moreover, according to Costley (2014), the use of

technology in teaching has a positive impact on the student's learning process, because it is highly used nowadays so students feel more familiar and engaged with technology, and a result of this is that they often retain more information. Furthermore, this is based on the premise that technology is implemented in so many areas of many peoples live that further implementation in more fields leads to familiarity due to previous positive exposure.

In addition, other advantages of technology in education are to provide meaningful learning experiences to the students; moreover, it gives hands-on learning opportunities that can be integrated into different subjects, it also promotes teamwork because it allows students to work with their classmates and learn together in a collaborative way, which is great for the students' social skills as well as bonding and healthy competitiveness.

Nevertheless, with so many options available, when it comes to teaching with technology, it is of the utmost importance to use the technology in the best appropriate way with the correct approach. This to ensure that the most advantage is being taken for the students and to enhance the learning process.

Moreover, as stated by Wulandari and Almendo (2020) "EFL teachers need to explore some digital tools in order to apply gamification concept. However, they also need to integrate the technology with appropriate learning approach" (p.70). Along with, integrating technology appropriately in education, the teachers should find these learning approaches to take as most advantage as possible of technology and its benefits for improvement of English learning. Therefore, these specific learning

approaches can be found by researching and experimenting in order to examine if the approach is working properly with the implementation of technology.

Furthermore, technology is a great tool that helps immensely in the learning English as a Second Language Process, based on Costley (2014), states: “Technology is a powerful contributor to learning if it is used to deepen students’ engagement in the meaningful and intellectually authentic curriculum...Technology can be a particularly effective tool for English language learners...”. Therefore, using the proper and adequate implementation of technology in education can be certainly enriching for the student’s language skills as well as many other skills, which are being developed simultaneously.

2.9 The use of technology in the virtual class

Certainly, the usage of technology in virtual classes is a necessity and must be a given, so that the classes can take place and be enriching as well as effective for the learning process of the students. Moreover, using technology in virtual classes in its most basic form should not be the norm for teachers since teaching is always intertwined with change and desire to overcome obstacles. Therefore, professors should strive to find great technology to implement in their online classes, so that the significant learning process can flourish with improvements and stories of great success.

Therefore, teachers should take full advantage of technology and implement it in virtual classes, making great use of the unlimited resources, which are available online, that technology provides to help the students and achieve the best results in the teaching-learning process. “Instructors in online classes should lead the charge of

innovation and integration of technology into the online classroom to ensure that students achieve the best learning outcomes.” (Dyer, Larson, Steele, & Holbeck, 2015, p1.).

Indeed, highlighting the importance of teachers going the extra mile for the benefit of their students and for the future improvements as well as developments of education. Therefore, especially in the online classroom environment constant change and improvement is needed. This in order to achieve greater success in the task of creating a better education in the interest of the students as well as the achievement in any goals previously established by the curriculum of the educational institution situated in distance learning.

Moreover, technology certainly helps to meet students’ needs in education and enhances the virtual classes by providing and supporting the use of different learning styles and differentiated instruction. Also, properly adding technological materials to the class plan can increase students’ engagement, motivation, and learning outcomes (Dyer, Larson, Steele, & Holbeck, 2015). Since students of new generations are happy and excited to be immersed daily in technology, they look forward to technology in presential classroom settings as well as in virtual class environments. Clearly, the implementation of more innovative technology in virtual classes is an improvement for all kinds of educational processes.

2.10 Virtual Classes in Costa Rica

Undoubtedly, virtual classes in Costa Rica especially in the public educational systems were, before the pandemic caused by the virus Covid 19 became a global

issue, a very new and unexplored concept of teaching in general. Clearly, virtual classes were not a real matter of importance on the national curriculum created by the MEP, therefore the sudden implementation of distance learning was sadly difficult to execute for the most part.

As previously mentioned, virtual classes are the ones executed in an online environment such as Microsoft Teams, Zoom or Moodle. Furthermore, all participants of virtual classes only meet online and rarely see each other in person for educational purposes. Moreover, virtual classes are not a completely new concept in the educational field, since many educational institutions have been working with this specific modality for a variety of reasons, therefore some methods were already available and ready to use for the adequate implementation of virtual classes in public as well as private educational institutions, such as primary and high schools and universities.

As stated previously, the impact of the pandemic was tremendous on humankind and many different areas such as work and education. Therefore, due to the implementation of social distancing and diverse quarantine rules people had to adapt and if possible, do many processes online to avoid the sickness and lower infection rates, specially to reduce hospitalization. Therefore, the implementation of virtual classes had to be done apparently and as effective as possible, to not affect negatively the students learning experience.

Consequently, the best possible management of these virtual classes had to be created and applied by the administration of the educational institutions, this clearly for

the benefit of the students and their learning process and desired success in all fields. Furthermore, the educational institutions as well as the teachers and staff needed to be prepared and educated, this for the distance learning and virtual classes to be a success.

Indeed, during the COVID-19 pandemic some countries were fortunately able to immediately switch to the online learning modality, and it is clearly because they were already well-prepared for these scenarios or had already implemented virtual classes and distance learning in their established curriculum of the educational institutions. On the other hand, this modality has not been used in most of the schools, colleges, and universities, and more importantly, their staff is not familiar with the use of technology and has no idea about what is involved in e-learning. (Mahyoob, 2020).

Therefore, implementing it properly requires still time, good strategies, and online educational platforms. In addition, some teachers and students need additional training to use technological devices as well as apps and programs, so that the virtual classes achieve to be as fruitful as possible. This to minimize the impact the social distancing and quarantine rules caused.

Consequently, in Costa Rica, the Ministry of Public Education (MEP), decided to implement 4 scenarios for online virtual classes. Regardless of whether the student has a device and internet access or not, the pedagogical strategy "Aprendo en casa" that will be used by the MEP to resume the virtual course under the modality of distance education. Moreover, this pedagogical strategy contemplates 4 scenarios which considers the current situation of the students as individuals. These scenarios are

designed to guarantee that the students with lesser opportunities to have access to technological devices and internet students, are not excluded from the distance learning process and can learn and succeed without being marginalized.

Therefore, to accomplish this, teachers will receive an intensive training process, after that, they will work considering the scenarios contemplated in the document “Orientaciones para el Apoyo del Proceso Educativo a Distancia” presented by the MEP. (Castro, 2020). In addition, these intensive training for the teachers in distance learning, entails educating them on the proper use of technological devices and various online educational platforms if needed. Nevertheless, teachers should also investigate on their own how to achieve a successful learning experience for the students by using more than just what is given and establishes, going the extra mile by providing more resources as well as activities for the classes.

The 4 scenarios cover students with Internet access and device at home: It is characterized by a pedagogical mediation that promotes autonomous learning for the construction of knowledge, using specific technological tools. The first scenario is the one where the students have a device and have reduced or limited internet access: Promotes autonomous learning to achieve student’s knowledge acquisition, using non-synchronous tools that imply a minimum data consumption. Secondly, students who have technological devices and without internet connectivity: Autonomous learning is promoted for knowledge acquisition. Thirdly, students who have a device without connectivity may use different print and digital resources. Then, students who do not have technological devices or connectivity: Autonomous learning for knowledge acquisition. Student people use only printed materials. Finally, in the event that the

student does not have technological devices or internet access, the MEP will provide them with printed material, anthologies, specialized infographic readings, work guides, etc. (Castro, 2020) Certainly, these scenarios are well planned out and consider all the special situations the students may present; therefore, one should highlight the thought and dedication that went into creating these scenarios for the students benefits.

However, according to the newspaper La Nacion and various other local papers and journals in Costa Rica, more than fifty percent of the teachers from the MEP are not prepared to teach in online classes, the teachers do not have preparation or training to teach the virtual courses, they do not have specialized training, or training in remote or distance education topics, and due to this, technology was totally absent during the classes given in public education institutions in 2020 and 2021. (Cerdas, 2021). Clearly, these accusations are very serious and should not be discarded lightly, therefore more reviewing of the teachers, the class and the outcomes need to take place to ensure that this is not the case. Also, some teachers may do present some deficiencies in the technological field since they were accustomed to teaching in a traditional presential in classroom setting. Therefore, these teachers should acknowledge their shortcomings and seek help and additional training to overcome these obstacles and aim to better themselves to create better classes and a more beneficial education in the best interest of the students.

2.11 Teachers' tech management

Undoubtedly, the usage of technology in all its forms is clearly necessary and essential for the development and success of distance learning in virtual classes.

Therefore, every person, such as teachers and students, which are involved in the process of distance learning should have the fundamental understandings and knowledge of the usage and proper application of the technology used to create virtual classes and everything it entails.

As previously stated, the teacher's knowledge and proper management of technological devices and various tools as well as programs are of the utmost importance for the adequate development and consequent success of virtual classes in a distance learning environment. Therefore, teachers that wish to work in distance learning need to be held to a certain standard to guarantee a proper management of virtual classes. Moreover, these standards should revise the teachers' skills, understanding and knowledge in the technological area of education. This to determine if the teacher is suitable and more importantly competent in the environment of virtual classes and distance learning.

Therefore, to achieve the desired success in distance learning the teacher should be as competent and trained as possible in the various areas of technology which are linked and necessary for the execution of proper education and virtual classes. Moreover, to achieve success it also entails great creativity and resilience from the teacher, as well as a desire to investigate more into virtual classes and distance learning to create ambitious and fun classes in the best interest of the students and having in mind all the hardships and obstacles this learning environment entails for all parties involved.

Therefore, the teachers that work in distance learning environment should have a specific skillset that is perfectly suitable for the line of work in everything that virtual classes entail to be successful in the learning outcome. Furthermore, these skills are related specially to the proper usage of technological devices as well as programs, platforms and apps which can be used in the educational field to teach the virtual classes and making them more fun and attention grabbing. Undoubtedly, the teacher must have a clear understanding of the usage of technological devices used for distance learning, such as the computer, microphones and other devices needed for the execution of the virtual classes.

Moreover, teachers should be especially proficient and knowledgeable in the adequate usage of computers of any type since they are essential and necessary for the development of online classes. Also, professors should know how to use the educational platforms that are chosen by the educational institution to impart the classes and keep a connection and communication with the students. Usually these platforms are Microsoft Teams, Zoom and Moodle which all have options to meet each other and share documentation, which are crucial for the usage in the educational field. Moreover, these platforms have all very distinctive and different features as well as functions that the teacher should know how to use for the creation and proper development of the online classes.

In addition, teachers need to be creative and proactive to research new innovative teaching methods, activities, and techniques. This for the benefit of success of the virtual classes, clearly a virtual class cannot be taught the same way as a traditional presential class. Therefore, the teachers need to implement online activities

and techniques to make the class interesting and fun; for example, playing with Kahoot or doing interactive presentations, where the students are not mere spectators, but feel more included and active in the class. Consequently, the students can enjoy and have a significant learning experience in distance learning, which is the goal in all types of education.

Alternatively, if the teachers do not have the necessary skills or feel like the skills and knowledge could be improved, they can take additional training independently or through the educational institution, whatever seems better for their individual situation. In addition, the teacher could merge these two options for an even better optimal learning outcome. Clearly, there is no shame in asking for help and assistance, every person can improve their skills and work to better themselves, which is an admirable and something to strive for. Therefore, teachers should take advantage of these trainings or autonomous learning and further their education on these technological topics, to achieve and guarantee a great distance learning experience for everyone involved in the process.

Moreover, these trainings could be specific to the usage of the equipment for distance learning and the online educational platform. As well as some introduction to various, of course online available, tools, games, and techniques to create the virtual classes and make them more enjoyable and effective for all parties participating in distance learning. Therefore, with the implementation of all these technological equipment and online tools teachers could accomplish a more profitable virtual class for the students.

Furthermore, if the technological management and knowledge of the teacher is up to the standards or even excelling the established guidelines for online classes, it will most likely have a positive impact on the virtual classes and the subsequent distance learning. Therefore, having a competent and knowledgeable, in technology for education, professor teaching in virtual classes is crucial for the success of the classes and the achievement of the previously established academic objectives of the students attending the educational institution.

2.12 Students' language exposure in an EFL environment

Undoubtedly, an adequate and effective language exposure in an EFL environment of learning, is of immense importance to achieve a significant learning in the student's overall language skills. However, sadly in some distance learning environments this exposure is often limited and sometimes even insufficient, for it to have an impact on the learning. Therefore, to achieve a significant learning improvement of the student's language skills more exposure to the target language need to take place. Consequently, one must highlight the immense importance of language exposure for the students learning journey in a EFL virtual class through distance learning. Since it clearly has such a big impact on the students learning of the target language. Therefore, language exposure should never be neglected since it is one of the most crucial parts of learning any language in any language learning environment.

Clearly, in a distance learning environment some of the skills which are needed to master the target language, could be neglected due to the lack of exposure to the language as well as other crucial factors. Therefore, one may define which skills could

be the most negatively affected by virtual classes in distance learning. Furthermore, why a negative effect could occur especially in this setting more than other traditional presential in classroom environments. Moreover, by analyzing the established curriculum, the teacher could predict which skills could be affected beforehand and enforce the skill to ensure that the students receive a great education, and their goals are meet.

Therefore, some of the most negatively affected skills by the distance learning environment is mostly the speaking skills, and everything this skill entails for language learning. Undoubtedly, speaking skills need much more time and hands on practice to develop and improve properly in presential classes. Therefore, due to the nature of virtual classes and distance learning this could be affected negatively, since restricted time and speaking in online classes could not happen as naturally, as in a presential setting.

In addition, one of most negative aspects of virtual classes and distance learning is the reduced time of the classes as well as the consequent deficiencies in the exposure of the target language to the students. In distance learning environments the classes which the students need to take are reduced and split into in class teaching and autonomous learning sessions. Therefore, due to the lack of exposure and time spend practicing the speaking skills, many students struggle to develop properly this crucial skill to master the target language. Consequently, teachers need to be aware of these new difficulties in the teaching learning process of the target language, to understand and create new methods, ideas, and techniques to overcome or diminish those difficulties.

As previously mentioned, there are four scenarios that the MEP implemented in the Costa Rican public educational system during the pandemic, caused by the virus Covid 19, to continue the teaching and learning process in all areas. Therefore, these scenarios had in mind the situations that the students are living in, and would adapt perfectly to each situation, so that all the students regardless of their current living situation could participate and profit of the public educational system. Certainly, the implementation of the scenarios is a great way to ensure and guarantee that all students are receiving the education, which is theirs by birthright.

However, some of the four scenarios, which were more focused on students with less equipment and internet, did put much emphasis on autonomous learning. Undoubtedly, it is a great way of learning, but should be managed carefully due to some negative factors that could rise during the learning process. Autonomous learning is a method where the student or learner directs their own learning process, in this specific case the learner directs and is responsible for their own learning, however only partially since they are still underage and therefore the teachers or parents need to supervise the students.

Furthermore, autonomous learning is usually implemented for more older or mature students, since they have a more developed sense of responsibility for their education and the tasks that need to be done autonomously. Therefore, one may wonder if younger students are suitable for these types of learning methods and which effects it could have on them. Since doing tasks and learning independently could be difficult for children and teenagers which are not very dedicated to their studies and have trouble focusing for extended periods of time. Furthermore, some students may

have issues with time management and discipline with the autonomous learning method which can influence negatively the students learning process.

Certainly, autonomous learning is a great way of self-improvement and to learn independently in one's own time, which is great for some people who have various priorities and need to divide their time and attention to manage everything. However, one may ask how effective this learning method really is, considering that it is implemented in the four scenarios of the MEPs' response to the pandemic and social distancing mandates.

As previously mentioned, autonomous is a quite interesting but also for some students difficult learning method to handle. Instead of being guided and supervised constantly, the students are to some extent responsible for their own studying and task completion for the benefit of their own goals in education. However, especially in younger students, this is sometimes difficult, since the students do not see the importance or usage of education and prefer to do spend time having fun playing or being on their phone. Therefore, students who are learning in an autonomous way should be prepared to face some difficulties and should be aware of everything this method entails.

Undoubtedly, all students can choose to participate in autonomous learning, however there will most likely be students who struggle less or more with the implications that this method brings to the learning environment of the students. Therefore, the students should be prepared and aware of what awaits them with this specific learning method, to be successful in their learning journey.

As previously mentioned, some students may struggle less than others, there are several reasons for this to be a given in such a learning environment. Firstly, all students are fundamentally different and have diverse learning styles and types of multiple intelligences. Secondly, students could also have certain issues with learning, that they are not aware of, for example ADHD and many more. In addition, these students can also have some curricular adaptations, which always need to be considered and seriously when planning any class and especially for the distance learning environment. Thirdly, how the students homelife is daily, this factor can have an immense impact on the student's performance and learning outcome.

Consequently, the teachers need to take all these variables into account when planning and teaching virtual classes in a distance learning environment while also implementing simultaneously autonomous learning. Also, the teachers should identify the students that need some extra attention and support, for them to have a great and beneficial learning experience as well. However, it is also important to highlight the attributes or skills that students who do well in autonomous learning possess, so that other students can improve their skills by knowing what they need to work on, or even find tools to help them.

Furthermore, these attributes or skills that some people naturally possess are not exclusively for them, moreover they can be acquired, improved, and trained to be even more effective over time. Therefore, the attributes are discipline, responsibility, planning and resilience, these can be developed by students and improve with practice and time. In addition, it is important to know that these attributes are no requirements for autonomous learning but should be considered to help the students adapt themselves in

these new learning environments, as well as help them succeed in their education and goals for the future.

In addition, these attributes are also quite beneficial for the students' present and future lives in general, since they are quite useful in many aspects and can be put to good use in their future endeavors and goals. Certainly, to achieve success in autonomous learning as well as distance learning, these specific attributes need to be trained and hopefully perfected over time for the best possible outcome in any learning environment.

In addition, the benefits of autonomous learning in distance learning are various and can be used in other aspects of life to improve certain factors of the student's future. Therefore, implementing the autonomous learning method in the life of the students can be quite beneficial for them and their further developments as well functioning humans and members of society.

2.13 L1 Interference

Certainly, distance learning is a challenge for all parties involved in the process, however it is also quite beneficial for many people who need a different educational method for their various valid personal reasons. As previously mentioned, there are numerous factors to consider when deciding to study in a distance learning environment. For these reasons, the students should in any case be aware about these factors to make informed decisions about the future educational environment they may engage in, which is crucial for the benefit of the students.

Therefore, one specific factor, which everyone involved in distance learning, specifically in a language learning environment, should be aware of is the quite possible impact that L1 interference has on the significant learning experience and outcome of the students. This specific factor in distance learning occurs when students are taking online classes through an online platform and do not have a suitable environment to take the classes in.

As previously mentioned, one of the requirements to partake in distance and online learning is to preferably have a suitable and beneficial environment for the development and participation of the class and the subsequent autonomous learning process. Therefore, the students as well as the teacher should have a specific space in their environment, where they can participate and receive properly the online classes. This specific and dedicated space should be quiet and peaceful without any distractions, which may interrupt the online classes. These interruptions are specifically the L1 interference, noises and many more.

Certainly, the L1 interference is one of the most crucial disruptions which can occur during the online class. The L1 interference occurs in the language learning environments when the native language is spoken or heard while trying to learn a foreign language. Therefore, the L1 refers to the native language of the students, which in this specific case is Spanish, while the L2 refers to the language that is being taught in the distance learning setting. Moreover, the L1 interference in the language learning process in the specific distance learning environment can possibly cause major issues in the proper acquisition and significant learning experience of the students.

Evidently, in a traditional learning environment, the teacher can control in an easier way if the native language of the students is being spoken or used in a written form by the students, the teacher can correct it immediately. However, in a distance learning environment, where the class is being held on an online platform, the teacher is sadly often not aware if the students are having a L1 interference in their environments. Since the online platforms used for online classes, have the function to mute the participants, when there is not a need of participating in the class. Therefore, many of the students are muted most of the time to avoid interrupting the class with noises, or because of personal preference. Additionally, some students mute themselves in order to avoid getting caught doing other activities simultaneous to the online class, which are clearly not set by or encouraged by the teacher, the curriculum, or the educational institution. The teacher should be aware of these possibilities and act upon them accordingly.

Moreover, the L1 interference in the distance learning environment, while learning a second language, can negatively impact the proper learning process of the students. The L1 interference impacts the proper learning process of the target language since it is perceived as an interruption by the learner. In addition, when learning a second language it is crucial that only the target language is being used by everyone involved in the teaching and learning process.

Moreover, utilizing only the target language ensures and facilitates the proper language exposure of the students to the language and helps to improve their language proficiency. Furthermore, the students' being completely immersed in the target language, facilitates their language learning process by the constant use of the

language. Moreover, not using the native language of the students should be a priority for the teachers since it has negative effects on the learning process.

Certainly, the L1 interference occurs in many ways and forms which as previously mentioned can negatively affect the learning process of the students. Specifically, in the distance learning teaching method as well as environment this specific interference occurs more often than in traditional in classroom teaching since there is less control of the surroundings and situation of the students by the teacher. The L1 interference usually occurs in the distance learning environment since the students are in environment which is not being supervised or controlled by the teacher or the educational institution.

Furthermore, the environment where the students attend and participate in the online classes is up to the students and their parents or legal guardians to choose. Usually, the space the students use to attend the online classes are various rooms or areas of the house they inhabit with their family. Therefore, the location or specific space dedicated for their online classes should meet a set of certain criteria for the benefit of the learning process.

As previously mentioned, the space dedicated for the online classes should have a good light source, sufficient ventilation, good internet connection and everything necessary for the proper online class. However, one of the most important factors one must take into consideration for the space: is that the student will be able to attend the online class without interruptions and especially without the L1 interference.

The L1 interference negatively affects students especially when the dedicated space for the online classes is not suitable so that interruptions may not take place often or at all. Therefore, the space should be a room or space where the student may be uninterrupted for the timeframe of the online class. The interruption or L1 interference is usually done by a family member or various types of media. Therefore, it is important that the space can be closed off from the rest of the apartment, so that there is a lesser chance of interruption.

Furthermore, teachers should consider the L1 interference and try to recognize when the interruption is happening, this to prevent it or possibly work along it. Moreover, during the online class the teacher may announce that the L1 interference or the usage of the native language is not desired during the language learning class. In addition, by establishing these rules the teacher ensures that the students have them in mind and avoid the native language for their benefit.

Undoubtedly, preventing the L1 interference seems like the best decision and action to take, to avoid a negative impact on the students' language learning process. Therefore, the teacher may consider contacting the parents or legal guardians of the students, to inform them about the online classes' objectives and the possible interruptions that may have a negative impact on the students learning journey. This was the first prevention effort to ensure that the students learning a language in the distance learning environment are being provided with the very best education.

Consequently, by properly briefing the parents, they can make informed decisions considering the possible interruption of the online class of the students, therefore the parents can make specific arrangements to prevent the L1 interference

from happening in the first place. Moreover, these arrangements can be assisting the student with finding and choosing an appropriate space to take the online classes, as well as making sure that they are not interrupted by any noise or person during their learning process.

Furthermore, the parents or legal guardians can make sure that there are no interruptions from the media, they can ensure that the students are not using the phone while in class, or they can make sure that the television or radio is not causing a L1 interference to the student. In addition, the parents should also take into consideration other family members that could cause interruptions, these family members should be accordingly briefed as well, so that they know how crucial uninterrupted teaching and undivided attention and concentration for the learning process is to achieve a great language learning outcome.

Undoubtedly, having a dedicated space for online classes is a privilege that many students do not have due to socioeconomic reasons. Furthermore, teachers should be aware that now all students have their own rooms and most importantly an understanding family. Moreover, for the student to have a family that understands and appreciates the effort done for education and specifically the hardships in distance learning are crucial for the prevention efforts of the L1 interference and many more issues that can present during the learning process.

Therefore, the teacher should also carefully consider those students that may have more issues than others with the L1 interference due to various personal reasons. Moreover, the teacher should also take the students home environment into account when evaluating harshly the students' participation in the online class. Since these

factors can be the cause for a L1 interference as well as normal everyday interruptions like the television or a radio. Therefore, it is of the utmost important to contact and inform the students' parents or legal guardians. As previously mentioned, this can have a positive impact on the students' distance learning experience as well as the subsequent success in the learning of the language.

Certainly, the L1 interference cannot always be prevented, therefore the teachers and students need to find ways to work with this issue and help to mitigate the possible damage done by these interruptions. Moreover, there are various ways to work with the L1 interference one of them is for the student to use noise cancelling headphones which usually have an integrated speaker. Therefore, using these headphones reduces the outside noise of people talking or the media in the house, as a result helping the student to lessen the L1 interference in their online classes. Another possible solution for the student, is to find a room that can be closed off or an isolated space, where they can attend their online classes without having to worry about interruptions and the L1 interference.

Certainly, the socioeconomic factors of the students' environment can interfere alongside and possibly worsen the L1 interference, since this can affect the distance learning outcome, specifically in language learning. Therefore, the socioeconomic situation of the student is important to know, so that aid is provided, for example in form of headphones. Also, the teacher should consider the living situation of the students since lower income homes usually do not have a room for every child. Therefore, some students may not have a dedicated space for distance learning and should not be put in a place where they must explain themselves and the L1 interference to the teacher.

Lastly, students who want to partake in distance learning should take the L1 interference into careful consideration since it can have an impact on the proper development of the performance and language learning process of the student. The student and their legal guardians must consider all the previously mentioned factors to take informed decisions regarding the educational environment they may consider applying in. Nevertheless, as mentioned before, the distance learning environment has many advantages, however the ones participating in it should also be aware of the disadvantages and how to properly work with them to achieve a great learning outcome which is in the best interest of the students' educational success and future.

Chapter III

Methodological Framework

3.1 Type of investigation

This specific section of the research paper describes in detail the research setting, which methodological design is used to allow the checking of the objectives as well as the procedures to follow. Then the type of investigation is defined and described as well as the investigation approach of the research paper. After that, it also details the population and its specific unique characteristics, this section will contain the sample that will be used in this investigation. Then, the instruments, that are used in the data collection process, are listed, and described in detail as well as the possible variables. Lastly, the process of how the data is collected is described to understand the whole approach to the data collection methods.

Furthermore, this investigation is designed to know and understand the impact that the preinstalled recording tool can have on the students' pronunciation of some minimal pairs in virtual classes at Liceo de Turrúcares, Alajuela during the third quarter of 2021 to the second quarter of 2022.

3.2 Types of research

Firstly, the type of research is defined, in order to provide clarity and deeper understanding on the nature of this research paper as well as the possible procedures to expect. Moreover, this research was initially meant to be an exploratory research type, however, due to the nature of research and its development over time it became and evolved to a descriptive investigation due to various reasons lying in investigation and data collection.

Therefore, the type of research is the descriptive investigation. Furthermore, the specific aims of a descriptive research are to “describe the nature of a situation as it

exists at the time of the study and to explore the causes of particular phenomena (Travers, cited by Sevilla, Ochave, Punsalan, Regala & Uriarte, 1992, p.94). Therefore, the descriptive research type tries and pretends to describe and explain a phenomenon being studied that is occurring at a specific place and time and the consequent causes of this unique phenomena. Consequently, for this specific research paper, the phenomena to observe and explain is the distant learning method as well as its possible improvement of the pronunciation skills, through an innovative method of audio feedbacks which aims to improve the overall experience of language learning in the unique distance learning environment.

Furthermore, the type of research is also the experimental investigation type since the research is to be also experimental in nature. This means that this specific investigation is mixed in the investigation types, this to provide various data entries. Moreover, the experimental investigation type concerns itself with experimenting and gathering firsthand data in the process, this benefits immensely a research paper which intends to prove or support a tool such as the recording tool proposed in this investigation.

Therefore, the investigation is conducted in a descriptive and experimental manner, to detail the given situation and describe its particularities. Moreover, it details the data within the previously establishes objectives to obtain the necessary information to conclude.

3.3 Investigation Approach

Certainly, the investigation approach is a crucial component of the research paper, which impacts and determines how the instruments for the data collection are going to be designed and applied. Moreover, the investigation approach should be as clear as possible as the research paper evolves, and new implications start to appear to the researcher.

Therefore, the investigation approach to be used in this research is the qualitative as well as the quantitative methodology, making this a mixed approach methodology. Furthermore, as stated “It is a type of social science research that collects and works with non-numerical data that seeks to interpret meaning from these data...” (Mohajan, 2018, p.2) In other words, qualitative research involves collecting and analyzing non-numerical data such as text, video, or audio, to understand what is being researched and how to interpret the collected data properly through this approach.

Therefore, with the help of the establishment of a qualitative methodology, the researcher obtains reliable data in regard to if there is any improvement or not, in the students' pronunciation which is the purpose of this investigation. The qualitative data is going to be gathered using a recording tool that will be applied in pronunciation practices during two weeks of practicing with the tool. Lastly an observation is going to be used as well to gather information of the distance learning method used in the public institution.

Nevertheless, the quantitative method is used as well, therefore as previously mentioned the methodology used is the mixed approach. The mixed method approach is “an approach to inquiry that combines or associates both qualitative and

quantitative forms. It involves philosophical assumptions, the use of qualitative and quantitative approaches and the mixing of both approaches” (Creswell, 2009, p.4). The mixed method research entails the qualitative and the quantitative to gather and analyze the data.

Moreover, the reason for implementing this specific mixed methodology is to acquire the maximal level of objectivity when collecting data. Therefore, with the quantitative methodology, clear and specific statistical data is obtained. While the qualitative methodology, obtains reliable data regarding the opinion of the students. Finally, applying both approaches help to achieve objectivity in the process of gathering information.

3.4 Sources

Certainly, sources are one of the most crucial parts of the research paper, therefore it should be explained which type of sources there are and how they have been gathered to sustain the research paper. Therefore, the sources used for this research paper are divided into two distinct categories, first the ones that are searched or investigated for and then the ones that the investigator created to create more sources for the better understanding of the research paper as well as the research findings.

Firstly, the sources that were searched or investigated by the researcher of this investigation are all secondhand information, which means that the information is based on a book, article or journal written by a person different than the researcher of this investigation. Moreover, this is done to provide more information on the topic by more

experienced and reliable person, which opinions have more weight in the educational environment.

Furthermore, apart from the secondhand sources mentioned previously, the researcher also adds own information to this research paper. Therefore, in addition to the secondhand information presented in the research, three instruments are created by the researcher to gather own information for the research papers data analysis as well as to come to the conclusions of the work. In addition, these three data gathering instruments are considered to be firsthand information providers for the research.

Lastly, the gathered firsthand information is of the utmost importance for the proper development of the research itself as well as the most important parts, for example the results of the instrument application as well as the analysis and review of thesis. Therefore, the three instruments are a questionnaire, survey as well as a checklist, which are going to be used by the researcher to gather the information and draw as well as interpret the data accordingly. Moreover, the acquired data is used carefully and confidentially to come to conclusions about the topic.

Moreover, the goal of the questionnaire is to obtain important information about the experience that the students have had with the distant learning and the online-class environment. Therefore, the questionnaire is an instrument that helps to collect data, it is also one of the most popular data collection instruments used to gather information. In other words, a questionnaire is an instrument to collect data that consists of a series of questions that can be closed and/or open-ended questions. Furthermore, for this specific research paper the question for the students are both closed and open-ended

questions, this in order to have much more concise data as well as broader data which will be more useful and beneficial for the fulfillment of the specific objectives of the investigation.

Therefore, in this research this investigation method is applied to the students of the studies subject to gather valuable and useful information about the student's experiences and specific thoughts regarding language learning classes in an online class environment during distant learning due to the pandemic caused by the virus Covid 19.

In addition, the second data gathering instrument is the checklist. Moreover, this checklist objective is to measure and define in detail the initial level of the students' pronunciation skills of various phonetic sounds, more specifically the minimal pairs. After defining the initial level of the student's pronunciation skills, the checklist is applied at the end of research process again to measure and define any changes that may have been caused by the recording tool. Therefore, the subsequent results of practicing with the recording feedback tool will be displayed, to see if there are any positive improvement in their overall performance of the pronunciation skills of minimal pairs.

3.5 Subject of the study

The sample of the study consists of 15 students, all of them are from 10th grade and subsequent 11th grade that are learning English at Liceo de Turrucares, in the province of Alajuela in Costa Rica. However, these specific students are also in the technical conversational class which is provided by some public schools across the country. Therefore, the investigation as well as the instruments to gather data, are going

to be applied in the conversational English class. Furthermore, this specific sample was selected because they are learning English as a Second Language and are taking the conversational English class as well.

Therefore, these students are exposed to much more English hours per week and clearly have the desire to improve their conversational skills in English as well, since they are taking this additional conversational language class besides the obligatory English class.

In addition, this specific sample was not chosen randomly without any criteria set beforehand. On the contrary, the sample was chosen with the assistance of the non-probabilistic sampling. Moreover, non-probabilistic sampling is to choose a sub-group in which the choice of the elements does not depend on the probability, the choice depends on the characteristics of research (Jha, 2009). With this selection, it is expected to collect reliable and valid data from the instrument used in this research.

3.6 Variables of the study

Certainly, defining and explaining the variables of the study is of the utmost importance for a better understanding and impact of the research paper. For this specific reason, both variables of the study should be comprehensive and understandable.

Moreover, the unique variables of the study are the following: the independent variable is the preinstalled recording app of the phone, with which the researcher aspires to change and hopefully improve the overall performance of the students' pronunciation of minimal pairs in the English language.

Therefore, the dependent variable of this study is the pronunciation of the students, which could be improved by utilizing and practicing the English language pronunciation of minimal pairs with the already preinstalled recording app of the smartphone.

3.7 Instruments to collect information

Undoubtedly, the data gathering instruments are one of the most important components of research papers which require experimentation and not only description of the issue and the possible solution. Therefore, data gathering instruments are incredibly useful to create not only firsthand sources and information, but also proof or disproof the initial thesis of the investigation.

Therefore, some general information about the following part of the research paper is that the instruments are as previously stated one of the most important parts of the research. Furthermore, if created as well as designed and applied correctly, they can provide the necessary information to determine if the research objectives and its purpose can be proven or not. Moreover, one should take into careful account that both of these outcomes which are acceptable since all results, even though negative, are important and helpful for the development, completion and richness of the research paper.

3.7.1 Description of the instruments

As previously mentioned, the data gathering instruments are one of the most important parts of a research paper, which wants to obtain firsthand data as well as information on a specific topic of interest. Therefore, the description of said instruments is crucial as well, however the application process is as important than the actual

instrument since the process determines many factors of the data that is going to be acquired by the researcher. Furthermore, the conditions of the data acquiring methods as well as the process determines if the data is worth being analyzed as well as interpreted properly.

Therefore, the procedure to consider for the research paper proper developments and application, consist in three data acquiring instruments' employment and its steps: a questionnaire, a checklist, and a survey. Furthermore, these instruments are developed and applied to the subjects of the study with the following procedures.

Firstly, the researcher does an observation of the class during the distance learning, the researcher will not interfere in any way. Nevertheless, the class should be of a normal everyday distance learning lesson, so that the researcher can observe a natural progressing class to obtain a better view of online classes as well as the desired data for the research paper. Furthermore, the observation also has checklist to provide information on the teaching and learning process of language classes in the distance learning environment.

Secondly, before the implementation of the recording app and the subsequent practicing with it, the survey is applied to understand where the students mind and general opinions at, regarding online classes, distant learning and how they perceive their overall pronunciation skills of the English language. Therefore, the survey is meant to gather useful and important information regarding distance learning and its general

impact on the specific sample of students, which study conversational English in a public institution.

After the application of the survey, the researcher starts with gathering information regarding the students' pronunciation of some minimal pairs by recording their voices. Therefore, a checklist with specific criteria regarding the students' pronunciation of the minimal pairs in the English language is applied to define the student's initial pronunciation skills. Furthermore, give a sense of perspective from where the pronunciation initially stands, and to where it can be improved or not by the implementation of the recording tool.

After the initial standpoint for the pronunciation is clear and understandable, the researcher implements the use of the preinstalled recording app to practice the pronunciation of minimal pairs of the English language. Moreover, the recording app is implemented so that the students' pronunciation skills improve and by the end of the experiment a noticeable change appears.

Furthermore, to see and proof if there are any changes to the students' pronunciation of minimal pairs after the implementation of the recording tool, the same checklist will be applied. Moreover, using the same checklist provides a nonbiased viewpoint and showcases if there are any noticeable positive or negative changes to the pronunciation of the students.

Lastly, all the data gathering instruments used in the investigation will help to have a better viewpoint about distant learning and the implications. Also, it showcases if the implementation of the recording tool will change the pronunciation of the students in

a positive or negative way, this will help to determine if the recording app can be used successfully in everyday English classes as well as conversational classes.

Furthermore, the instruments could show what could be implemented to improve the students overall understanding and skill of the pronunciation skills and their use in language.

3.7.2 Observations

Certainly, observations are a great tool for gathering qualitative data, which can be used in various ways for not only research papers but also many other types of reports and so on. Therefore, it is important to define and explain what an observation is and how it is utilized for the purpose of investigation in the academic setting of educational research.

Furthermore, as defined by Pawar, observation “involves collecting data by observing observable phenomena” (Pawar, 2004, p.17). Moreover, this instrument makes the researcher “take field notes on the behavior and activities of individuals at the research site” (Creswell, 2009, p.181). Therefore, an observation is an instrument that allows data gathering by watching behavior or events in a specific and unique phenomenon. Additionally, applying observations in the research setting involves entering depth in social situations and maintaining an active role and a permanent reflection of the situation at hand.

Therefore, through the observations, the researcher incorporates data collection research, considering important details that may be omitted if the observation is not

used and subsequently failing to provide important information to the research paper and its purpose.

3.7.3 Questionnaire

Undoubtedly, the application of questionnaires is an effective method of data acquisition, therefore questionnaires are important to consider for research papers in many academic fields.

As previously mentioned, one questionnaire is applied to the students, with the purpose of gathering information about the different experiences and opinions that students have on the distant learning method and the online-classroom environment. Additionally, it pretends find out about the difficulties the students have faced and how they think they have learned during their time studying with these unique methods and environments.

Also, it pretends to investigate how much the students enjoyed the lessons imparted that way and how they believe education will differ in the future. Moreover, it pretends to gather information about the effectiveness in the eyes of the students of the method of distant learning and online-classroom environment to determine which steps are the ones to take next to achieve a better learning experience, for both students and also teachers which want to see the truth about these methods, introduced into the learning environment.

3.7.4 Checklist

Furthermore, one checklist was created for this research paper, which has the goal or objective of gathering the important and useful information of the initial level of

the students in the skill of pronunciation of minimal pairs of the English language. Then, after the implementation of the recording tool, the checklist will be applied again, to ascertain if there are any changes or possible improvements by the students when speaking and articulating the phonetic symbols of minimal pairs in English words and sentences.

Furthermore, the researcher will apply the checklist to see if there was progress after the usage of the recording tool, this by comparing both results of the checklist after the application time is completed in the educational institution. Moreover, the checklist will be used with the recordings of the students. The students will use a short text with words and sentences that contain some minimal pairs, for the students to practice and read. After that the teacher will check the students', recordings considering the changes and possible improvements the students may have achieved after using the recording tool.

In addition, some general instructions for the usage of the instrument of checklist are for this research: The students will have a text to read out loud and record themselves with the recording tool, which has all the minimal pairs that are going to be checked for in the following checklist. The researcher checks the recordings with the checklist and provides the student with the necessary recordings and feedback to improve themselves at home with the tool.

Furthermore, the students can practice the times they want then record themselves again after some time and upload the audio to the online educational platform used by the educational institution, for the teacher to review their pronunciation. Since this research takes place in a public institution, the online platform

used is Microsoft Teams as well as WhatsApp. The teacher reviews the pronunciation at the end of the application time again with the same checklist and can then determine if there are any changes in the students' proficiency in the pronunciation skill using the recording tool.

3.8 Procedures

Certainly, the procedures regarding the data gathering instruments of a research paper, are quite important for the proper completion, development, and application of all the instruments. Since badly planned procedures can have a direct impact on the results and subsequent conclusions as well as the recommendations of the research paper.

Therefore, the procedures to gather the information needed to consider in this research consist of various steps: observing the virtual classes several times, define the pronunciation level of the students beforehand, then applying the use of a recording tool during several classes, and subsequent an analysis on the recordings made by the students. Also, a small questionnaire will be applied to the students regarding their opinions and experiences made in distance learning as well as their usage of the recording tool.

First, the researcher will join several classes for two weeks where an activity to do several recordings will be assigned to the students, the students will need to record an audio reading a specific text. Moreover, this text is provided by the researcher since the text needs to have all the minimal pairs that the investigation needs to analyze the effectivity of the recording tool of improving the pronunciation of said minimal pairs.

After the students upload the recordings to the online platform Microsoft Teams or to the platform they choose, the researcher will provide the students with feedback on their recordings, regarding their pronunciation of minimal pairs. Therefore, over the course of the application of the recording tool the students will receive feedback which purpose is to improve the student's pronunciation of minimal pairs in the English language. At the very end of practicing with the recording tool, the students will record themselves again, this recording's purpose is for further analysis of the researcher, and to judge if there are any changes in the pronunciation of the students.

Lastly, having gathered the necessary data to analyze the and determine if the recording tool meets its purpose in the investigation, the researcher will analyze the data. Therefore, the first recording made by the students will be compared with the last recording they did, to provide a clear view of any changes. This to observe if there are any improvements in the students' pronunciation after using a recording tool to enhance and improve the students' pronunciation of minimal pairs primarily and possibly even as a whole.

The instrument used in the investigation will help to have a clear and organized view of the impact a technological tool, such as the on the smartphone preinstalled recording tool, has on students who are learning English as a Second Language. Furthermore, it highlights the importance of investigation in education and how it can affect positively the progress of education for students. Furthermore, the implementation of new technologies will provide more opportunities to improve education and will most certainly continue to grow in the future. Therefore, teachers should be accordingly informed and capable of managing these new implementations.

Lastly, to ensure that the names of the students and teachers are treated according to the privacy, the researcher will guarantee that the data will not be misused in any form. Moreover, for privacy reasons of the students, their name will be always kept anonymous. Therefore, if one student is named specifically due to any reason, a pseudonym will be used instead of the actual name to protect the student's identity order to keep their privacy.

Chapter IV

Data Analysis

4.1 Data analysis

The data analysis chapter is undoubtedly one of the most essential parts of any research paper which specifically focuses on gathering data by applying instruments as well as subsequently carefully analyzing the results. Moreover, analyzing carefully the gathered data is crucial for the research paper's purpose since it provides the important analysis and subsequent explanation of the instrument data to prove or disprove the objectives and ideas of the investigation and researcher.

Furthermore, analyzing the data gathered by the instruments is one of the most important tasks within the research paper, since the analysis provides crucial additional inside information with which the researcher can determine and inspect the outcome of the research paper and its results properly. Moreover, by doing this various analysis the researcher will get results which important to verify the proposal and purpose of the investigation paper.

Therefore, the process of analyzing the data is also quite important to understand and give the appropriate meaning to the data gathered by the instruments during the investigative and experimental phase of the research. Firstly, the data is gathered by the instruments in the application of said instruments. Then depending on the different types of data gathering instruments this data should be carefully read and analyzed according to all the previous research that has been done to understand the topic and give meaning to the data.

Therefore, according to the instrument the data should be analyzed in a quantitative or qualitative way. As previously established, this research utilizes a mixed approach, where the data is gathered as well as analyzed in a quantitative and

qualitative way depending on the instrument in question. After collecting the data, it should be transformed and displayed into corresponding graphics to exemplify the understanding of the data. Then, the data should be analyzed properly to form informed meaning and commentary on the evidence.

As mentioned previously, in this part of the research paper the data is displayed in the form of graphics. This to ease and exemplify the data for the benefit of the reader. Moreover, not only graphics can be used, since this depends heavily on the form of the data, therefore other methods of data analysis and exemplification such as commentary can be used.

Therefore, analyzing the data and exemplifying it in the form of graphics is useful in many different forms. In addition, using graphics helps also immensely with the observation of said data and helps to find correlations and/or interrelate the gathered data with the previously researched data. Moreover, this helps not only to make meaningful connections between the data, but also, to understand how they correlate as well as how these connections directly impact the outcome of the research papers conclusions.

Furthermore, this chapter is divided in many sections. These various sections analyze individually each of the data gathering instruments and most importantly the collected data. The sections include a short description of the instrument as well as its purpose for the research papers objectives. Furthermore, how the instruments are applied to the subjects of the study is explained and then the results analyzed carefully to come to a coherent conclusion as well as form informed opinions on the gathered data.

4.2 Results of instrument – Observation

Certainly, the first instrument applied is the observation. As previously mentioned, the observation was applied before all the other instruments to gather crucial information on the distance learning environment and online classes development. This specifically in the context of conversational English classes of a public school. Therefore, the observation took place in an online class environment, where the researcher joined the class on the online educational platform, chosen by the MEP, which is Microsoft Teams.

Moreover, the specific purpose of the observation instrument is to gather information necessary for the researcher to understand how the online classes are managed by the teacher of the educational institution. This to know how this management can possibly affect positively or negatively the students' performance as well as learning experience of the English language and more specifically their proficiency of the pronunciation part.

As previously mentioned, the observation is done by joining an online class held on the educational platform Microsoft Teams. The researcher does not only observe the class but also pays attention to specific criteria that are important for the purpose of the research paper. Therefore, to adhere to these criteria the researcher created a checklist beforehand to observe the class and pay attention to these specific points. Moreover, the checklist includes questions as well as statements that can be answered with Yes or No, depending on the situation. In addition, to make matters as clear as possible a section for comments is added at the end of the checklist. This to ensure that situations

that are not easily predicted can be added as well to create a better understanding of the online classes in distance learning in the educational institution.

In continuation the results of the observation are analyzed carefully by the researcher, taking into consideration the researched data and its importance for the research paper as well. Moreover, to showcase the results of the observation the checklist with the criteria will be shown next:

4.2.1 Checklist #1

Criteria	Yes	No
1. Do the students engage in the online class?	x	
2. Do the students participate in the online class?	x	
3. Does the teacher encourage the participation of the students in the online class?	x	
4. Is there sufficient space for the development of the speaking skill?		x
5. Is there sufficient space for the development of the pronunciation skill?	x	
6. Do most of the students speak at least once in a 40min online class?	x	
7. Is there immediate feedback regarding pronunciation provided by the teacher to the students?	x	

Source: Drach, C. The impact of recording app in improving pronunciation in virtuality in students, 2022.

As seen in the checklist above the results of the observation are quite positively inclined to the usage of the online class as a reliable learning environment for the students benefit. Therefore, the online class designed by the teacher of the public educational institution was great at developing properly the speaking and pronunciation skills of the students by providing the necessary factors for the improvement of said language skills.

Moreover, the first question focused if the students engage in online class, which they did often. This is a great indicator that the teacher focuses on the students not only as passive receptors of knowledge but also active participants of the class, which is of immense importance in a conversational English class. The second question is based on the participation of the students in the online class, the participation was great and often. The students did not only spoke when spoken to but also participated by asking questions according to the topic being covered in the online class.

The third question focused on the criteria if the teacher encouraged the students to participate in the online class, the teacher did do it frequently. Therefore, the teacher did a great job on encouraging the students to speak freely in the online class, which is very important in a class focused primarily on the conversational skills of the students in question.

The fourth criteria is based on the space dedicated for the development of the speaking skills, therefore the researcher analyzed carefully how much time the class was and how much it was dedicated to speaking alone. The researcher concluded that the space dedicated to speaking alone was less than expected, however in relation to actual time of the class it should be noted that there was not much time to begin with. In

addition, the fifth criteria is based on how much space is dedicated to the development of the pronunciation skill. The teacher did dedicate time for the proper development of the pronunciation skills, this is very important to ensure that the students do improve their pronunciation skills within the class.

Furthermore, the sixth criteria is based on the question if all of the students in the online class, participate at least once in the 40min where the online class is held, and yes, they did participate. Sometimes students do not participate at all in online classes since they feel no need for it, however these specific students did participate greatly which clearly can have a positive impact on their speaking and pronunciation skills performance.

Last but not least, the seventh criteria is based on the question if the teacher provides the students with immediate feedback regarding their pronunciation. The teacher did provide immediate feedback regarding the students' pronunciation, the feedback was direct and beneficial for the students' improvement. In addition, it is quite important that the feedback is done in a nice way, not condescending or rude. Therefore, the teacher did a great job by doing it professionally having in mind what a badly feedback can cause in the students' confidence and desire to study and improve their language skills.

Certainly, this instrument gathered important data regarding the learning environment of the students and how their relation is regarding the speaking and pronunciation skills. Overall, the instrument gathered very positive data regarding the students' participation, the teachers' management, and the learning environment. Which is great to be aware of to apply other instruments.

4.3 Results of instrument – Checklist and Questionnaire

The second instrument is divided into two parts as well as two applications. The first part of the instrument is applied to the students of the public institution as a checklist created to determine and evaluate the students' proficiency in the pronunciation of minimal pairs in the English language. Then the second part of the instrument is a small questionnaire that is only applied once, simultaneously with the second application of the checklist.

As mentioned previously, the main purpose of this instrument checklist is to gather information on the students' initial and outcome of their pronunciation proficiency after practicing with the recording app to possibly improve pronunciation of some minimal pairs in the English language. In addition, with the second part of the instrument which consist of a small questionnaire of closed ended questions, data regarding the students' opinion on the effectivity of the recording tool is gathered to determine if the students liked the tool and would use it again for future practicing of the English language.

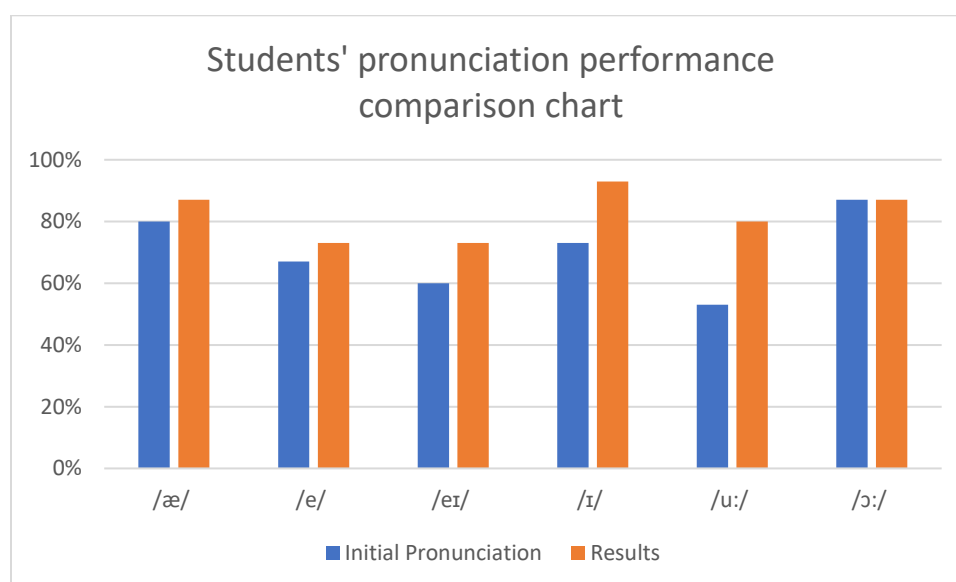
Furthermore, the checklist instrument is applied two times to determine if there are any clear changes either negative or positive on the pronunciation of the students' pronunciation of minimal pairs in the English language. Therefore, the first application of the checklist is before the implementation of practicing with the recording tool, this to determine the initial proficiency level of the students' pronunciation of minimal pairs. Then, after practicing with the recording tool, the checklist is applied again to determine the outcome of the students' pronunciation. In addition, a small questionnaire is applied

as well, to determine the opinions of the students by using closed ended questions regarding the recording tool.

Furthermore, the results of both checklists are displayed on the chart below:

4.3.1 Graphic #1

Students' pronunciation performance comparison chart



Source: Drach, C. The impact of recording app in improving pronunciation in virtuality in students, 2022.

The chart above displays the information gathered by applying the checklist twice to the students. Moreover, the chart exemplifies the progress of the student pronunciation of these specific phonemes which are also minimal pairs as well. In addition, one has to take into careful consideration that the first application of the checklist went already remarkably well for most students. Therefore, the students being in a conversational English class had already a very good pronunciation of the vowels

that would be evaluated, therefore the progress made is not as drastic as it could have been.

The chart above displays both gathered at different times but by the same checklist, therefore the y axis represents the percentage of students who achieved the desired sound for the vowel phoneme. On the other hand, the x axis represents the vowel sound they should produce to improve their pronunciation of these vowels in accordance with the minimal pairs. Furthermore, the blue bars represent the results of the first application of the instrument, while the orange bar represents the results of the students achieved after the implementation of the proposed recording tool.

After explaining how the chart displays the gathered data, one can analyze the difference between both bars and come to the correspondent conclusions about the effectivity of the recording tool.

As mentioned previously, the students had fortunately already a great level pronunciation for these specific vowel sounds, therefore the difference is not as grand, however still noticeable.

Firstly, the /æ/ sound was already pronounced very well by the students, since the result for the first application showcases that 80% of the students were able to pronounce the vowel properly. After the implementation of the recording tool, there was a slight increase, 87% of the students were able to pronounce the vowel correctly, this is a difference of only one student.

The second vowel is the /e/ sound which on the initial application of the instrument a total of 67%, who represent ten students, pronounces the sound correctly. By the second application there was only a slight increase to 73%, who represent

exactly one more student who was able to pronounce the vowel properly after practicing with the recording tool.

The third vowel is the /eɪ/ sound, moreover on the first application of the checklist the /eɪ/ sound was pronounced properly by 60% of the students, who represent a total of nine students. The second application of the checklist displays an increase by two students, who represent total 73%.

The fourth vowel is the /ɪ/ sound, the first application revealed that 73% of the students were able to pronounce the /ɪ/ sound. After the implementation of the recording tool the percentage of students able to pronounce the /ɪ/ vowel increased to 93%, this means that three additional students were able to pronounce properly the vowel after practicing with the recording tool.

The fifth vowel is the /u:/ sound, which was the most difficult sound to pronounce for the students had the most difference in the comparison of the results. Moreover, the first application of the checklist revealed that 8 students, who represent 53%, did pronounce the vowel sound properly. However, after the implementation of the recording tool, the second application of the checklist revealed that an additional four students, who represent 80%, improved their pronunciation of the vowel sound which was pronounced correctly.

The sixth vowel is the /ɔ:/ sound, is the only exception for progress, since there was no visible improvement, however 87% of the students, who represent a majority of thirteen out of fifteen students, did properly pronounce the vowel sound.

Furthermore, the /e/ and /u:/ phonemes were the only vowel sounds which needed much more improvement, since the first application revealed some deficiencies

in their pronunciation. Fortunately, the results revealed that these two vowel sounds did experience an improvement in the pronunciation of the students, which is a success for the pupils and their skills.

Therefore, after the implementation of the recording tool positive changes did occur which is a great success for the student's pronunciation skills and overall speaking skills. Granted the changes were not overwhelmingly grand, however making a positive change in at least some student is already an immense success for the researcher and the students.

As mentioned previously the small questionnaire is applied after the checklist to gather information on the students' opinion of the recording tool and its effectivity in the distance learning environment. The questions are closed ended to gather precise data regarding the topic. The following graphics show the results of the questionnaire:

4.3.2 Graphic #2

Have you improved the pronunciation skill?

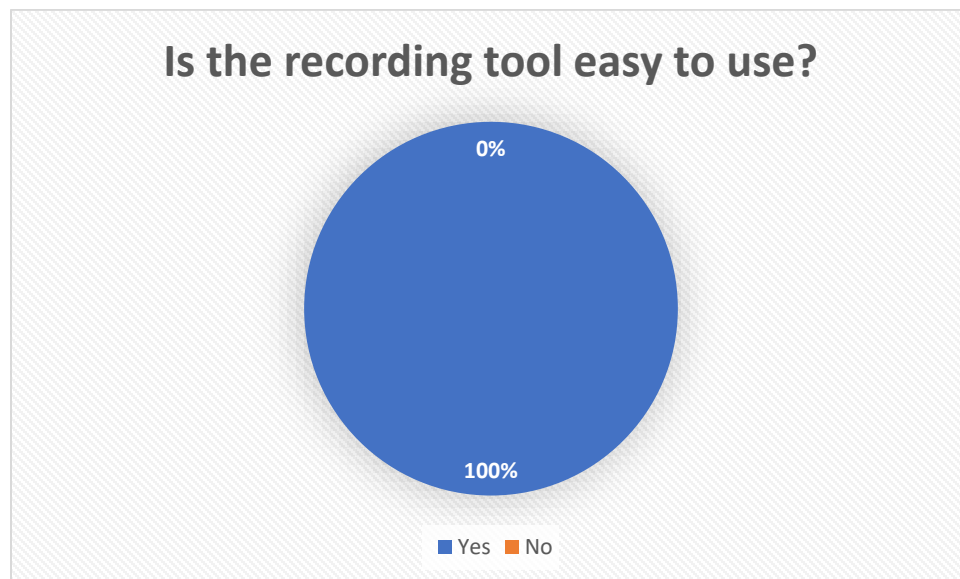


Source: Drach, C. The impact of recording app in improving pronunciation in virtuality in students, 2022.

According to the information shown on the graphic, which concerns itself with the question if the students think they improved their pronunciation skills, of the total number of fifteen students, 2 students who represent 13% did not believe that they improved their pronunciation skills. Moreover, of the total fifteen students, thirteen of these pupils who represent 87% did believe that they improved their pronunciation skills.

4.3.3 Graphic #3

Is the recording tool easy to use?

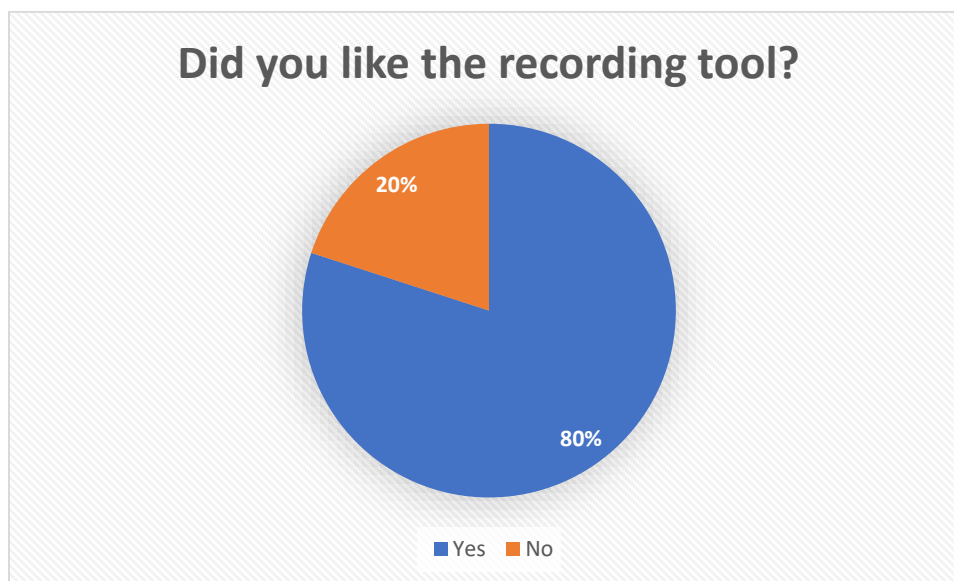


Source: Drach, C. The impact of recording app in improving pronunciation in virtuality in students, 2022.

According to the previous displayed data the answer to the question if the recording tool was easy to use was by a unanimous vote yes. All the fifteen students unanimously consider the recording tool to be easy to use, this is important information since the tool should be as easy to use as possible. This in order to provide the students with a tool which does not need much instruction or clarification during its prolonged usage and can be utilized easily by any student with a smartphone. Furthermore, it is important to know that the students consider the tool to be easy to use, since this could potentially increase the chances of the recording tool to be utilized again by the students in related and unrelated efforts to impact positively their educations.

4.3.4 Graphic #4

Did you like the recording tool?

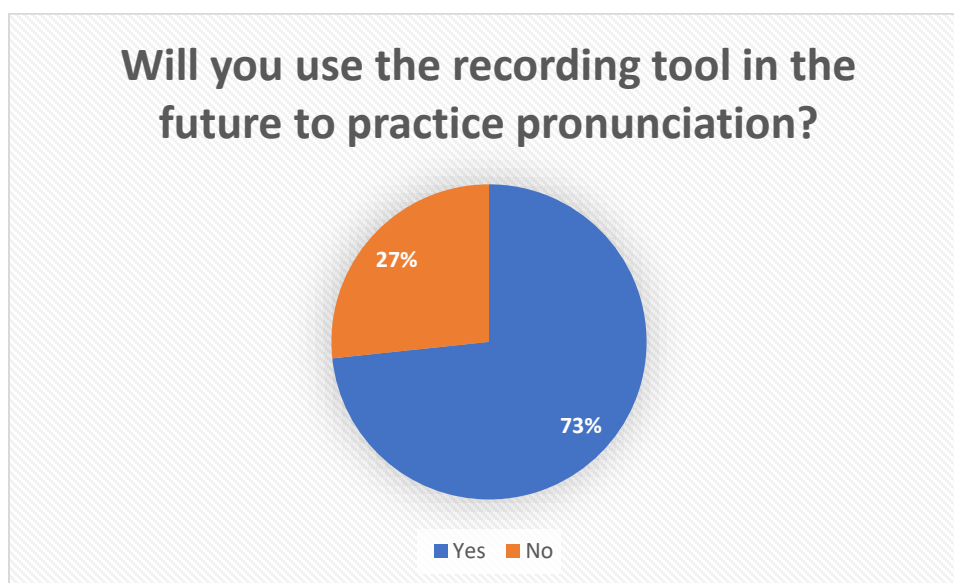


Source: Drach, C. The impact of recording app in improving pronunciation in virtuality in students, 2022.

In accordance with the previous graphic which is about the second question if the students liked the recording tool, they used to improve their pronunciation skills, most of the students liked the recording tool. Moreover, of total fifteen students only three pupils which represent 20% did not like the recording tool. This means that twelve students which represents 80 % did like the recording tool. Moreover, this is important to be aware of so these types of tools can be implemented again in the future to help to improve the speaking and pronunciations skills of the students in the English language and in public institutions. Furthermore, if the students present a liking to the students, there are higher chances that the students use the tool again improve their pronunciation.

4.3.5 Graphic #5

Will you use the recording tool in the future to practice pronunciation?



Source: Drach, C. The impact of recording app in improving pronunciation in virtuality in students, 2022.

As stated in the chart above the questions is about if the students intend to use the recording tool in the future to practice the pronunciation skills. According to the chart, most students do intend to use the recording tool in their future to practice the pronunciation skills, this represents eleven students which are shown as 73% of the total. Moreover, four students who represent 27%, do not want to use the recording tool in the future. This information helps to determine if the recording tool had a positive impact on the students' studying choices. Since introducing these tools to the students can impact if they would like to study and practice with these tools in the future which is great for the development and improvement of various skills.

4.4 Results of instrument – Questionnaire

The last instrument is a questionnaire directed to the students of the public institution, regarding their personal experiences with the distance learning environment and its impact on their education so far. Therefore, gathering this data helps to understand the standpoint of the students on the topic of distance learning and what they think of this educational environment.

As previously mentioned, the main purpose of this instrument is to collect information regarding the students' opinion of distance learning and its relation to pronunciation. As well as their opinions on the effectivity of this special learning environment, which are important to determine and understand what their expectations can be regarding distance learning and choosing future educational environments to further their education.

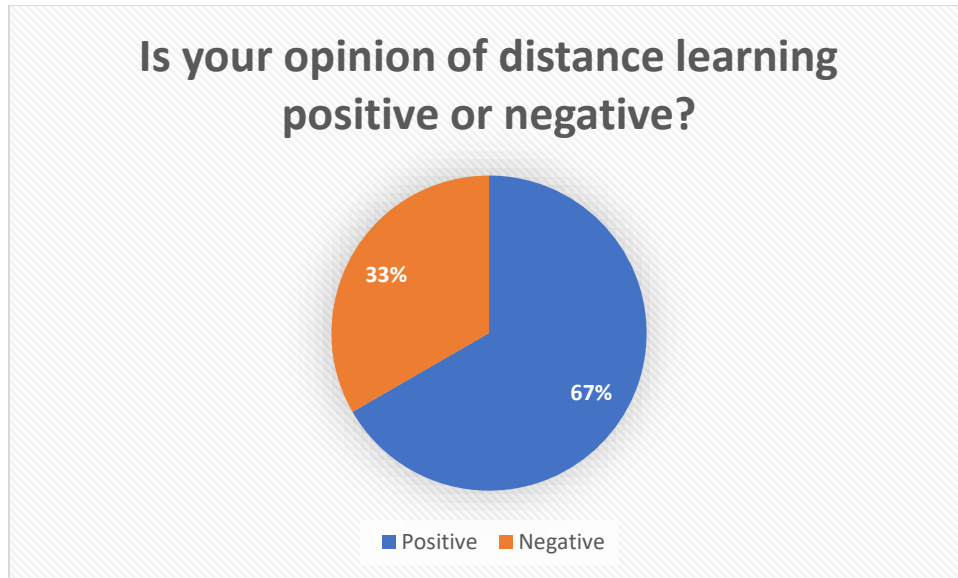
Moreover, the questionnaire instrument is applied after the second application of the checklist which determines if there are any changes in the students' pronunciation in

the English language. This in order to ensure that the students can experience a different type of technological tool that could be applied in future distance learning classes. In addition, the questions are closed and open-ended questions, this to ensure more diverse and impactful answers to enrich the research paper with meaningful information.

Then, the gathered data is presented in graphs which make it more accessible to analyze and understand. Moreover, each of the graphics represent a single question asked to the students. In addition, the first question as well as the two statements are open ended, therefore much more elaboration is required for their graphics. Furthermore, for the statements which are answered by the students the researcher gathered the information and made the general answers in one category, for example every advantage regarding saving money is put into one category for more comprehensibility.

4.4.1 Graphic #6

Is your opinion of distance learning positive or negative?



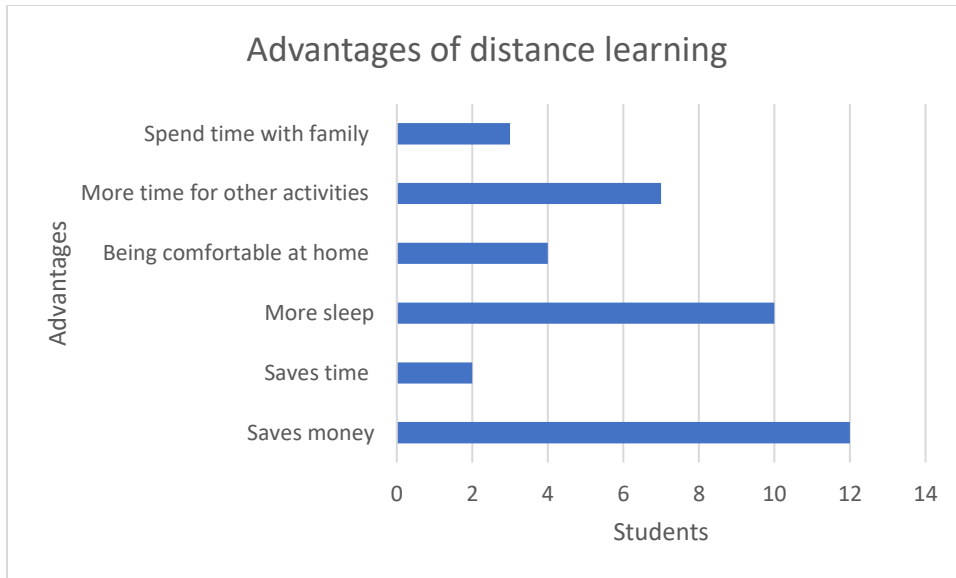
Source: Drach, C. The impact of recording app in improving pronunciation in virtuality in students, 2022.

As stated in the graph above, the question to the students is based on their either negative or positive opinions on distance learning, their opinions have been formed during the time of the distance learning environment implemented during the pandemic. Moreover, their opinions on the distance learning environment are more positive than not. Therefore, of total fifteen students, ten have a positive opinion of the distance learning environment, these ten students represent 67%. On the other hand, five students, who represent 33%, have a negative opinion on the distance learning environment.

In the following two graphs these negative and positive opinions are supported by the advantages and disadvantages that the students mentioned.

4.4.2 Graphic #7

Name advantages of the distance learning environment.



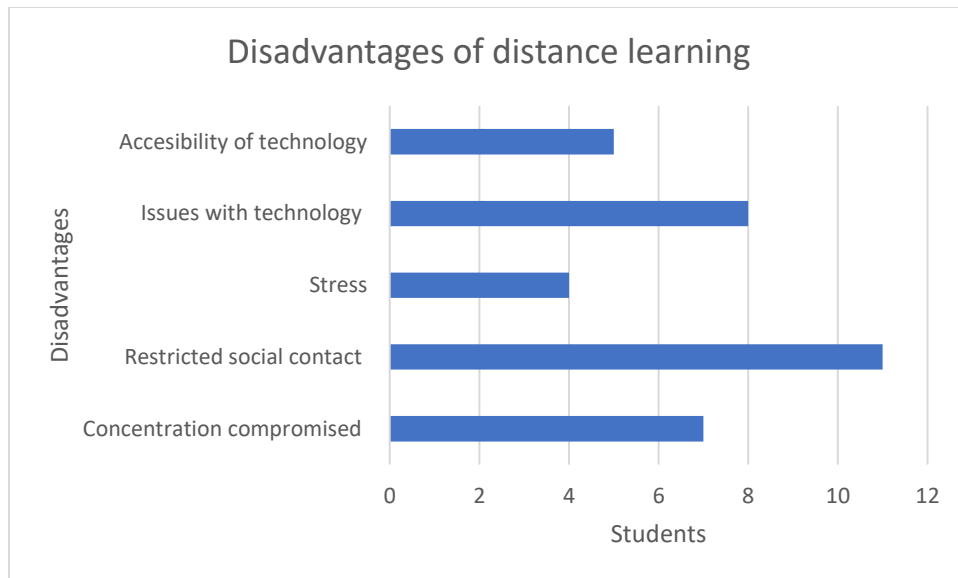
Source: Drach, C. The impact of recording app in improving pronunciation in virtuality in students, 2022.

Certainly, this graphic is about the various advantages of distance learning from the point of view of the students who studied quite some time in this special learning environment due to the global pandemic and its implications upon all people. Moreover, the most stated advantages are related to the fact that the students saved money in distance learning due to not having to pay for transportation and food, get more sleeping hours since they do not have a commute to the educational institution nor must get ready in the mornings and have more time to do other activities.

In addition, other advantages according to the students are being comfortable at home, being able to spend more time with their families and being in a distance learning environment saves time of their day.

4.4.3 Graphic #8

Name disadvantages of the distance learning environment.



Source: Drach, C. The impact of recording app in improving pronunciation in virtuality in students, 2022.

Certainly, studying in a distance learning environment can have its disadvantages as well, therefore the graphic above displays the answers of the students when asked to state some disadvantages they experienced during their time in the distance learning environment.

Therefore, according to the previous chart, eleven students stated that the restricted contact to their peers is a major disadvantage. Furthermore, this disadvantage is rooted in the humans need for contact and is understandable, especially in the crucial developing stages of adolescence and should be addressed accordingly to avoid damages to the social skills of the teenagers affected by this disadvantage. In addition, the second most mentioned disadvantage of distance learning is issues with technology, it was mentioned in total by eight students.

As stated previously the answers of the students have been put into categories, therefore the answers were all related to various issues regarding technology, so it included issues with technological devices, programs, apps, and the internet. Moreover, these issues are expected in a distance learning environment since technology is not perfect and can present various issues regarding many factors.

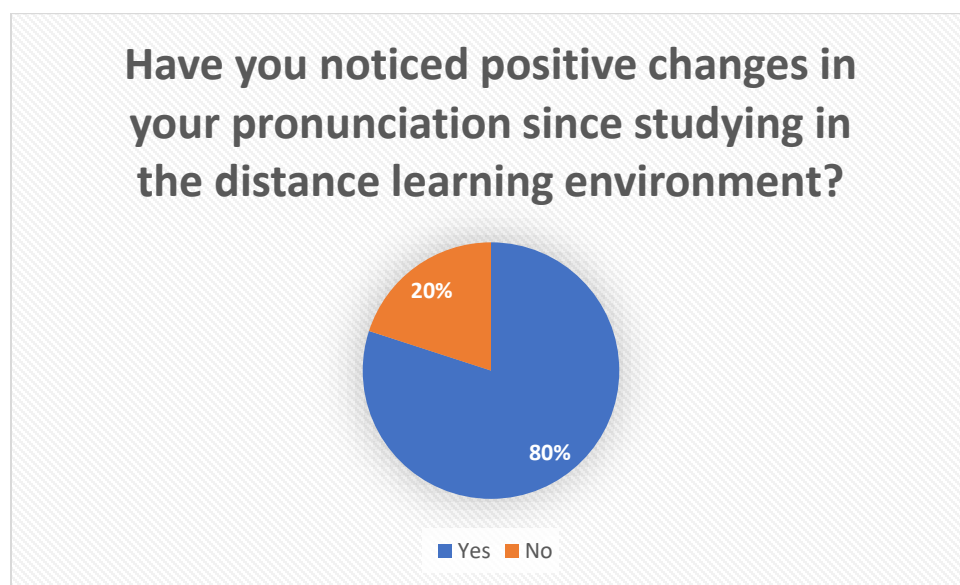
Moreover, the third most mentioned disadvantage is based on concentration issues, seven out of fifteen students mentioned they experienced this issue during their distance learning experience. This issue manifest itself as interruptions and various issues regarding their concentration on the online class as well as individual studying and homework.

Other disadvantages that were foreseeable are the specific issues on accessibility of technology, five out of fifteen students mentioned they experienced issues regarding this disadvantage of the distance learning environment. As previously mentioned, many factors can impact the students access on technology, one of the most important factors on this is sadly the socioeconomic standing of the student. With sufficient money the parent or legal guardians can buy the necessary technological devices as well as contract a good internet connection, sadly without these economic means students have this disadvantage in distance learning. Furthermore, some of these students live in a very rural place, this also implies that the internet connections is not as stable as it is in the city. Therefore, some students mentioned power outages and issues with connectivity as disadvantages of studying in the distance learning environment.

The last disadvantage, which was mentioned by four out of fifteen students is based on the additional stress they experienced in the distance learning environment. Certainly, stress is quite often present in any learning environment, however especially in distance learning environment students are sometimes more stressed due to the reasons above and many more. Sadly, mental health is often overlooked, however it should be a focus point for educational institutions. Since students that suffer under stress can simultaneously develop more mental health concerns and their education can be negatively affected.

4.4.4 Graphic #9

Have you noticed positive changes in your pronunciation since studying in the distance learning environment?



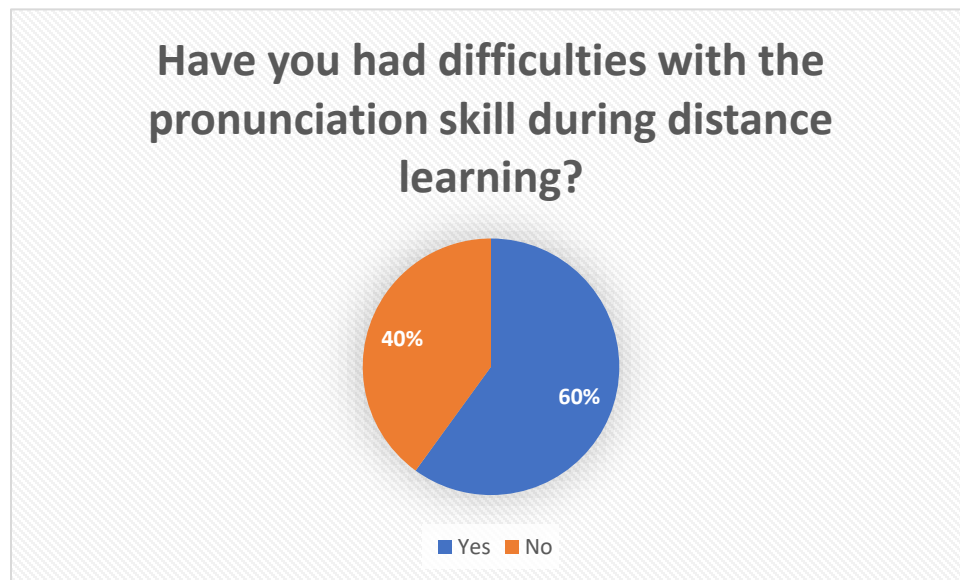
Source: Drach, C. The impact of recording app in improving pronunciation in virtuality in students, 2022.

According to the graphic above it displays the question if the students noticed any positive changes in their pronunciation since studying in the distance learning environment. Therefore, the students replied quite positive to this inquiry, specifically twelve students, who represent 80%, stated that they have experienced a positive change in their pronunciation while studying in a distance learning environment. On the other hand, three students, who represent 20%, stated that they did not notice any positive changes to their pronunciation in the distance learning environment.

Moreover, these differences in the answers can be caused by other disadvantages which some students did experience while others not, advantages and disadvantages in distance learning affect greatly the learning experience of the students and therefore their proficiency in the pronunciation and speaking skill.

4.4.5 Graphic #10

Have you had difficulties with the pronunciation skill during distance learning?



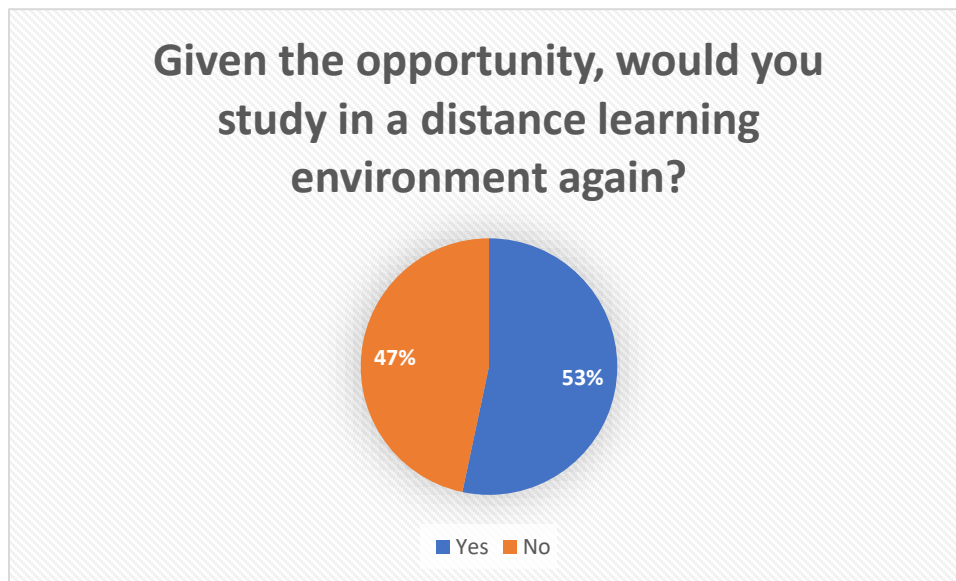
Source: Drach, C. The impact of recording app in improving pronunciation in virtuality in students, 2022.

According to the previous chart the inquiry is based on if the students experienced any difficulties with the pronunciation skill during their time studying in the distance learning environment. From the total number of fifteen students, nine students who represent 60%, did experience difficulties with their pronunciation skills during their time studying in the distance learning environment. On the other hand, six students, who represent 40%, did not experience any difficulties with the pronunciation skills during distance learning, these students are also the ones that stated that they experienced positive changes in their pronunciation skills during their time studying in the distance learning environment.

This difference in answers can be caused by the different advantages and disadvantages that the students personally experienced during their time studying in distance learning. Clearly, a student that experienced more disadvantages and had more difficulties, can suffer under these conditions, and therefore not improve as planned their pronunciation skills and overall improvement in their further education in distance learning.

4.4.6 Graphic #11

Given the opportunity, would you study in a distance learning environment again?



Source: Drach, C. The impact of recording app in improving pronunciation in virtuality in students, 2022.

Finally, the last question asked to the students is if they would choose to study in a distance learning environment in the future if there would be an opportunity for this to take place. The answers on these questions were almost balanced between the students who would study in this specific environment again and students who would rather not study in the distance environment.

More specifically, eight students stated that they would study in the distance learning environment again, these students represent 53% in the graphic. On the other hand, seven students who represent 47% stated that they would rather not study in the distance learning environment in the future.

This difference as well as balance in answers could be rooted as well in the personal experiences which the students had with this specific learning environment. Their positive or negative experiences influence their opinions on the learning environment and its effectivity, this clearly leads to their liking of the distance learning environment and their desire to continue studying with this method or not.

Chapter V

Conclusions and recommendations

5.1 Conclusions

The purpose of this research paper is to improve the pronunciation of minimal pairs of students in public education, studying in a distance learning environment, using the recording tool proposed as a tool that could assist with this task, after carefully analyzing the results of various data gathering instruments, the researcher concludes that the purpose of the investigation has been achieved. The data gathered by the instruments proved that the recording tool did make a positive change in the students' pronunciation proficiency of minimal pairs in the English language.

Other important points to highlight were the distance learning environment and its implications for the students and their learning experiences. Furthermore, the instruments gathered information regarding the distance learning environment and its advantages, disadvantages and most importantly the opinions of the students on this special learning environment. The data gives assists in concluding that the distance learning environment is effective and helpful for many students for various reasons, but also has deficiencies which everyone involved should be aware of.

The significance of this research is based on the innovation necessary for the future of education. Sadly, the pandemic caused by Covid 19 forced education to move its classes in an online environment, and this caused many hardships for many people involved in education, not only students had difficulties but also teacher and the administrative staff. However, using more technology in education can be also beneficial for the proficiency of the students as well, therefore implementing and keep using these innovative tools could change the teaching and learning process in a positive way.

Therefore, teachers can use these innovative technological tools not only in distance learning but also in a presential classroom, to improve the learning experience of the students. Moreover, the importance of being innovative and open to technology should be highlighted as well for the benefit of the education of future generations of students.

5.2 Recommendations

Certainly, some recommendations the researcher can provide for teachers that would like to implement technological tools to improve the pronunciation proficiency of the students is to approach the students in a playful manner as well as to disguise these tools into fun activities that the students may enjoy.

Furthermore, teachers should always be researching and keep up with new educational technology and innovative teaching methods. Being open, curious, and creative can have a beneficial impact on the teacher's performance and subsequent success for the students as well.

Chapter VI

Proposal

6.1 Proposal

Certainly, to add continuity to the research paper a proposal is developed for further usage in the educational environment. Moreover, a proposal in research papers is a great way to give more perspective and ideas as to how the researcher intends the tools or techniques to be used in the educational environment and on the student population.

Therefore, to improve the pronunciation of minimal pairs of students in distance learning, the researcher proposes the use of the recording tool and the color vowel chart to assist alongside the regular classes. Moreover, these tools can be used as a complementation to the regular classes, to give more exposure time to the language as well as implementing autonomous learning, which is clearly beneficial in many ways for the students' further development in education. Furthermore, by implementing the recording tool and the color vowel chart alongside the classes it can help the students to achieve an improved pronunciation of vowel sounds and possibly better their overall speaking skills, this to overcome difficulties during the distance learning class. Moreover, implementing the color vowel chart improves the pronunciation of the students especially of the vowel sounds, and using the recording tool to practice assists the learning process.

Furthermore, the pronunciation skill is for many students difficult to master due to a variety of reasons, but especially in the distance learning environment more hardships are present during the teaching and learning process. Therefore, implementing these tools to learn practice the pronunciation skills additionally outside of the class is a great

way to achieve better pronunciation and speaking skills as well as having an overall better learning experience.

Furthermore, since the tool is easy to use and accessible to almost every student that has a smartphone and internet access is beneficial for the learning process. Moreover, the tool being accessible to many students helps to provide more equal opportunities for the pupils to benefit from. Additionally, the students can after a short instruction by the teacher use the recording tool independently and practice with it to improve their proficiency in the pronunciation and speaking skills, as well as possibly improve many more aspects of their language skills.

6.1 Name

Autonomous pronunciation practice tool

6.2 Proposals population

This proposal is specifically directed to the student population of the high school of Turrúcares, located in the province of Alajuela, Costa Rica. Moreover, this school is a public school in an urban but also rural area. Furthermore, this public educational institution provides the normal obligatory English classes, but the institution also provides additional courses which start in tenth grade. The students can choose one of the obligatory courses, depending on their personal likes and interests. These are the courses to choose from tourism, IT, and conversational English classes, undoubtedly these classes are a great way to reinforce and improve the English language skills of the students. Also, the students can obtain precious knowledge on various topics of tourism and IT as well as other useful skills which are very beneficial for the students' future pursuits.

Therefore, this proposal is specifically designed to help the students of the English conversational class to improve their pronunciation of some specific vowel sounds in the English language. Furthermore, the population consists of age-appropriate students who clearly understand and appreciate the importance of learning English as a foreign language, since it has a great significance for their futures. In addition, these students did choose this course over other previously mentioned courses, therefore they have already the very important desire to study and learn the English language and succeed in their language acquisition goals. Also, the students ages are between fifteen to seventeen years, depending on various factors. Therefore, due to their age, the students did receive regular English classes for the vast entirety of their school lives, however the specialized conversational English classes start in tenth grade, in the public education system.

Certainly, the main goal of the proposal is for the students to improve their pronunciation skills, specifically of the vowel sounds, this by practicing with the preinstalled recording tool additionally using the vowel guidelines of the color vowel chart.

Furthermore, some of the general procedures are to implement the recording tool alongside the color vowel chart to the conversational English classes of the students at the public institution. Moreover, implementing these both tools are meant to increasingly improve their pronunciation. In addition, by using the recording tool the students can practice and learn how to improve their pronunciation by comparing their own recording to the example recordings, simultaneously improving not only their pronunciation but

also their ability to work and learn independently and fomenting autonomous learning as well in the progress.

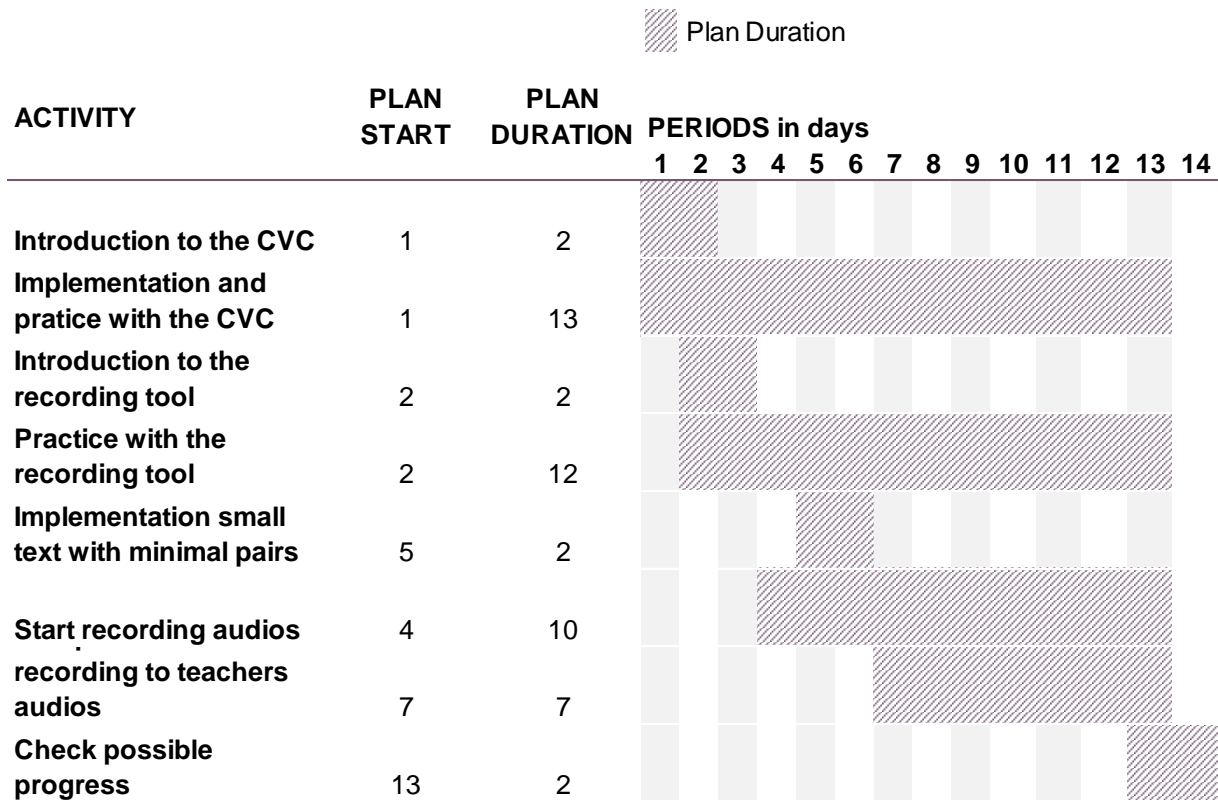
Lastly, implementing these new and innovative technological tools clearly could benefit education as a whole and everyone involved. Therefore, not only English pronunciation skills can be improved but it could also be implemented in other subjects as a mean to improve their autonomous practicing methods and promote independent learning.

6.3 Chronogram of activities

Undoubtedly, to exemplify and showcase in an organized manner the activities and procedures a chronogram is a fitting way to portray said data. Chronograms can be used to portray the correlation between data and a specific time frame in an organized manner which makes sense for the reader. Certainly, for this specific proposal a chronogram based on Gantt's Graph is optimal to showcase the ideas, activities, and dates, to eventually apply in the educational institution in any form to improve certain aspects of the teaching and learning process.

Furthermore, to exemplify and for better understanding of the procedures and activities, the researcher showcases the entirety of the proposal's timeline and correspondent activities in the graph below.

Proposal



The chronogram above showcases the proposal for the implementation of the recording tool and color vowel chart alongside the regular conversational English classes. Moreover, the graph showcases when and for how long each activity or procedure is implemented in the specific timeframe of fourteen days, not counting the weekend.

Furthermore, the graph explains the data by using specific sections which correlate which each other to create a chronological meaning. The first section is called activity which provides the data on the activity or procedure done in the timeframe of the proposal. The next two sections are about the timeframe of the proposal to exemplify the chronological order of the proposal. The section defines on which day the activity or

procedure is implemented in the specific timeframe and the duration of said implementation to the proposal. In addition, the last section showcases the timeframe in the total number of days and creates the correspondent correlation between the timeframe and the activities as well as the implementation and duration of each activity or procedure. Moreover, the horizontal bars represent the activity in question as well as the start and finishing date.

Furthermore, each activity or procedure is explained next for a better understanding of the proposals plan of action. The first activity is the introduction to the tool color vowel chart, this introduction is done in two days. The goal is to set a foundation to explain the students its usage and benefits for their learning process in the English pronunciation of specifically vowel sounds. Furthermore, according to Fanenshtel (2017) it is essential that the correct pronunciation is taught as soon as a new language is introduced (pag.1), therefore using the color vowel chart is a great way to establish great pronunciation of vowels. Moreover, the second activity is to implement and practice with the color vowel chart tool the pronunciation of vowel sounds. This activity is the longest one since the practicing starts the moment the tool is introduced on day one and continues until day thirteenth. Practicing with the color vowel chart and the recording tool simultaneously is important for the possible improvement in the pronunciation skills of the students.

The third activity is the introduction to the recording tool, it starts at day two and ends the following day. The introduction explains to the students how to use the tool, and which benefits it can have on their learning process. This occurs a day after the introduction to the color vowel chart, however both introductions overlap to combine

both tools for a better and possibly improved learning experience. Moreover, the fourth activity is to practice extensively with the recording tool the pronunciation of vowel sounds. This activity starts on day two and ends on day thirteenth, it is developed alongside of the practice with the color vowel chart combine its benefits for the students' learning.

The fifth activity is the implementation of a small text, which contains the minimal pairs to practice these vowel sounds to improve the students' pronunciation. Moreover, the text is used alongside the tools to complement them and give more practice material for the recordings made in the process. Also, the text is used to see if there is any progress made by the students, by comparing the recordings of the text in the beginning and the end of the timeframe. The sixth activity starts at day four and ends on day thirteenth, during this timeframe the students will start to record themselves and upload it to the online platform. The online platform is not specific, two recommended platforms are Microsoft Teams and WhatsApp in terms of group chats.

The sixth procedure is the implementation of the teachers' recordings to the students. On day seven the teacher uploads some voice recordings according to the color vowel charts practice, these recordings are for the students to check and compare their own recordings. In addition, this type of independent work is great for the students, since it promotes autonomous learning which is an important and useful skill for the any student to develop early in their lives.

The last procedure takes two days and starts on the thirteenth day. Therefore, on the last two days of the process the teacher checks the recordings of the students and compares the first ones to the last recordings to determine if there is any improvement

in the pronunciation of the students regarding vowel sounds in minimal pairs. Then the teacher provides the correspondent feedback to each student privately, this to ensure that the students know about their progress as well of possible areas to improve in the future.

Lastly, many of these activities overlap intentionally to create a combined learning process for the benefit of the students. The goal is that the students learn how to use the color vowel chart and the recording tool, to practice their pronunciation of vowel sounds. In the end of the process, they receive feedback from the teacher about their possible progress, which helps determine strengths and weaknesses in their pronunciation. The feedback also can be used to motivate the students about their process and highlight to the student the importance and effectiveness of practicing with these tools. Also, the feedback on their progress highlights that consistency and resilience are crucial for their learning experience and the subsequent achievement of their future goals. As previously mentioned, the usage of these tools alongside each other can promote autonomous learning to the students, which is a important skill for their future, since they can utilize this tool in many other areas of their lives and improve processes.

6.4 Budget

Certainly, due to the nature of this proposal the budget is very affordable and accessible to many populations of educational institutions. Many of the tools that are mentioned in this proposal are free of charge and can be used without any restrictions.

The materials for the instruction of the color vowel chart could have a cost of maximum 2000 colones, that would entail different types of paper and colors for the

correct representation of the chart. However, the teacher could also print the color vowel chart at a copy shop, that would cost less than 2000 colones. Also, if the teacher does not want to use physical didactic material, the teacher can also use presentation apps to create or use the images of the color vowel chart.

Furthermore, there are costs involved in the payment of internet access as well as Microsoft Teams, however these costs are not counted for this proposal since those services are already a requirement for distance learning.

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Appendixes

Appendix A

Observation:

Criteria	Yes	No
1. Do the students engage in the online class?		
2. Do the students participate in the online class?		
3. Does the teacher encourage the participation of the students in the online class?		
4. Is there sufficient space for the development of the speaking skill?		
5. Is there sufficient space for the development of the pronunciation skill?		
6. Do most of the students speak at least once in a 40min online class?		
7. Is there immediate feedback regarding pronunciation provided by the teacher to the students?		
8. Is there a focus on the pronunciation and speaking part of the class?		

Appendix B

Checklist:

Criteria	Yes	No
Does the student pronounce the phoneme /æ/ as in black		
Does the student pronounce the phoneme /e/ as in red		
Does the student pronounce the phoneme /eɪ/ as in grey		
Does the student pronounce the phoneme /ɪ/ as in green		
Does the student pronounce the phoneme /u:/ as in blue		
Does the student pronounce the phoneme /ɔ:/ as in olive		

Questionnaire about the tool:

Criteria	Yes	No
Have you improved the pronunciation skill?		
Is the tool easy to use?		
Did you like the recording tool?		

Will you use the recording tool in the future to practice pronunciation?		
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Appendix C

Questionnaire about opinions of distance learning:

Instructions: Answer the following questions with yes or no

1. Is your opinion of distance learning positive or negative?
2. Have you noticed positive changes in your pronunciation since studying in the distance learning environment?
3. Have you had difficulties with the pronunciation skills during distance learning?
4. Given the opportunity, would you study in a distance learning environment again?

Mention some advantages and disadvantages next:

5. Name advantages of the distance learning environment.
6. Name disadvantages of the distance learning environment.