

Didactic and Technological resources based on English Teaching as a second language to improve speaking and reading skills on students with special needs in high school during 2021

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Jury

This Project was approved by the jury of Language Teaching, from Universidad Latina de Costa Rica, Ciudad Neily as a requirement to get the tittle of Baccalaureate on English Teaching

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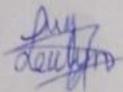
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Edwin Z

Abstract

Education for students with special needs in Costa Rica is limited since the methods used to teach tends to be basics, in other words, it does not include a variety of different resources specially when talking about technology. This thesis project pretends to demonstrate the importance of the incorporation of ICTs when teaching students with special needs, focusing in speaking and reading skills. During the investigation, some of the specials needs that can be presented on students are going to be explained, in this manner different methods and activities would be known according to each of them. On the other hand, some examples of technological resources are explained to show how effective it can result when teaching. During the investigation, important facts were found which demonstrate that the ICTs can facilitate a more independent life for people with special needs creating equal conditions for them. For this reason, it is necessary to actualize the curriculum or program implementing new methods and technological resources, on the other hand teachers should receive properly trainings to use the didactic and technological tools in the best way to increase not only facilities on students but also, improvement of skills such as speaking and reading, in this manner people with special needs will feel more confident in a social environment.

Resumen Ejecutivo

La Educación para estudiantes con habilidades especiales en Costa Rica es limitada debido a que los métodos usados en la enseñanza tienden a hacer muy básicos, en otras palabras, no incluyen variedad de recursos especialmente hablando de recursos tecnológicos. Este proyecto de tesis pretende demostrar la importancia de las TICs cuando se enseña estudiantes con habilidades especiales enfocándose en habilidades de lectura y habla. Durante la investigación se explicarán algunas de las habilidades especiales que se pueden presentar en los estudiantes de esta manera se podrá conocer los métodos y actividades adecuadas para cada una de ellas. También serán explicados algunos ejemplos de recursos tecnológicos para demostrar cuan efectivos pueden resultar durante la enseñanza. Durante esta investigación se encontraron hechos importantes que demuestran que las TICs pueden facilitarles una vida más independiente a personas con habilidades especiales creando igualdad de condiciones para ellos. Para esto es necesario actualizar el curriculum implementando nuevos métodos y recursos tecnológicos, por otra parte, los profesores deberían de recibir cursos para usar herramientas didácticas y tecnológicas de la mejor manera para incrementar no solo facilidades sobre los estudiantes sino además para mejorar las habilidades de lectura y habla, de esta manera las personas con habilidades especiales podrán sentirse más confiadas en un ambiente social.

Thought

“Everybody is a genius, but if you judge a fish by its ability to climb a tree, it will live its whole life believing that it is stupid”. (Albert Einstein)

DEDICATION

I would like to dedicate all my efforts to God who has blessed me every day and guide me to follow a good way full of obstacles that have made me grow.

Also, I would like to dedicate this effort to my family, especially my parents because no matter what the circumstances was, they always give me their hand to help me. I dedicate this effort to the values and principles that my mom and dad teach me to be someone and found a line to a better future.

Leulin Mena.M

DEDICATION

With love and affection, I would like to make this dedicatory to those persons that have been my inspiration, comprehension, and support through this long process. I dedicate this work to my parents Maria Vanessa Chaves Madrigal and Gregory Antony Zuñiga Berrocal that always show me their unconditional support and motivation to go ahead with my dreams and goals. To my Girlfriend Fabiana González Hernández, thanks to her I finish my High School and give me all the motivation to prepare me for a better future. She have been there every moment that I should need help and support to go through this process. This and all the other goals that I can reach through my life are going to be for her. To my boss Jorge Arturo Concepcion Chaves that give me the opportunity to continue with my studies because nowadays is very difficult to find a job that let you study. To my partner Leulin Mena Mora that always was there, to give us mutual support during this process and the teachers for been there to help us in any moment.

Thanks to all them for that and many other things.

Eduin Zuñiga Ch.

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I would like to express special thanks to my teachers of the Universidad Latina who have worked very hard to be an example for us as professionals because thanks to it I know what kind of teacher I want to be.

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To God, he is the creator and give us the life, wisdom, show us the correct way. It gives all the strength to go through all the challenges faced during this process.

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CHAPTER I
INTRODUCTION

1.1 Introduction

This thesis pretends to improve speaking and reading skills of English language by incorporating technology resources when teaching students with special needs. In this manner education can be seen as an equal environment for those students who need more attention. On the other hand, by including didactic and technological resources in teaching, more doors can be opened in the future of this students since they will be more familiar and confident in the use of technology, furthermore, practicing communicative skills would improve their social relationships.

1.2 Problem Statement

The education for students with special needs should incorporate more technological resources in their teaching methods when teaching English as a second language. This would improve the learning process of the students with special needs and at the same time would prepare them for real-world scenarios. Right now, the teaching process for these students is too basic and this causes that these students finish their studies with a knowledge not adequate for their age. This would increase difficulties for these students to create opportunities to improve in their social and working life.

Creating a more complete teaching process where the technology goes hand to hand with their learning process would create a positive effect on students with special needs. This research would demonstrate different didactic and technological resources that would help to increase and prepare students with special needs to face real world scenarios. Now days we live in a world where the technology and a second language are an important key to open doors in the social and working field.

1.3 Justification

The students with special needs, face an important issue that many people do not realize. The education for these students, most of the time is too basic and their learning is not improving properly because the plans or methods tend to be basic. The idea of this investigation is to share options and different important information that may be helpful for teachers to apply them in the classroom, in this manner lessons can be more active, communicative, and fun for students who most of the time face a very limit education. It is important to mention that sometimes a low education is applied because the lack of information or knowledge about the students' needs.

1.4 Hypothesis

The use of didactic and technological resources applied to students with special needs will increase more growth opportunities and help them develop communication skills in the English language.

1.5 Objectives

1.5.1 General Objectives

To demonstrate how to teach students with special needs using technology to increase their knowledge in speaking and reading skills of English language.

1.5.2 Specific Objectives

- 1- To analyze some of the special needs that can be present in the different students.

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2-To implement the different didactic and technological resources that can be used in the different student's needs.

3-To evaluate the effectiveness of the didactic and technological resources apply in the investigation.

1.6 Scopes and Limitations

This research project is focus on how to improve the learning of speaking and reading skills of English language on students with special needs by providing different didactic and technological tools that could allow the teachers to facilitate the teaching process for the students of seventh grade of Colegio Umberto Melloni Campanini during 2021. This institution is located in San Vito, Coto Brus. During the investigation some contributions of different authors show that technology can have a positive or negative impact of the learning process depending on how it is applied in the education field. The study is focus on how it should be applied for a positive impact on students with special needs. The major limitation while doing this research is the pandemic of COVID-19, unfortunately due to this, the methods and founding of the research could not be applied in real life situations to get strong results, however, the investigation demonstrate the results based on similar works and testimonies.

CHAPTER II
THEORETICAL FRAMEWORK

2.1 Education System in Costa Rica

According to *San Jose Costa Rica.org*, Costa Rica is in the fourth place in ninety-four countries with more opportunities and accessibility to study. The Ministry of Public Education (MEP) facilitate the development of an excellent education opportunities to all the population by promoting the integral development and human capacities to be integrated in the global society. Costa Rica brings the opportunity of a free education, but also, an equal education for all ages.

The education process in Costa Rica is divided in 4 different areas.

- Kinder Garden education this is for child from 5 years and 3 months.
- Elementary education, this is composed by two processes. Primary is for kids that have from 6 to 12 years old, and the Secondary is for students from 13 to 17 years old.
- Diversification education this is for students that finish 9th grade of high school and for different circumstances were not able to finish their studies.
- University education, the goal of this process is to teach students in the different areas to create a professional that would be able to find a good job in their future.

2.2 What is the Education Technology?

Education Technology (ET) can be considered as an integrative, live, contradictory and significative discipline of the Education. According to General Assembly, it is an ethical practice for facilitating learning and improving performance by creating, using and

Didactic and technological resources based on English Teaching managing appropriate technological processes and resources. Technology is a resource that contributes or facilitates the process in all files, for example, the manufacturer of products, however, educators have been using technology to facilitate the education process for example to create physical material as tests or registries of the students. On the other hand, a less percentage of teachers use technological resources to teach, especially students with special needs.

2.3 Incorporation of ICTs in Costa Rica education system:

This incorporation began on 1985 with the opening of the Experimental Center located in The High School Bachiller Rafael Francisco Osejo that open to the creation of “Red de Centros para la Enseñanza en Informática (CEI) (MEP-FOD, 2005) Later was built the PRONIE MEP-FOD, initial call Programa de Informática Educativa (PIE), as an educative propose with economic and social range. This program built an alliance between the MEP and FOD that look to help in three subjects (Muñoz, Brenes, Bujanda, Mora, Nuñez, y Zuñiga, 2014):

- Full incorporation of people to the national economy and international dynamic.
- Foment educative system of quality.
- Strengthen the mechanism of citizen participation and promote the social union to the interior of the country, to contribute to the reduction of geographic, socioeconomic, educative, and technologic gaps.

In the year 1994, according with MEP-FOD (2005), is created in the MEP the Educative Informatic Department through the order # 23489.

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The Program of educative informatic for High School (Pries) was established in 1995 and allowed an administrative and operative structure to define types of working , in 2002 was moved to FOD. In 2004 a program of educative informatic MEP-FOD for third cycle, and the program of innovation educative in third cycle of basic education was launched.

Later in the MEP some changes were made as the creation of Innovation Colleges and the Technological Resources Direction (DRT), created in the process of the upgrade institutional of the Ministry. This group of programs and direction are the responsible of the development of programs and projects of the incorporation of ICT in the classroom.

2.4 ICTs and education of English language for students with special needs in Costa Rica

According to Innovaciones Educativas, special studies show that the population with special abilities, face multiples barriers that limit their development of social rights such as differences in the access of fundamental services as health, education, and jobs. Nowadays the technology has made a big change in the society. The technologies can be considered as an important and essential tool in the learning process. It can be applied to any group of population; it does not matter their physical or mental differences.

Students with special needs receive a special trade in education for example by creating a different plan for teaching, however, these kinds of plans are not good enough for their professional development. During their teaching process, learners receive a slow progress of learning, and when talking about the use of technology it is too basic or null, this means that when those students finished their studies, most of them are not going to be prepared to face the labor world.

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The properly use or introduction of ICTs can contribute to the equal opportunities for learners with different abilities and provide a more independent life. Furthermore, if these students could learn a second language applying the use of ICTs to improve their skills such as speaking and reading, then they are going to be able to find more opportunities not only in the labor ambient but also, they could be or feel more motivated and fuller of self-confidence to face the society.

Inclusive education is an aspect in which the hole population should have access, but for nobody is a secret that working as a teacher with learners that have any type of problem, or special abilities, for example Down` syndrome, autism, Asperger, or any type of attention deficit is an everyday challenge. To teach English as a second language to students with special needs, is very important to know what kind of ability is presented and what techniques can be used for each student, also an important clue is to know what technological tools can be apply according to those abilities to facilitate and increment the learning process.

2.5 Students with special needs

Teaching students with special needs is a process in which the teacher must be very careful but optimistic having a lot of creativity, management of time and special attention on how the student learn best. On the other hand, there will be some students with special needs and sometimes when a teacher faces these special cases for the first time, can be difficult to know and to manage how to work successful with those students. Let see some abilities of learning and how to teach them successful.

2.5.1 Down's syndrome

It is a condition in which a person has an extra chromosome, this causes a change in the baby's body and brain which cause mental and physical challenges, and they have different abilities.

2.5.1.1 Behavior: Children with Down syndrome have a variety of unique behaviors. Teachers should provide a lot of positive encouragement to these children to obtain their confidence and teach in the best way.

2.5.1.2 Unique Talents: People with Down syndrome tend to be very talented, for example on music or any sport. They need to develop skills and be part of groups, also they do not have to feel pressure to learn something, who is teaching them needs to be patient and positive.

2.5.1.3 Communication: According to Mass General for Children, people with Down syndrome can be easily understood, some others have difficulties to communicate and there are some that stay in the middle of this, however, there are many ways they can communicate nonverbally, for example, facial expressions, gestures or signing. It is very important to be patient and to know what the best way is to communicate with them. Asking direct questions instead of many open-ended is helpful.

2.5.1.4 Visual Memory: It can be said that people with Down syndrome have an incredible memory as "photographic memory". This can be so much useful to learn, they can create lists about their interests, remember where things are or places they had visited, also they can be very organized.

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2.5.1.5 Methods to use in class: In some cases, children with Down syndrome assist to special schools in which the institution focused only in these special abilities with prepared teachers, however, is very common that children with Down syndrome assist to a regular school where teachers are not always prepare. It means a special change in the curriculum of this student in order to develop the maximum success in this student. It is very important to know how to work with the abilities of this students and to know the correct materials to teach

2.5.1.5.1 Visual supports: Children with Down syndrome as was mentioned, have a great visual memory, it can be very useful to work with pictures, colorful charts, videos, also to catch their attention with texts is useful apply bolding, underline, bright colors, and any other format.

2.5.1.5.2 Dynamic classes: Teachers should make lessons actively, by working with sensory activities, implementing social activities for example work in pairs or groups, in this way the students can improve their social skills and feel confidence in the classroom.

2.5.1.5.3 Being clear and passionate: People with Down syndrome need time to understand language and to respond, in this way teachers need to speak directly to the student using clear language, short sentences and use appropriate facial expressions. Furthermore, the person who is teaching them must be very patient and passionate, she/he needs to increase in some way motivation in the student to create interest and self-confidence in the learning process all the time.

2.5.2 Autism

According to AutismConnect “Autism Spectrum Disorder (ASD) or Autism, is a neurodevelopmental disorder characterized by impaired social interaction, verbal and non-verbal communication, and restricted and repetitive behavior”. The first signs can appear in the two or three years old. Some signs can be intellectual disability, difficulties in motor coordination and attention and physical health issues.

2.5.2.1 Behavior: People with Autism can present a variety of behaviors such as avoid eye contact, desire to be alone, difficulties to understand feelings of other people and to talk about their own feelings, delays in speech and language skills, repetition of words.

2.5.2.2 Communication: Autism can cause an important social and communication challenges, it is not in the same way for all autism people, it can be from a low to a severe level. Children with autism are often seem in their own world presenting difficulties to communicate and interact with others. Also, they may have problems developing social skills and understanding what others say. Furthermore, they can present difficulties to communicate nonverbally, for example using hand gestures, facial expressions, or eye contact.

2.5.2.3 Echolalia: Echolalia is a common characteristic of the autism in which the child repeat words several times that he/she has heard. They used to say words that does not have any sense while they are having a conversation.

2.5.2.4 Methods to use in class: Teach students with autism can be difficult and not only because the institutions are not equipment enough to teach them but because they present an unexpected behavior and demand at their level, in other words, it is hard to

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predict when they will learn a particular skill. For this reason, is important that teachers learn or adopt special methods for these students to avoid giving up on students.

2.5.2.4.1 Clear instruction: Autism can impact their communications skills, so, is very important that teachers be clear using short sentences and avoid metaphors or rhetorical questions.

2.5.2.4.2 Integrate their interests: To know the particular interest of the autistic child can be very helpful in their learning process, they tend to be focused on a particular thing, in this way teacher implement that alike in the materials needed in the lesson. For example, if the kid like the history or cars, the teacher can use history or cars to teach. In this way the learner will feel interested on learning.

2.5.2.4.3 Anticipation: People with autism use to follow routines as a comfort zone and when they have to change the routine it can be very overwhelming for them. This is important to know because if the teacher needs to make a change in their time lesson for example, she/he needs to prepare the child beforehand. In this way avoid anxiety in the learner.

2.5.3 Asperger:

Asperger's syndrome is a less severe form of Autism. People with Asperger syndrome have a normal intelligence and language development, but difficulties in their social skills. Actually, people with this syndrome want to fit in and interact with others but they do not know how to do it.

2.5.3.1 Behavior: One difference between Autism and Asperger syndrome is language skills, people with Asperger have great language skills, on the other hand, they

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can feel socially uncomfortable, avoid eye contact, and do not understand gestures or sarcasm. Their form of speak can be formal and is difficult for them to understand and demonstrate feelings.

2.5.3.2 Always have a routine: People with Asperger used to follow routines, sometimes repetitively, which produce security for them, however, it also means that make changes can be difficult.

2.5.3.3 Concrete interests: Obsessive interest is a particular characteristic of this syndrome. Children with Asperger often like to collect categories of different things, for example rocks. But also, they can feel interested on knowing particular information, for example, about a sport or names and categories of animals and flowers.

2.5.3.4 Methods to use in class: Children with Asperger syndrome as had been mentioned, have a normal intelligence and language development but still have some particular attitudes which means that their learning must be different from others. Teachers should make a different plan lesson for them to success in the best way.

2.5.3.4.1 Established a job routine: People with Asperger use to follow routines; in this way they feel comfortable and secure. Teachers can implement clear and consistent routines not only in class but also with assignments or homework. Create schedules can be a good idea for them.

2.5.3.4.2 Audible and visible material: The use of audio and visible materials can result effective for their learning. People with Asperger syndrome tend to be very visual and present difficulties to understand nonverbal communication, for example gestures, this means that audible material is a good choice.

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2.5.4 Attention deficit hyperactivity disorder:

Attention deficit hyperactivity disorder (ADHD) is a behavioral disorder that includes symptoms such as inattentiveness, hyperactivity, and impulsiveness. The symptoms tend to appear at the early age and can be more notice with the time. Children with ADHD may also present low self-esteem, issues with relationships and school.

2.5.4.1 Behavior: People with ADHD present a lot of different behaviors, for example, they have trouble with people needs, they used to interrupt also, they may have trouble waiting their turn for example in school activities, fidgeting, difficult to stay quietly, lack of focus and others.

2.5.4.2 Active students: Children with ADHD have lot of energy, it is very difficult for them to stay in one place, be quiet while are listening or pay attention of what is important. On the other hand, these kids do not do this because they want but because it is what the brain demands.

2.5.4.3 Social difficulties: It is common that social relationships turn difficult for the people with ADHD because their behavior. They can pay a price with low grades, punishments, and low self-esteem.

2.5.4.4 Methods to use in class: Most of the time some of the struggle symptoms are presented when children start school. Of course, have a child with ADHD in the classroom can be difficult because also can disturbed all the class, however, knowing some techniques can help a lot.

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2.5.4.4.1 Work in groups: People with ADHD need to improve their social skills.

Work in pairs or groups helps a lot, in this way the student not only improve social skills but also can stay focused on the tasks and it produce encouragement to end the work.

2.5.4.4.2 Be clear giving instructions: Classroom instructions, rules and expectations must be clear and concise. It is a good idea to review the rules and expectations of the class and posted where they can easily read. Also allowed time for activities is a good option, in this way the student understand and focused more on the task.

2.5.4.4.3 Adequate the class: Children with ADHD get easily distracted. Teachers should adequate a space for these kids, in which they sit far for windows and the door and close to the teacher. Avoid any distractions as possible. One advice is to put some soft background music to increase concentration.

2.6 Technological tools

Nowadays the technology has become an important part of our life, and every day more people depend on technology to complete their everyday task. Technology has come to connect the world and facilitate everyone task. Something like a smartphone allow you to have a job, to study, and a lot more useful task. Now imagine the things that you can do with a computer or any other technological tool, so is important to learn and to take advantage of all this technology. Teachers need to learn and investigate of many apps available that can facilitate and improve their teaching methods at the same way that can help the students to know how to work with this technological tool.

This investigation work wants to show different apps that would help teachers and students with special needs to improve their learning process and to be able to connect with

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the technology. Here are some different tools that would help teachers to make this possible.

- ***Microsoft Immersive Reader***: This is an app that was specifically designed to support students with dyslexia, but the app works so well that Microsoft realize that the app would work for any type of reader. This app is completely free, and it comes include in Microsoft 365 and is available on the apps that come in the package. Now how it works? Well, the principal function of the app is to read text out loud but is just the beginning, immersive reader, aloud you to personalize the way you read. When you go into the app, it is going to eliminate all the distractions and show you just the text, in this way you focused on the reading. Some of the characteristics that has immersive reader are, translation, picture dictionary, dictation, line focus, syllables, page color, spacing and font size, math & equations... This app is going to allow teachers to work with any type of student do not matter the type of ability presented.
- ***AZAHAR***: This is an excellent tool that can be used. Azahar is a conjunction of applications that you can download for free and is created specially to people with autism or intellectual disability. It can be used in tablets, smartphones, or computers. This tool will assist student to communicate, create sentences, and learn by choosing the pictures they need and listening the content, also they can find topics like the time, likes and dislikes, verbs,

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videos, and pictures. The teacher or tutor can also, create the content and adequate the applications according to the students.

There are many technological tools that can be used to teach and that can be adequate according to the needs of the students. At this point, education does not have to be poor for anyone. People can create the content they need to facilitate the learning process. According to U.S Department education Technology increases student engagement and motivation and also has the power to connect teachers with students and transform teaching to make a more professional content, resources, and systems to help them improve their own instruction and personalize learning.

CHAPTER III
METHODOLOGICAL
FRAMEWORK

3.1 Research method

Research methods are the strategies, processes or techniques utilized in the collection of data or evidence for analysis in order to uncover new information or create better understanding of a topic (University of Newcastle, 2020). According to, there exist different ways, tools and process to get the information for research and can be described as inductive, deductive and mixed research.

According to Raimo Streefkerk, the difference between the inductive and deductive reasoning is that inductive reasoning aims at developing a theory while deductive reasoning an existing theory. There is the mixed method that combine the use of inductive and deductive method this because much research starts as inductive studies but end with deductive research to confirm or invalidate the conclusion (Raimo, S. 2019).

This Investigation work according to different research method apply for the mixed method because show the technological tools that are available in these times and would try to demonstrate how the technologies can help students with special needs.

3.2 Type of Investigation

There are different types of investigation, and it is important to determine what type is going to be apply in the research work. For this step the purposes of the investigation should be clear. This research work is based in a descriptive investigation. This type of investigation can provide quantitative or qualitative information and as the name said is described all the information. This work based the research in this type of investigation because it pretends to describe and identify the different application and uses that can provide the technologies in students with special abilities.

3.3 Research Approach

3.3.1 Qualitative Approach

Qualitative approach collects and analyzed non-numerical data such as videos, texts and others. The purpose of this research approach is to develop and understand concepts, opinions or even experiences, on the other hand, it could be used to generate new ideas for an investigation. According to Dr. Saul McLeod, the aim of qualitative research is to understand the social reality of individuals, groups and cultures as nearly as possible as its participants feel it or live it.

For this research, the qualitative approach is used since one of the purposes is to demonstrate the reality of the education of students with special needs and change it implementing new ideas using didactic and technological resources to make students feel more capable and increment their English skills, however, this is also possible because the concepts of special needs such as down syndrome or Asperger are developed to understand the reality of the individuals who presents those conditions.

3.4 Sources and Subject of information

The sources of an investigation refer to all the materials and tools used to obtain the information required to create or bring about the research and theory. For this research, the principal sources used are internet to find information in different websites as blogs, or e-books, but also, the application of the instruments as survey and interview to know the opinion of different professionals related to the central topic of this investigation.

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3.4.2 Internet: Internet is an interconnection that provides the capability to connect computers and all kind of devices over the world.

3.4.2 Blogs: A blog is an online journal where different writers or people share information about a specific topic.

3.4.3 e-books: Is a book that is read on a computer or any electronic device.

3.5 Variables

The Variables of a research are used to describe the factors that are reflected in the investigation which can cause changes in the results of the research. According to Indeed, a variable can describe a person, place, thing, or idea. A variable's value can change between groups or over time. For this research, the principal variables are the following:

3.5.1 Variable #1 Number of lessons:

3.5.1.1 Conceptual definition: A lesson is a period in which a learning development is the central focus for students. The number of lessons will be the quantity required for the developer or teacher.

3.5.1.2 Instrumental definition: For this research an interview is applied to educators to know how important and effective are the number of English lessons that the students are receiving to increase their reading and speaking skills.

3.5.2 Variable #2 Technological Resources

3.5.2.1 Conceptual definition: Technological resources are the tools, information, machines, or devices use to facilitate any kind of work that should be done.

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3.5.2.2 Instrumental definition: A survey for this investigation is applied to people working in the education field. In this case the survey that would be used is the online method. The researchers create closed question questionnaire of Yes or No answers, that would be send to the different respondents and then the researchers create a graphics to know the statistics of the answers.

3.6 Population

This investigation is directed to a specific population, students with special needs of seventh grade of Colegio Umberto Melloni Campanini, this institution is in San Vito, Coto Brus.

3.7 Instruments

Instruments are tools that use researchers to collect data and information to create a research or investigation work. There exist a lot of tools to collect data and it depends on the type or research and also from the researcher to determined what instrument work better for the investigation. Following would be explain the different tool that could be use in this investigation work.

3.7.1 Survey: According to QuestionPro.com A survey is a research method used for collecting data from a predefined group of respondents to gain information and insights into various topics of interest. In this case the survey that would be used is the online method with closed question of yes or no.

3.7.2 Interview: Interview is a method to acquire information of a certain topic in which some questions are made to receive answers such as personal opinions, ideas, and others.

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An interview most of the time is a face-to-face conversation, however, for this research the interview is made by using a questionnaire of open answers to know the opinion of a specific group of people which are educators.

CHAPTER IV
RESULT ANALYSIS

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4.1. Analysis of the use of ICT on students with special needs.

This research tries to demonstrate how the technologies can improve the teaching methods and the learning process of students with special needs. It shows different didactic and technological resources that could facilitate the teaching process and the improvement of speaking and reading skills on these students. To confirm this theory is important to investigate and compare different investigation works about the use of ICT in the education field.

According to Molina & Cuevas (2014) . ICT can contribute to provide a better quality of life for people with disabilities by becoming in helps to create equal conditions. If the success of universal designs, access and use in equal conditions are accomplished it can be said that the ICT are instruments to facilitate a more independent life for people with disabilities. On the other hand, a different point of view show that:

The use of ICT as an efficient method is completely useless in the educational field if its adaptation and use creates another form of social exclusion for students with special needs. This is because of lack of resources resulting in the inability of these students to follow the same activities as their fellow students without special educational needs (Ertmer; 2005; Kozma, 2003; Mitchell, 2005; Skidmore, 2004; Zhao & Frank,2003) (Suria Martinez, R. 2011, p.190)

The previews contributions demonstrate how the technologies can improve the opportunities of learning and create a more independent life on people with special needs, moreover, it can create exclusions for this people if the teaching process is not the adequate or if the teachers are not prepared enough to apply the technologies on people with special

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needs. For this reason, it is important to prepare teachers that can be able to face the different needs of each student in this manner teachers can implement the properly methods and changes when creating a curriculum, as Díaz and Barrantes (2016) said “modifications and accommodations contribute to making the teaching and learning process inclusive and motivating for students”. (p.341)

As it is mentioned in this investigation work, when teaching students with special needs it is important to have the knowledge of what kind of needs the learners have and create a good communication by giving clear instructions with short sentences to be understood. “Moreover, the instructor should be clear with these students about their rights and duties to avoid misunderstandings because they may complain about certain adaptations, especially the ones related to time.” (Diaz & Barrantes, 2016,p.353).

Use of technology (e.g., computers, adapted keyboards, & screen displays) in teaching makes education more exciting for students with special needs (Pratt, 1999). All children can benefit from advances in technology that provide meaningful ways to communicate and learn (Ryba, Sleby, & Nolan, 1995). Teachers should explore online programs and create programs that benefit children with special needs (Al-Shammari, 2008,p.2).

In this investigation work are mentioned two examples of technological tools that would help teachers to improve reading and speaking skill on students with special needs at the same time it facilitates the creation of specific and attractive material to meet the needs of the learners.

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Immersive reader is an app mentioned during this investigation as one important tool that would help to improve the reading and speaking skill of English language on students with special needs. On an interview made by Shreesha Ghosh 2020 to Balendu Sharma from Microsoft India about the Microsoft tools, it is mentioned how immersive reader would help students with dyslexia:

Immersive Reader, included in OneNote Learning Tools, is a full-screen reading experience to increase the readability of content in OneNote documents. Learning Tools is designed to support students with dyslexia and dysgraphia in the classroom but can support anyone to improve reading aptitude. It enables students with learning differences to use text decoding solutions and helps build confidence for emerging readers through features like Line Focus and Picture Dictionary. (Ghosh S, 2020).

Another app mentioned in this project is named AZAHAR. This app was created specifically for people with autism, however, its successful gives the opportunity to be use on other specialties for example, down syndrome and more. It is a conjunction of apps of different and interesting topics which helps students to communicate easier for example, “HELLO” it is one of the apps which allows the student to communicate using pictures, they should select the image and click on to reproduce the word sound related to the image, this is one of the reasons why this app is useful to improve communication skill. While investigating about this great project, some written experiences of professionals were found, some of them are:

Azahar provides people with autism, and more specifically children with the lowest level, with a visual aid which is indispensable for them to process

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information. The main advantage is that they are applications which only provide the necessary information and which they can understand. With such a simple and specific design, without any additional information, the computer offers just the information they require, without any kind of distraction. The advantage of the computer or mobile is that you always obtain the response from the device. (Javier Arnáiz Sancho, trainer, Colegio Alba, Autism Burgos). (Azahar,2013).

The application we have used the most is the timer, TIC-TAC... In the case of this application, the response was more positive and faster than expected. The most interesting part of all was when the people with autism touched the screen, as if they wanted to make the timer move faster. In all cases, they have respected the device to the full, at no time showing any frustration or anxiety at waiting towards it. What they like most about it is the clear image it presents, the flow and repetitive movement of the bar timers, and the extra attention received from their careers when using the device. (Concepción Ramírez, Speech Therapist, Autism Burgos).(Azahar,2013).

An investigation work by Arrieta-Casasola demonstrate how the implementation of the ICT in the different education centers contribute to the elimination of the learning barriers; proving that if the learners have access to technological tools improve the participation and development to reach an independent life.

The contribution of Ms. Cicerchia in her article, show the importance of renovate the education for these special students to increase their opportunities of grow and to open a door for a better future since they are equal and full of great talents that should be improve and used to increase their learning and skills. A manner to gain this goal is using

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technological tools in the learning process, this creates an active and attractive
environment for learners.

An article written by Cicerchia, M determine that the key to inclusive special
education programs is understanding and accepting students for who they are. This means
not just helping them overcome their weaknesses but assisting them in finding and
developing their talents too. Some people associate special education needs with lower
intelligence, but this is not necessarily the case. Every student, no matter what learning
difficulties they have, has strengths, even if he or she has not found them yet!

CHAPTER V
CONCLUSIONS

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According to the findings of different authors mentioned before, it can be demonstrated that the use of technology to teach students with special needs can facilitate the learning process to improve speaking and reading skills on English language since the different tools and methods that teachers can apply with the use of technology on their classrooms open a bridge to the motivation, social inclusion, facility of learning and communication. On the other hand, a very important and essential indication is that teachers should have the knowledge to apply the properly methods according to the students needs.

It is essential and necessary to investigate and analyze the different needs that can be present on students. Teachers should be able to identify when a student presents a special need and what talents and abilities it includes because, according to these characteristics is how teachers could be able to prepare the different materials and techniques that would facilitate the learning process of the students, furthermore, it would improve reading and speaking skills increasing their social ability.

The examples of applications provided in this investigation work show how technology can be helpful for teachers to implement interactive material, and for students to communicate and learn easily by taking advantage of the multiples functions these apps have not only for one specific ability but for all the needs that could be present in the classroom. Teachers should be more open mind and not just quipping with the techniques learned in their studies; they need to continue learning about the new technological tools this way they would improve their teaching methods reaching out every student.

The effectiveness of the application of didactic and technological resources in this research project was evaluate with the experiences of different users of the apps mentioned

Didactic and technological resources based on English Teaching and under the opinion of authors who made similar investigations, since the methods and elements could not be applied on real situations for the actual emergency the world is facing. However, the research demonstrates that the apps mentioned could create a positive impact on students and teachers, furthermore, it can improve the speaking and reading skill on English language on students with special needs, not only for their characteristics but also, because of the facility to use them and the confidence it provides for students to communicate.

This investigation work demonstrates that technology makes an improvement in the education field if educators make a properly use and if the institutions provide more opportunities to have the equipment required. This is really important since it could highly help students to acquire their knowledge successful. On the other hand, this investigation also shows that if teachers and educational centers start to get more interest in the technological tools, a better educational system would be created, where the barriers that face students with special needs could be less with the time. In this way people with special needs are going to be able to be incorporated easily in the society taking advantage of more opportunities to grow with a more independent life.

CHAPTER VI
RECOMMENDATIONS

6.1 Recommendations

6.1.1 Keep classroom organized: Keeping classroom organized could be very helpful when teaching students with special needs since most of these students are very organized and used to follow routines such as asperger or autism. If the classroom is disorganized students can feel stressful and unable to be concentrated during the lesson.

6.1.2 Investigate about new technological tools: This is a very important point because every day technology brings new tools and apps that can facilitate the teaching and learning process for people with special needs. As it is shown in this investigation with the two examples of apps the technology provides easier understanding and engagement with the topics, in this way a friendly environment could be created.

6.1.3 Investigate and learn about student's needs: Teachers should investigate and learn about the abilities their students have such as their behaviors, unique talents, communication, debilities and interests, in this manner they can provide the properly teaching methods to successfully reach the goal of increase their skills.

6.1.4 Maintain an active and clear communication: Keeping an active and clear communication with students increment their confidence which can be very helpful to identify their needs, uncomfortable situations they could be presenting or any other aspect that can affect their learning. On the other hand, having a good relationship with students would allow the opportunity to express their opinions, suggestions or concerns about the class activities.

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6.1.5 Planning with active activities: Working with a plan that includes active activities is going to increment motivation, self-confidence, relationships with classmates and could reduce anxiety on students, this goes hand by hand with the improvement on learning.

6.1.6 Trainings for teachers: To provide a good education applying technological tools is necessary to prepared teachers since a lot of them do not feel prepared to use technology in order to change their teaching methods. Technology is constantly updated and so on the education methods should take advantage of the multiple facilities it provides. For this reason, the education system should foment the implement of trainings for all teacher to take advantage of the different resources they could find and use.

6.1.7 Institutions with more equipment: An updated or better education cannot be possible if the institutions do not have the proper equipment to implement new teaching methods. Institutions should fight more to acquire the equipment they need if they want to improve, for example by creating some method to increase their funds such as communal activities or donations.

6.1.8 Communication hand by hand with parents: Students with special needs require to have more attention, for this reason it is very important and necessary that education does not stay only in classroom, alternatively, the institution can improve the communication with parents by creating activities such as monthly meetings in order to provide advices, education about the student's needs and more. This would increase the student's opportunities to gain confidence, fast learning and improvement of their skills and talents.

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6.1.9 Create an inclusive curriculum: To provide a better guidance for teachers who are not specialize in teaching special education could be a great opportunity to include the capabilities and challenges of these students, in this way proper teaching methods and activities can be add to the curriculum success.

6.1.10 Provide more English lessons: It is necessary to implement more English lessons in order to improve the speaking and reading skills on students with special needs. Currently, the English language is the most important language, it can be said that it is a universal language, for this reason the number of lessons the students receive could impact the learning and improvement that they can acquired.

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6.3 Annexes

6.3.1 Instrument for Variable #1

Didactic and Technological resources based on English Teaching as a second language to improve speaking and reading skills on students with special needs in high school during 2021

The following survey is based on education for students with special needs (Down Syndrome, autism, Asperger, etc.). To know the importance and equality that has been given to those students in the implementation of English language and/or general education using technological methods.

INTERVIEW

In this interview you are going to provide your opinion based on your experience as a teacher to know the importance that the number of lessons have and how it can impact the learning improvement on students with special needs.

The following questions need to be answered through audios.

1. Do you consider that the number of lessons affect the improvement of the learners? Why?
2. What practices do you apply to take advantage of the number of lessons that are assigned to you to improve speaking and reading skills on students with special needs?
3. How many English lesson do you consider are necessary to achieve effective learning on students with special needs?
4. Do you consider that the number of English lessons assigned to teacher are enough to reach the goal of the MEP's curriculum? Why ?
5. Based on your experience as a teacher do you believe students with special needs would like to have more English lesson ?

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6. Since the English language is one of the most important language to communicate around the world , do you consider that students with special needs should receive more English lesson to ensure a better future ?

6.3.2 Instrument for Variable #2

SURVEY

In this survey you are going to provide your opinion based on your experience as a teacher to know the importance of the technological resources and how it can impact the learning improvement on students with special needs.

https://docs.google.com/forms/d/e/1FAIpQLSdM5WfjtawYj0LYFOTtxtq8uyBf44mnXjMuu2ixfE2QYKl_2w/viewform?usp=sf_link



Questionary - Didactic and technological tools

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*Obligatorio

Do you believe necessary to increase the application of technological tools on students with special needs to improve reading and speaking skills? *

Yes

No

Do you believe that students with special needs receive the enough support of technological tools? *

Yes

No

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It is necessary that teachers received trainings about how to apply technology when teaching students with special needs?

- Yes
 No

Do you consider yourself sufficiently trained in a technology field to implement the English teaching on students with special needs? *

- Yes
 No

Do you consider that teaching methods applied to the students with special needs are suitable for the improvement of students?

- Yes
 No

Do you believe that the curriculum applied to the students with special needs incorporate the enough technological resources to improve speaking and reading skills?

- Yes
 No

Do you believe that educational institutions have the proper equipment to implement technological methods ?

- Yes
 No

Do you investigate about new technological resources to improve your teaching methods?

- Yes
 No

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