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EDUCACIÓN, CIENCIA Y TECNOLOGÍA PEDAGOGÍA DE LOS
IDIOMAS NACIONALES Y EXTRANJEROS**

Effects of 3D environments as an assessment tool to encourage English oral production in senior students at "Empresa Pública UTN", Ibarra, 2020-2021.

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DEDICATION

*“The fear of the Lord is the beginning of knowledge”
Proverbs 1:7a.*

To God, creator of all things and owner of the past, present, and future. To my mother, Guadalupe Torres, for their unconditional love and support during the years of my academic preparation. For her wisdom in the most challenging moments in my life, for encouraging me in every moment when I needed it the most, for being the most beautiful blessing in my life.

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RESUMEN

El objetivo del presente estudio fue la adaptación de la tecnología de realidad virtual como herramienta de evaluación para las destrezas comunicativas del idioma inglés para los estudiantes del “Centro Académico de Idiomas” de la Universidad Técnica del Norte, ubicado en Ibarra, en la provincia de Imbabura. El resultado fue la creación de una aplicación móvil de realidad virtual, cuyo diseño fue en base a información obtenida de encuestas de una metodología cualitativa y cuantitativa. Para la parte cuantitativa, se encuestó a 61 estudiantes de últimos niveles del “Centro académico de Idiomas”. Para la parte cualitativa, el instrumento seleccionado fue una entrevista semiestructurada a 3 docentes de la entidad antes mencionada. Los resultados más notables de la investigación reflejaron una clara evidencia del uso de las tecnologías de la comunicación en el proceso de evaluación de habilidades auditiva y hablada. Además, una clara aceptación por el uso de la realidad virtual en el proceso de aprendizaje y evaluación por parte de estudiantes y docentes; además de la disponibilidad de celulares inteligentes capaces de correr aplicaciones de realidad virtual. Estos resultados fueron usados para la creación de EVRAT (English Virtual Reality Assessment Tool), la primera aplicación móvil de realidad virtual en Ecuador, orientada a la evaluación de habilidades receptivas y productivas en Inglés.

Palabras clave: Realidad virtual, habilidades receptivas, habilidades productivas, aprendizaje, evaluación.

ABSTRACT

The main objective of the present research was the adaptation of the Virtual Reality technology as an assessment tool for English communicative skills of students at “Centro Académico de Idiomas,” Universidad Técnica del Norte, Ibarra, Ecuador. The result was creating a mobile Virtual Reality app whose design was based on data from a quantitative and qualitative approach. An online survey for 61 senior students at “Empresa Pública” was carried out quantitatively. For the qualitative part, a semi-structured interview was applied for three teachers. The most remarkable results reflected clear evidence of technological resources in the assessment process of receptive and productive skills such as listening and speaking. Also, teachers and students showed a clear interest in using Virtual Reality technology in the English learning and assessment process, besides the presence of smartphones capable of running mobile VR apps. These results led to the creation of EVRAT (English Virtual Reality Assessment Tool), the first Ecuadorian mobile VR app to assess receptive and productive English skills such as listening and speaking.

Key words: Virtual Reality, receptive skills, productive skills, learning, assessment.

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INTRODUCTION

Nowadays, over 300000 high school students have difficulties learning a foreign language to integrate into fields such as business, education, trading, travel, and others. Context and experiences are required to learn a second language. Sometimes, textbooks are found to provide insufficient exposure to the target language, leading to learning through translation and memorization of language structures. Therefore, in Ecuadorian public high schools, language learning comes to be a frustrating process for students.

In 2015, the Ministry of Education of Ecuador revealed an updated National English Curriculum based on the communicative language approach and the Common European Framework of Reference (CEFR). It established that students would reach an intermediate level at the end of high school, allowing them to understand the target language's main points, setting and keeping a conversation in L2. English became a mandatory subject in either private or public schools. Nevertheless, Ecuador ranked last place regarding English proficiency in Latin America in 2018 (Pasquali, 2020). Some factors for the low English proficiency in Ecuador include outdated assessment ways in the communicative skills and lack of technological equipment in public high schools such as Language labs with access to new technologies and mediocre government's support.

Traditional ways of assessing speaking skills in Ecuadorian public institutions underline memorization of grammar and vocabulary through worksheets and audios, limiting L2 (English) use in real communicative situations. Consequently, high school students are not encouraged to use English for communicative purposes. The teacher's limited knowledge of technology leads to a decreasing student's desire to learn English. Thus, the teacher and students cannot benefit from the use of new technologies in the classroom. Finally, the government's curriculum based on the communicative language teaching approach expects students to use the language for communication. However, teachers need to implement innovative ways to assess speaking skills and not focus on traditional grammar assessment methods to determine the communicative level language.

Communicative competence is the ability to convey information between two or more speakers given a determined context. Language learning is a cognitive process where exposure and experiences are required to allow students to use the target language for real communication. It exists a variety of language teaching methods and approaches where accuracy and grammar are essential to learning. Communicative Language Teaching and the Natural approach are the foundation for language teaching methodology nowadays (Richards and Rogers, 2001). However,

the advances of technology in education, known as E-learning, have opened new perspectives toward its applications in the EFL contexts.

The simulation of virtual environments known as VR (virtual reality) has influenced new ways of education. Unfortunately, there is a limited VR application for language learning nowadays, and in Ecuador, this technology has not been implemented in public education yet. The present research work will take place in a Language learning Institution of a University in the north of Ecuador, "Centro Académico de Idiomas, Universidad Técnica del Norte". It has over 12500 students and is in Ibarra city.

The language teaching process in the public sector of Ecuador has suffered several changes and steps. It first started with CRADLE in 1990, which benefited over 8000 English teachers in the general division; unfortunately, the project did not last much. Until 2008, public schools' situation remained the same—low communicative performance in EFL high school students and traditional assessment methodologies related to Grammar Translation. So, it reflects a challenging step when students go to university. Nevertheless, applications of new technologies in language teaching raises doubts among language teachers and students. For instance, can virtual environments promote experiential learning in an English classroom? Do teachers and students need additional training to use this technology? Is it affordable to implement in EFL classrooms? How can this technology be used as a tool to assess speaking skills in students? Furthermore, finally, can be this technology adapted to an assessment tool for students at "Centro Académico de Idiomas"?

Justification

Despite the term virtual reality appeared in 1950, its introduction in the market field started with Google (Cardboard) and Microsoft (HoloLens) in 2016; for some experts, virtual reality teaches the future. Attempts to introduce this technology in education have been made in some countries worldwide, such as Japan, the United Kingdom, and the United States. Simulated environments (immersive learning) allow students to interact and apply their communicative skills based on a determined context to encourage oral production and listening comprehension. Allowing teachers to evaluate student's performance and provide feedback in their teaching for future lessons. The presented research is oriented to offer VR as a new technique for English teachers to evaluate student's oral production.

It is **innovative** because of education and technology progress at the same level. In Ecuador, the learning process in the public sector lacks innovative ways to assess students' performance. In language learning, students study English as a subject without application in real life, since students' communicative performance reflects grammar structures and vocabulary through audios

and papers. The present work justifies **presenting** VR technology as an assessment tool to evaluate listening and speaking skills since it can simulate contexts where students can use English for real communication.

The implementation of VR technology in public educational institutions may be achievable in the future. However, some **limitations** should be noted. First, the lack of research on VR in Ecuador represents a gap between VR's benefits and the reality in public institutions. Second, the shortage of trained English teachers to implement VR in the classroom demands additional capacitation and research on methodology, curriculum design, and assessment. Mobile VR will be used for the study. It provides an immersive experience, but not as real due to its low cost. The present research will be supported economically by the researcher to present the first steps in Virtual Reality as an assessment tool in an EFL context (English as a Foreign Language) in Ecuadorian public Universities for further implementation.

The present study's **significance** is to introduce language teachers at "Centro Académico de Idiomas" modern technologies for assessment through VR in EFL students. The effect is evident because most students have internet access and smartphones qualified to run 3d platforms such as 360 videos on YouTube and apps. Besides, it implies teachers to determine students' strengths and weaknesses regarding speaking skills and how to reduce them.

This research will **benefit** English teachers and students at "Centro Académico de Idiomas." Teachers will update their techniques to evaluate student's communicative performance, and students will be encouraged to utilize what they have learned in the classroom for real communicative situations. Finally, "Universidad Técnica del Norte" will be the first public University in Imbabura province to implement VR in language teaching and be evidence for further research to implement VR in the whole country.

Topic:

Effects of 3D environments as an assessment tool to encourage English oral production in senior students at "Empresa Pública UTN" , Ibarra, 2020-2021.

Objectives

General

Adapt Virtual Reality technology as an assessment to encourage oral production in students at "Centro Académico de Idiomas."

Especific

- Analyze the teachers' perspectives about oral production and assessment at "Centro Academico de Idiomas"
- Categorize students' oral production and assessment methods used at "Centro Academico de Idiomas".
- To design the English Virtual Reality Assessment Tool (EVRAT) to encourage oral production in students at "Centro Académico de Idiomas".

CHAPTER I. THEORETICAL FRAMEWORK

1.1 Virtual reality in education

1.1.1 History

Virtual reality is the simulation of computer-based environments like the real world where users can manipulate and control their actions in real-time by stimulating different senses (Lowood, 2018). It was introduced as a simulation program to train American pilots in 1950, and since then, other fields such as medicine, design, and gaming have applied this technology. Therefore, it is not modern technology, as people commonly believe. Šenovský (2018) mentions, “Current VR technology most generally uses virtual reality headsets or multi-projected environments to generate realistic images, sounds, and other sensations that simulate a user’s physical presence in a virtual or imaginary environment” (p.10). Although its origin is still debatable, it was not until 1980 when Jaron Lanier, founder of VPL Research, started the virtual reality industry as a commercial product (Alizadeh, 2019).

Google Cardboard was the beginning of the mobile V.R. industry in education since it offered V.R. experience at a low price. The first version of the app launched for android and IOS in 2015. It created the effect of 3D environments by splitting the smartphone's screen into two halves while using a headset where the user can see the 3D simulations. Google also announced other programs to complement the V.R. experiences such as Google Earth, Google V.R., Google expeditions, and Tilt Brush. Other companies like Samsung and Microsoft introduced their V.R. hardware and software, but they were more expensive than the previous headsets, and most people could not afford them. It is worth mentioning that HoloLens by Microsoft is augmented reality hardware and not a virtual reality device.

1.1.2 Types of Virtual Reality

Before introducing Google's cardboard in the market, V.R. was an expensive technology. Its applications were limited since it demanded complete and costly equipment like a computer with a high-quality processor, headsets, stable internet connection, and software to design the 3D environments. Oculus Rift in 2012 was the beginning of a new type of V.R., mobile V.R. Therefore, companies such as Sony (Play Station V.R.), Samsung (Samsung V.R.), HTC (HTC Vive), and other enterprises started developing their own V.R. prototypes. However, Google cardboard has dominated the market over the last years.

Desktop V.R.

This type of virtual reality refers to the simulation of 3D environments generated by a computer program. It uses computer graphics and animation, screen-based environments that are realistic, flexible, interactive, and easy to control by users (Shneiderman, 1993, cited in Lynna & Floyd, 2004). This type of V.R. began in the entertainment industry, focusing mainly on gaming. The three leading companies developing this technology are Play Station (Play Station V.R.), HTC (HTC VIVE), and Facebook (Oculus Rift).

1.1.2.2 Mobile VR

With the rise of platforms powered by google and Samsung in 2014, V.R.'s experience focused mainly on smartphones. Mobile V.R. is goggles that hold a smartphone, and 3D content is projected without advanced hardware and software. One of the advantages of mobile V.R. is its low price, and internet connection is not needed since most of the content in platforms such as google expeditions, google earth, and poly is downloadable. As Dejian Liu, Dede, Runghuai Huang, and Richards (2017) assert, "Low-cost V.R. experiences are possible with products like Google Cardboard which only costs \$15 and a smartphone" (p.82). Some examples of mobile V.R. headsets available on the market are Google Cardboard, Samsung Gear V.R., and VR BOX

1.1.3 Virtual reality in education

The integration of technology and the internet in education has had an essential role in the learning-teaching process over the last decade. Students have access to information anytime, anywhere, and the role of the teacher is promoting self-learning. From the beginning, V.R. technology was a simulation program to train pilots, and this principle was adopted in medicine to prepare students in simulations of specific circumstances. V.R. offers students the opportunity to apply what they have learned in real simulations without leaving the classroom. As Šenovský (2018) argues, "Students sometimes just need to be taken out of the school environment and put into an immersive world where they can experience" (p.16). This conception of V.R. has been applied in different educational disciplines, such as mathematics, physics, medicine, and even languages, by providing learners experiences only obtained in practice (Al-Gamdi, 2019).

Models of head-mounted display systems for virtual reality most used in education

Mobile V.R.

Name	Google Cardboard	VR BOX	Samsung Gear V.R.	Google Daydream
Release date	June 2014	2016	November 2015	November 2016
Weight	88 g	500 g	318 g	220-260 g
Platform	Cardboard	Cardboard	Oculus Home	Daydream

Field of view	90 – 100 degrees	65 degrees	96 – 101 degrees	90 – 100 degrees
Minimal requirements	Any phone with a gyroscope and Android 4.1+ or iOS 8.0+	Any phone with a gyroscope and Android 4.1+ or iOS 8.0+	Samsung's flagship models, starting with Galaxy S6	Android's models from May 2018.
Release price	10 \$	8\$	100\$	79\$

Table 1: Mobile V.R. headsets used in education (Šenovský, 2018)

Desktop V.R.

Name	Oculus VR	HTC VIVE
Release date	March 2016	April 2016
Weight	470 g	470 g
Platform	Oculus home	Steam VR Vive Port
Field of view	110 degrees	100 degrees
Minimal requirements	PC with GTX 970 + video card.	PC with GTX 970 + video card.
Release price	400\$	800\$

Table 2: Desktop V.R. headsets used in education (Šenovský, 2018)

1.1.3.1 Applications of V.R. in schools around the world

United States

Washington Leadership Academy (Washington D.C.) was founded in 2014 by Stacy Kane. It is one of the first American schools to apply virtual reality and computer science to supplement their curriculum. Teachers use V.R. to teach, and students are also trained in coding to create their own V.R. content. An example of this is VietVR, where students can learn about the Vietnam and Cold War. Teachers boost students to think like designers by examining problems from a user's view and subsequently hypothesizing possible solutions (Rolph, 2017).

United Kingdom

Sevenoaks School is a boarding school in the United Kingdom founded in 1550. The first school in the United Kingdom to implement V.R. Teachers presented virtual reality technology into its classrooms to bring classes to life in subjects, including art, history, and geography (McWethy, 2016). "There is ongoing research into the technology of virtual reality. The researchers are experimenting with using V.R. for educational purposes and share their findings with other teachers and schools to further progress the use of this technology at school grounds" (Šenovský, 2018, p.17).

Birmania

360ed is an organization that creates virtual and augmented reality content for schools in Myanmar. It is a platform that uses cardboard headsets and smartphones to simulate 3D environments. "More than 5,000 of the country's 500,000 teachers have had a chance to become acquainted with the technology" (<https://plus.google.com/+UNESCO>, 2018). Students using V.R. visualizes information and have a better understanding of the contents. Also, it has been useful for students in remote areas. Nowadays, 360ed is working with Myanmar's Ministry of Education to expand this technology across the country.

1.1.3.2 Advantages and Disadvantages of V.R. in education

Technologies in the classroom have led to a modification in methodology to teach different subjects. V.R. technology offers a unique feature that other multimedia resources do not. It has allowed students to apply what they have learned in class without leaving the classroom so that teachers can evaluate the level of comprehension and application of skills. Alizadeh (2019) affirms:

Virtual learning environments enable learners to comprehend concepts and practice tasks that are often difficult or impossible to do in the real world while providing them with ample opportunities to engage in collaborative interactions with their peers within a media-rich learning context, thus leading to higher motivation and engagement levels (P.24).

In other words, teachers sometimes find it challenging to make their content attractive for students, and the opportunities to practice these contents are limited. According to Fowler (2015), as cited in Al-Gamdi, (2019), "The main idea behind virtual reality is creating a simulation for learners to contribute to developing practical skills in a context" (p.27). Nowadays, young students prefer learning using technology since it provides them more opportunities to improve their capacities.

Megat Zakaria (2020) asserts, "Learning takes place when the learner becomes interested in immersive learning cognitive processes which pick, organize, and incorporate words and images" (P. 1282). Virtual reality incorporates these features with the association of visual contents, so it provides enhanced motivation and engagement and contextualized learning. According to Jonassen (1994), simulated environments facilitate knowledge construction because:

- They provide multiple representations of reality.
- They focus on knowledge construction, not a reproduction.
- They provide real-world, case-based learning environments, rather than pre-determined instructional sequences.

- They enable context- and content-dependent knowledge construction. (P.35)

Most of these characteristics described above are the benefits of using V.R. in the learning process. Besides, teachers do not need special training in coding to create 3D content since there are multiple platforms like Google Expeditions or Tour Creator, where they can find and edit V.R. content. Moreover, the internet connection is not required to run the simulations because mobile V.R. material can be downloaded previously by students and teachers.

However, V.R. technology can bring some disadvantages. It can disrupt some students and be a complicated process for teachers if they are not familiar with this type of technology. As Al-Ghamdi (2019) mentions, "The use of new technologies in a teaching process can lead to affected interactions, the distraction from tasks, and students' inability to learn if teachers have no required training and practice in using digital resources" (p.27). Another disadvantage of V.R. is its limitation; only a part of students could experiment with V.R. because of its hardware cost to fulfill the demand in schools. Although mobile V.R. offers itself as an affordable option, it does not provide a total immersion of didactic 3D material than other more expensive devices like Oculus Rift. Other disadvantages of V.R. in class include:

- Even though there are many virtual reality videos and applications, not all are genuinely useful in the classroom (Šenovský,2018, P.17).
- Experimenting V.R. for long periods can make students feel headaches and nausea.
- Teachers who have not had previous experience with V.R. can find complicated, creating 3D material.
- The lack of smartphones in rural schools to use V.R. technology limits the benefits.
- Even with mobile V.R., the cost of implementation in schools is still high.

1.1.4 V.R. in language teaching

Learning a language is a psycholinguistic process where oral production is stimulated through experiences where the learner uses the vocabulary for communication. Over the last decades, the introduction of technological resources in language teaching such as social media, websites, online platforms, video games, video creators, and others has been found useful in student's motivation and communicative skills (Pareja-Lora, Calle-Martínez, & Rodríguez-Arancón, 2016). Development of creativity and cognitive skills based on a specific learning style can result from the application of technology in the teaching-learning process (Kessler, 2018). The significant features of the virtual reality applications for foreign language learning are vocabulary acquisition, Grammar learning, speech recognition, speaking, and real-life situations (Symonenko, Zaitseva, Osadchyi, Osadcha, & Shmeltser, 2020).

V.R. applications offer promising opportunities for both involvement students into the foreign language learning process and achieving three main goals of this discipline successfully: enhancing foreign language learning, preparing undergraduates for real life and professional situations outside the native language environment, improving student communication skills. (Symonenko et al., 2020, p.45)

2.1 Language Teaching Methods

Over the last centuries, the process of teaching foreign languages has been varying in terms of oral proficiency, accuracy, comprehension, and fluency. So, the search for the ideal method that provides efficient results has been the main propose of research in language teaching. It is fundamental to define the terms method and approach to understand how languages have been taught over the centuries. Anthony (1963), as cited in Richards and Rodgers (2001), defines an approach as a set of theories that involve the nature of language, learning, and teaching. On the other hand, a method is a set of learning theories and principles that support teaching in the classroom. According to Anderson and Larsen (2011), the study of methods is invaluable for language teachers in three ways.

- Methods serve as a promote for reflection that can help teachers bring to conscious awareness the thinking that underlies their actions.
- Knowledge of methods is part of the knowledge base of teaching.
- Knowledge of methods helps to expand a teacher's repertoire of techniques.

New methods are created over the centuries. Practices and principles of methods sometimes are omitted in one era and encouraged in others. As Larsen-Freeman and Anderson (2011) mention, “The choice among techniques and principles depends on learning outcomes” (p.15). There are several factors that affect the language teaching process such as motivation and anxiety levels. For instance, approximately half of the world's population is bilingual, and 1,500 million speak English (Fernández, 2020). Besides, the promotion of the Common European Framework of Reference (CEFR) by the Council of Europe has introduced a standardized system to teach and evaluate foreign languages in communicative language competences.

CEFR has encouraged multilingualism and the application of standardized examinations and textbooks in language teaching. Moreover, the constant development of technologies and language learning theories have had a critical impact on the field since they offer new linguistic conceptions for teachers about human communication and learning. However, it did not exist the best method or approach to teach a foreign language nowadays.

2.1.1 Traditional Language methods

From the seventeenth to nineteenth centuries, Latin was the dominant language for education, commerce, science, religion, and politics in western societies. The way Latin was taught focused on the memorization of grammar rules and translation of texts. Nevertheless, it was a tedious and complicated process for learners since implied memorization and recitation of grammar rules. Additionally, learning Latin was perceived as a mental activity. In the 19th century, when other languages such as French, Italian, and English rose as alternative languages for commerce, non-native speakers in Europe started to speak more occasionally these languages.

Nevertheless, based on studying Latin, this style became the standard way of learning foreign languages for centuries (Jack Croft Richards & Theodore Stephen Rodgers, 2001). Later with the introduction of psychology as a science in 1879 by Wilhelm Wundt, the learning concept was human behavior. The primary traditional language teaching methods and approaches were the Grammar Translation Method, Situational Language Teaching, and the Audiolingual Method.

2.1.1.1 Grammar-Translation method

German scholars originally developed the Grammar Translation Method in the 19th century. GTM was the way to teach classical languages like Latin and Greek. It became the standard method of studying languages in the 20th century. Although it did not have substantial support related to language learning theories, psychology, and linguistics, it encouraged the study of grammar rules to help students to read foreign language literature. The main feature of GTM is translation and memorization of grammar structures. Reading and Writing are the principal skills taught, so communicating in the target language is not the goal. According to Richards and Rodgers (2001), The chief characteristics of GTM are:

- The objective of studying a foreign language is to learn a language to read its literature and for mental training.
- Reading and Writing are a significant focus.
- Sentences are the basic unit of teaching and language practice.
- Students study to attain high standards of abilities in translation.
- Grammar is taught by presentation and study of grammar rules.
- The student's native language is the medium of instruction.

GTM dominated language teaching in Europe and America from 1840 to 1940, and some of its principles are still used by teachers nowadays because it makes few demands on teachers. However, memorizing endless lists of vocabulary and grammar rules produced frustration in students, and learning a foreign language was a tedious process. Besides, the demand for oral proficiency in foreign languages increased communication opportunities (Jack Croft Richards & Theodore Stephen Rodgers, 2001). So, it was the decline of the Grammar Translation Method.

2.1.1.1 The direct method

In 1886, the International Phonetic Association established the sounds of all the languages around worldwide. It aimed to improve the teaching of modern languages and supported linguistic theories. At the end of the 19th century, linguistics and psychologists attempt to design a methodology that simulates child language learning, making second language learning like first language learning in the classroom. L. Savieu believed that translation was not essential to teach a foreign language, so when he opened a language school in Boston in 1860, his method was known as the Natural Method (Jack Croft Richards & Theodore Stephen Rodgers, 2001)

Later, in 1884, F. Franke supported the natural method by establishing the psychological principles between meaning and forms in foreign language learning. In other words, a student learns best a foreign language by using it actively in the classroom, and the translation is not essential to teach grammar. These principles provided the foundation for a modified version known as the Direct Method. According to Larsen-Freeman and Anderson (2011), the principal characteristics of the Direct method were:

- The purpose of language is communication.
- Students understand to think in the target language.
- No translation
- Listening and speaking are taught first.
- Pronunciation is emphasized.
- Lessons contain everyday activities.
- Students learn grammar inductively.
- Reading and Writing are the results of listening and speaking.
- Native-speaking teachers in classrooms.

The Direct Method was effective in private language schools in Europe and the United States. However, the norm of using native-speaking teachers was challenging to implement in secondary school education. Besides, the explanation of some linguistics structures took a long time for teachers, when the translation was a more efficient technique to convey meaning (Brown, 1973, as cited in Jack Croft Richards & Theodore Stephen Rodgers, 2001). By 1920, the Direct Method suffered some modifications and adaptations by academics and linguistics from the Reform movement in Europe and the United States. It concluded with two versions to teach languages known as the Audiolingual Method in the United States and Situational Language Teaching in the United Kingdom.

2.1.1.2 The Audiolingual Method and Situational Language Teaching

The Audiolingual Method and Situational Teaching were an enhanced version of the Direct method. Both were oral-based approaches and had behaviorist learning theories. Situational Language Teaching was developed by British linguistics, and it was the accepted British approach to teach English by 1950. Contents and grammar structures in SLT based on situations, it was the main feature for the name itself.

Our principal classroom activity in the teaching of English structure will be the oral practice of structures. "This oral practice of controlled sentence patterns should be given in situations designed to give the greatest amount of practice in English speech to the pupil" (Pittman, 1963, p.179).

Learners on STL study grammar inductively, and accuracy is emphasized. Learners listen and repeat what the teachers say and respond to instructions. On the other hand, teachers are responsible for setting up situations or scenarios for students to use the target language and monitor their communicative performance. PPP (Presentation, Practice, and Production) was the standard methodology on STL for language teachers in the 1980s and 1990s.

As STL gained popularity in Europe, the Audiolingual method rose as an American variation of the Direct method. It has a solid theoretical base on linguistic and behavioral psychology. It was developed in 1945 by the University of Michigan to train military personnel in World War II. It was an army program for attaining conversational proficiency in foreign languages such as German, French, Japanese, Chinese, and Italian. Later, it became the standard way of teaching foreign languages in the United States during the 1950s. The emphasis of Audiolingualism was on the acquisition of grammar structures in dialogues; learners repeated and practiced until the responses in the foreign language were automatic (Maedeh & Ehteramsadat, 2016). Despite Audiolingualism had a more solid linguistics and psychology theories than Situational Language Teaching, both methods declined in the mid-1960s.

2.1.2 Current approaches and methods

Noam Chomsky (1957) demonstrated that language learning was not a habit-formation process, but a communicative and creative process. So, there was a demand for developing new methods that emphasize communicative proficiency rather than mastery of structures. Over the 1970s and 1980s, cognitive psychology influenced language learning since communication is a mental process. There was a high interest in the communication approach to language teaching. It was the "Communication Movement," and the development of methods that emphasized a communicative environment and fulfills learner's needs was a high priority. According to Diana (2014c): "Concerning accommodating learners' needs, many language experts and English educators have been working seriously in finding the best way to teach English. That is why, until now, English teaching methodology is still going through a transition." (p.37).

2.1.2.1 Communicative Language Teaching

With the decline of STL and Audiolingualism since 1960, new conceptions about language and learning theories emerged. Language teaching methodology experimented with several modifications based on learner's communicative needs. Besides, the council of Europe and British applied linguistics such as Wilkins, Widdowson, Cadlin, Christofer Brumit, and Keith Johnson supported the theoretical basis for a communicative approach that later will the Communicative Language Teaching (Jack Croft Richards & Theodore Stephen Rodgers, 2001).

CLT bases on language as communication and encourages students to learn how to use the target language. Classroom activities involve tasks with instructions in the target language that promotes meaning and speaking (Jack Croft Richards & Theodore Stephen Rodgers, 2001). Nowadays, language teachers and institutions worldwide still use CLT principles. Indeed, the Ecuadorian English teaching curriculum bases on CLT. Nunan (1999) mentions that CLT is the best approach in English Language Teaching.

2.1.2.2 The Natural Approach

In 1977, Tracy Terrel and Stephen Krashen developed a language teaching proposal that included an innovative second language acquisition theory. Terrell defined new thinking of language teaching known as the Natural Approach. Krashen mentioned that language learning and acquisition were different processes; formal language learning is a conscious process that limits the communicative ability (Krashen & Terrell, 1995). Besides, Krashen believed that an unconscious process called acquisition allowed the ability to speak and understand a language. This natural process will enable children to learn a second language more rapidly than adults.

The Natural Approach based its theory on five language acquisition principles: Acquisition, the Monitor hypothesis, the Natural order hypothesis, the input hypothesis, and the affective filter hypothesis (Krashen & Terrel, 1995). Teachers on the Natural approach provide students comprehensible language and speak slowly using pictures, charts, and other objects from real life to teach. Learners speak the target language when they feel ready, and the teacher monitors their speech production. It is worth mentioning that V.R. technology in language teaching underlines the Natural Approach principles because it delivers second language learners a communicative simulation where the teacher monitors and evaluates listening, speaking, pronunciation, and grammar.

2.1.2.3 Computer-Aided Approach to Language Learning

The rise of the internet and computers in the 1980s created new language learning opportunities. The combination of pedagogy and technology supported educational needs based on the Multiple intelligences' theory proposed by Howard Gardener in the 1980s. Hubbard (1996)

proposed a methodology based on learner's needs that included three modules Development, evaluation, and implementation. Hubbard introduced the first principles of Computer-Aided Language learning. CALL emerged as a research field that studied computers, software, and multimedia to teach and teach foreign languages (Gamper & Knapp, 2002). Examples of language teachers using CALL tools include games, online tests, platforms, web pages, and recently the Virtual Reality.

Laghos and Zaphiris (2005) state, “The use of computers in language acquisition is becoming a common practice, a challenge for research, and a business opportunity” (p.2). Besides, the development of new technologies such as artificial intelligence and speech recognition has provided two enhanced CALL systems in language learning; they are Intelligent Computer-Assisted Language Learning (ICALL) and Computer-Assisted Language Testing (CALT). Examples of ICALL systems are platforms like Open English, English Live, and Rosetta Stone. TOEFL (Test of English as a Foreign Languages) uses CALT systems to evaluate exams. Nowadays, Computer-Aided Language learning has a tremendous impact worldwide since it provides opportunities to study foreign languages through virtual classrooms and online platforms.

2.1.3 Pedagogical theories that support V.R. in language learning

According to Zhai (2017), "Virtual reality technology can be used to introduce real pragmatic and intercultural communication situations to foreign language teaching class and create immersive foreign language teaching environment" (p.212). In other words, V.R. has the potential to create immersive communicative experiences for students to assemble their comprehension of contents and interact with others. The three most relevant learning theories that support V.R. in language teaching include constructivism, situated learning, and game-based learning (Chen, 2009; Chen et al., 2019; Rahimi & Pourshahbaz, 2019).

Virtual Reality supports constructive language learning since communication is a logical combination of utterances with meaning based on experiences. As Alizadeh (2019) mentions, “Virtual reality supports the constructivist approach to learning in that it allows learners to construct knowledge from meaningful and enriched experiences” (p.23). Therefore, 3D contents simulated in computer-simulated environments are more immersive than 2D multimedia as they represent the world's natural complexity for students.

V.R. creates safe simulations of daily activities that promote social interactions and learning acquisition with computer-simulated characters. Alizadeh (2019) mentions that learners using Virtual Reality are more engaged in social interactions with classmates in a natural learning environment. Moreover, V.R.'s learning activities and assessment tasks engage learners since they reduce anxiety and promote inquiry-based learning. One of V.R.'s main features in learning lessons

for students is its engagement compared to traditional classroom activities (Buckingham & Scanlon, 2000).

3.1 English Teaching in Ecuador

Before 1990, studying foreign languages in Ecuador was exclusively for high economic sectors and privileged people. Private schools and language institutes offered English and French programs. However, in 1992, The British Council, altogether with the Ministry of Education and Culture (MEC), founded the Foreign Language Administration and created a curriculum for teaching English in public schools, known as Curriculum Reform Aimed at the Development of the Learning of English, or simply CRADLE (Education Intelligence, 2015)

3.1.1 CRADLE PROJECT

The CRADLE project (Curriculum Reform Aimed at the Development of the Learning of English) was designed to train English teachers and guarantee that students from public schools reach an intermediate level in the four English Language skills. It consisted of six books, "Our world through English," with didactic materials and audios where teachers and students could interact in English the country's reality. Reportedly, it benefited 8,000 English teachers and 1.200.000 students in the public sector from 1993 to 1999 (Ortega, 2017). The British government supported language learning in Ecuador by offering master's programs and training courses for English teachers in England.

The CRADLE project started in 1993 and ended in 2008 when the British Council stopped cooperating and left the country in 2010 for commercial reasons. According to Mafla (2013), the training programs abroad promoted by CRADLE resulted in creating the National Division of Foreign Languages in the Ministry of Education and Culture and the design of six successful didactic English books for local distribution. Unfortunately, high school students' English proficiency remained significantly low at the end of the project. It is worth mentioning that the American Government assumed the training programs (later known as "GO TEACHER") for teachers after the British Council left Ecuador in 2010.

3.1.1.2 REFORM IN 2008

After the British Council stopped supporting the CRADLE project in 2008, the Ministry of Education examined the English level in Ecuadorian English teachers from 2009 to 2010. It found that more than 50 % of teachers reached the level A2 (Basic user) on the evaluations based on the Common European Framework of Reference for Languages (Mafla, 2013). Later in 2012, former president Rafael Correa signed a contract with the international organization ETS (Educational

Testing Service) to evaluate the teachers' English proficiency from public schools around the country through the TOEFL exams. Approximately 4.082 English teachers took the TOEFL test, and only 2% reached the B2 based on the CEFR (Ministerio de Educación, 2012).

The low English proficiency in teachers and students from public schools led to developing a new curriculum based on the Communicative Approach, an evaluation system with CEFR standards, and the launch of the training program "GO, TEACHER." Reportedly, 112 teachers benefited and studied master's programs on curriculum design and methodology in American Universities. (Ministerio de Educación, 2012). This project, powered by the Ministry of Education, aimed to enhance English teachers' language skills and teaching practices.

Nevertheless, the English level in public schools remains low nowadays, and only a minimal percent of students at the end of school reaches the B1 level. A study carried out by Education First found that Ecuador ranks the last place in Latin America regarding English proficiency (Education First, 2019). Therefore, college students have difficulties achieving the B2 certification, a graduation requirement, and many cannot apply for master's programs abroad.

3.1.2 Language Skills level on high school Ecuadorian students based on CEFR

The Ecuadorian National English Curriculum guidelines (Las Directrices Curriculares Nacionales de Inglés) designed by the Ministry of education, established English as a compulsory subject in public schools since 2016. It is expected that students at the end of high school reach the B1 level based on the CEFR, the international standard in measuring language ability. The CEFR levels define a structure with "can-do" descriptions according to each group. The next chart describes the categories linked to the Common European Framework for Languages and highlights the levels expected in school grades in Ecuador.

	Level		General Description	School grades
Proficient User	C2	Mastery	High proficient – can use English very fluently, precisely, and sensitively in most contents	-
	C1	Effective Operational Proficiency	Able to use fluently and flexibly in a wide range of contents.	-
Independent User	B2	Vantage	Can use English effectively, with some fluency in a range of contents.	University
	B1	Threshold	Can communicate essential points	Grade 11 – 12

			and ideas in a familiar context.	(2do – 3ro BACH)
Basic User	A2	Waystage	Can communicate in English within a limited range of contents.	Grade 9 – 10 (10mo BGU – 1ro BACH)
	A1	Breakthrough	Can communicate in basic English with help from the listener.	Grade 7 – 8 (8vo – 9no EGB)

Table 3: English levels from CEFR expected in Ecuadorian school grades (Council of Europe. Council for Cultural Co-operation. Education Committee. Modern Languages Division, 2011; British Council, 2015)

Ortega and Fernández (2017) carried out a study in eight rural Ecuadorian public schools. They found that senior students' English level skills were deficient, confirming English's low proficiency in rural public schools. The research shows that writing and listening skills had the weakest scores than the other language skills, with 18.8 % and 21.53%. Regarding five schools, speaking had an average percentage between 20,4% and 69.1%, evidence that even with a methodology based on communicative principles, there is a considerable variation in speech production. Finally, reading had the most stable scores of proficiencies between 20.4% 34.68%.

Unidades Educativas	USE OF ENG. & READING	LISTENING	WRITING	SPEAKING
Unidad Educativa A	32,37	17,23	5,63	45,70
Unidad Educativa B	34,68	3,06	18,18	69,1
Unidad Educativa C	31,39	21,53	6,13	33,5
Unidad Educativa D	20,4	16,53	3,47	35
Unidad Educativa E	28,88	20,54	8,59	51,1
Unidad Educativa F	34,08	13,76	0,00	45
Unidad Educativa G	30,71	13,3	1,7	60
Unidad Educativa H	31,2	15,38	0,54	20,4

Figure 1. Analysis of English Language skills in eight Ecuadorian public schools (Ortega and Fernández, 2017).

The study demonstrated that the linguistic competences of listening, writing, and speaking had a low competence. The two main factors associated with the limited communicative skills are the social context and the traditional teaching methodologies (Ortega and Fernández, 2017). First, students cannot apply and practice what they learn outside the classroom since English is not a commonly spoken language in Ecuador. Some private schools have solved this issue by using online platforms and

implementing subjects in English, such as biology and history. However, these solutions are not possible in public educational institutions. Second, traditional language teaching methodologies limit students' language communicative performance since it implies teacher-centered learning, such as the Grammar Translation Method.

In summary, in Ecuador, English learning has experimented with several changes in methodology, curriculum, and teaching practices over the last two decades. International standards exams have become the accreditation of the English level in public schools for teachers and students. However, there is not yet an improvement in the field of English teaching in Ecuador. Some factors include the unknowledge of new technologies, access to digital resources, and traditional methodologies still used by teachers that reflect language teaching in classrooms, a reality that V.R. technology can change.

CHAPTER II: METHODOLOGY

2.1 Type of investigation

The present research involves a quantitative and qualitative approach since it includes statistical techniques and observation of non-numerical data. According to Tashakkori and Creswell (2007), mixed methods are defined as "Research in which the investigator collects and analyses data, integrates the findings and draws inferences using both qualitative and quantitative approaches or methods in a single study" (p. 4).

Oberiri (2016) mentions that "A quantitative research method deals with quantifying and analyzing variables to get results "(p.41). It is quantitative since the research will collect and analyze data about speaking assessment tools related to virtual reality technology in the foreign language classroom at "Empresa Pública" through a survey strategy to obtain comparable and general results in the samples. The survey strived to determine students' perception of their speaking performance, language experience, speaking assessment methods, and access to new technologies. These results gave the researcher the essential information to design and what to include in the final proposal.

This research shows a qualitative approach since the aim was to understand how English teachers at "Empresa Pública" think about their speaking assessment methods and students' performance in speaking activities through a semi-structured interview. As Kumar (2018) mentions, "Qualitative research is a form of social action that stresses the way people interpret and make sense of their experiences to understand the social reality of individuals" (p.2). Although individual interviews have limitations, this methodology was selected because of its advantages. First, data from the personal interview was used to create the follow-up questionnaire study. Secondly, interviews hold much information and allow researchers to reflect on each other's ideas objectively. Hence, the data collected from this qualitative instrument will allow the researcher to include specific aspects of speaking assessment in the final proposal.

2.2 Participants

In this research, 61 English students participated in the survey in three separate online sessions using google forms. All students were selected through convenience and purposive sampling. They also were students from the last levels (n = 61; 43 female and 18 male participants). As for the age of the participants, it ranged from 18 – 30 years. Regarding participants' education, all students were college students from different careers.

For the qualitative part, participants were selected through convenience and purposive sampling. There were 3 English teachers: 2 males and one female aged 30 – 50. In terms of affiliation, all participants have teaching experience in primary, secondary, and higher education. They are currently working at "Empresa Pública UTN" (for more information on the participants, see Table 4). All the names listed in the table are pseudonyms to ensure anonymity.

	<i>Interview 1</i>	<i>Interview 2</i>	<i>Interview 3</i>
Pseudonym	Gallardo	Nick	Patricia
Gender	Male	Male	Female
Teaching experience	15	11	21
Professional teaching experience	Primary Secondary Higher education	Primary Secondary Higher education	Primary Secondary Higher education
Currently teaches at	Empresa Pública UTN	Empresa Pública UTN	Empresa Pública UTN

Table 4. Participants for the interviews

2.3 Instruments

For the quantitative part of the study, a survey was used to collect information about the student's perspective in language learning, how they are evaluated in speaking, and their weaknesses with new technologies such as Virtual Reality. It was a 12-question survey that included questions about English as Foreign Language experiences and technological possibilities. For this study, the questionnaire, written in Spanish, included information from the previous literature review. However, due to the covid-19 pandemic, it was necessary to adapt an online version of the questionnaire for students. Before sharing the survey online, the instrument was piloted with expert judgments with two research professors. It was used to check any misunderstandings and inconsistencies before the final version. Besides, the survey did not document any biographical data of the participants, such as name, current workplace, or career. It was completely anonymous and confidential.

For the qualitative part of the study, a semi-structured interview to explore teachers' beliefs and perceptions about technologies in speaking assessment methods was devised. According to Wallace (1998), semi-structured interviews include a "certain degree of control with a certain amount of freedom to develop an interview" (p.174). After some modifications by an EFL expert

and information based on the literature review, the final version of the interview guide contained 15 items for the three participants: three biography questions for the sample description, and 12 questions related to speaking performance, speaking assessment methods, and technology in the EFL class. The definitive version of the interview guide was in Spanish since more details can be included for the following – up analysis. Besides, the interview was carried out on Zoom and Microsoft teams, and there were three participants. They have been teaching English for more than ten years and fulfill the requirements for this study. It is worth mentioning that participants' information was anonymous and confidential.

Six of the seven steps of the validation process based on Prescott's (2011) model were adapted as follows:

1. Review of the literature
2. Self-reflection and brainstorming
3. Formulating the research questions
4. The first draft of the interview guide
5. Expert reviewed the draft.
6. Final version

2.4 Data collection and analysis

The questionnaires were shared online using Google forms, and they were available to any participant with internet access. There were three sessions at the end of each class to avoid interruptions. The surveys were sent as a link in zoom meetings and WhatsApp groups for the rest. After data collection, information was analyzed with the statistical software Statistical Package for Social Sciences. Both descriptive and inferential statistics were used to compare the results.

The individual interviews were conducted in the L1 of the 3 participants (Spanish) and recorded with their consent. Next, the interviews were transcribed by the author through speech recognition software powered by Microsoft Office. There were three sessions, and the total amount of words were 15000. The interviews were conducted in an online meeting using Microsoft Teams where only the participants and the moderator (i.e., the researcher) were present and lasted 45 minutes per session. After the first interview, there were minor changes in the instrument: few

items were removed and modifications in some questions. During the interviews, constant reflections on participants' ideas led to a deeper understanding of speaking performance in students since participants had the chance to share their teaching experience and reflect on each other's thoughts. Therefore, it seemed a natural conversation between the participants, during which the researcher was often in a role of a silent listener. After the interviews, information was translated from Spanish to English. To validate the quality of the translation, back-translation was carried out by an EFL teacher who is also a Ph.D. student. Then, data were categorized and contrasted with information obtained with students' surveys to determine a general analysis with qualitative and quantitative information.

2.5 Research questions

General question

What are the perspectives about students' speaking performance at “Centro Académico de Idiomas, Empresa Pública”?

Specific questions

- What are the students' interests and preferred topics to talk about in English?
- How digital and traditional resources are used in the assessment of speaking?
- What do students and teachers know about virtual reality technology?

CAPÍTULO III: ANALISYS AND RESULTS

3.1 Student's level of confidence when speaking with others

Student's level of confidence when speaking with others.				
	Frequency	Percent	Valid Percent	Cumulative Percent

	English teachers	16	26,2	26,2	26,2
Valid	English native speakers	7	11,5	11,5	37,7
	Friends	38	62,3	62,3	100,0
	Total	61	100,0	100,0	

Table 5. Student's level of confidence when speaking with others.

Analysis

The following chart illustrates the level of confidence students have when speaking English with others. As shown in the figure, most students (62,3%) feel more confident when speaking English with friends. From the sample, 26,2% of the participants affirm to feel confident when speaking with teachers. However, few students (11,5%) feel confident when speaking with native speakers. These results reflect evidence of a higher self-confidence when speaking with non-native English speakers. Echoing Tridinanti (2018) English learners demonstrate a higher speech achievement when speaking with people close to them. Speaking is one of the productive skills that are the result of oral production. EFL learners enhance speaking by interacting with others in the target language. According to Srinivas (2018), "learners can acquire the knowledge of grammar and vocabulary that is useful in improving speaking skills when they can interact with others in language learning activities" (p.286).

3.2 Difficulties when speaking

Difficulties when speaking		Responses		Percent of Cases
		N	Percent	
Valid	Talk to two or more people	21	10,6%	34,4%
	Start a conversation	15	7,5%	24,6%
	Mantener la conversación	39	19,6%	65,6%
	Talk about general ideas	11	5,5%	18,0%
	Talk about specific ideas	22	11,1%	36,1%
	Make me understand	25	12,6%	42,6%
	Understand what others say	32	16,1%	52,5%
	Clarify ideas before to speak	34	17,1%	55,7%
Total	199	100,0%	326,2%	

Table 6. Difficulties when speaking

Analysis

The chart above shows the most common difficulties students have when speaking English. The vast majority (65,6%) agreed that keeping a conversation is the most challenging aspect. The second choice was "Clarifying ideas before to speak" (55,7%), and the third was "Understand what others say" (52.5%). However, 42,6% mentioned that "Making themselves understand" was also a challenging step in speaking. Similarly, 18 % indicated that talking about general ideas was less complicated. These results are evidence of common difficulties in speaking for most EFL learners. They include inhibition and nothing to say, making mistakes, fears of criticism, or shyness (Ur, 1996). Also, Zhang (2009) mentions that low participation in class was a problem for speaking development. As Patricia from interviews states, *"interactions in the EFL class are essential for fluency."*

Students can practice and monitor their development in speaking in terms of grammar, vocabulary, syntax, and pronunciation. However, speaking is a skill that requires motivation and context to be encouraged. Khrashen (1985) mentions that all these factors that challenge EFL students to speak are from input to production since learners need this silent period to internalize the information correctly. Sometimes learners develop negative attitudes towards the target Language after this period (Abukhattala, 2012). Based on the interviews (Patricia, Nick), communicative strategies such as podcasting and short roleplays help promote speaking. However, according to the participants, students tend to use a translator in speaking activities, so fluency is limited, and they find it challenging to keep a conversation and organizing ideas before starting a conversation.

3.3 Preferred topics to speak by students

Preferred topics to speak by students		Responses		Percent of Cases
		N	Percent	
	Sports	22	10,4%	36,1%
	Trips	22	10,4%	36,1%
	Hobbies	45	21,2%	73,8%
	Music	36	17,0%	59,0%
	Food	26	12,3%	42,6%

Places	26	12,3%	42,6%
Picture description	16	7,5%	26,2%
Academic topics	9	4,2%	14,8%
Culture	8	3,8%	13,1%
Technology	1	0,5%	1,6%
Daily activities	1	0,5%	1,6%
Total	212	100,0%	347,5%

Tabla 7. Preferred topics to speak by students

Analysis

The following chart shows a list of the most preferred topics to speak with confidence by students. Most students prefer topics related to their hobbies (73,8%) and music (59%). Favorite places and food; both of them at the third option (42,6.5%). The less preferred topics include trips and sports (36.1%). In contrast, only 14.8 % of students feel confident about academic topics and culture (13.1%) despite studying a career in higher education. In the context of this study, EFL students tend to feel more confident talking about daily routines and personal preferences such as hobbies. SLA research reveals that English learners prefer topics related to their daily life (Hsieh, 2016).

As Bouzar (2019) mentions, " Language is used in our daily interactions to fulfill many different goals such as communicating information, ideas, beliefs, emotions, and attitudes to one another" (p.70). Based on the observations and interviews, intermediate students feel more confident discussing their daily routines and preferences. They can include information about themselves or friends. However, "topics for discussion in fields such as politics or academic tend to be more challenging; since they are not related to their context and students do not have enough information. So they have to read and prepare first" (Patricia). In the same way, "talking about themselves, their experiences, their feelings always will be an advantage for learning. It is more significant if we talk in English about what is related to their personal life" (Gallardo).

3.4 Speaking assessment tools used by teachers

	Responses		Percent of Cases
	N	Percent	
Dramatizations	4	3,0%	6,6%

Speaking assessment tools used by the teacher	Role plays	16	11,9%	26,2%
	Audio recordings	12	9,0%	19,7%
	Picture description	27	20,1%	44,3%
	Online interview	24	17,9%	39,3%
	PowerPoint oral presentations	46	34,3%	75,4%
	Conversations	1	0,7%	1,6%
	Dialogue and questions	1	0,7%	1,6%
	Interaction with classmates	1	0,7%	1,6%
	Group's discussions	1	0,7%	1,6%
	Individual interactions	1	0,7%	1,6%
	Total	134	100,0%	219,7%

Tabla 8. Speaking assessment tools used by the teacher

Analysis

The following chart reveals the most used assessment tools to evaluate speaking in the class. As seen, the PowerPoint in an oral presentation (75,4%) is the most used tool to evaluate speaking. Also, pictures and descriptions (44,3%) and online interviews (39,3,5%) are the second and third most used to evaluate speaking, respectively. In addition, the survey reveals that students are evaluated through roleplays (26,2%), and the lower percentages include audio recordings (19,7%), dramatizations (6,6%), and free conversations either in pairs or groups (1,6%). Data reveals that most assessment methods are based on students speaking skills development; since the instructors focus on evaluate speaking habilities in actual communicative performance. Similarly, findings revealed that teachers' conceptions of assessment are directed towards developing learners' speaking skills (Ounis, 2017).

Camp and Richards (1992) argue "that the most important aspects to evaluate in speaking are related to a set of competencies such as the ability to talk reasoned, coherent sentences; the ability to express appropriate thoughts in different contexts and the ability to be creative and imaginative in language use" (p.75). Altogether with interviews, teachers use a variety of traditional and digital tools to evaluate speaking that includes: Oral PowerPoint presentations, roleplays, zoom meetings, podcasting, and short video blogs. Based on the interviews, teacher-supported their assessment methods:

"I prefer working with roleplays. Of course, it depends on the topic. For example, when I want my students to talk about their career, family, vacations. An oral PowerPoint presentation is excellent since they can prepare and connect their ideas related to personal experiences. I think it is and fruitful way to learn English" (Gallardo)

"Well, before the pandemic. We used traditional tools, let's say worksheets or those activities, to allow students to generate their content to talk, such as dialogues or any interactive exercise. Nowadays, if we talk about instruments, they are oriented to a virtual environment Soundcloud, Youtube is the most popular, and there are also other alternatives. (Nick).

3.5 Use of Rubric in speaking assessment

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	60	98,4	98,4	98,4
Valid No	1	1,6	1,6	100,0
Total	61	100,0	100,0	

Table 9. Use of rubric in speaking assessment

Analysis

The following chart represents the results about the use of rubrics when evaluating speaking. Data reveals that most students are evaluated using a rubric in terms of speaking. Therefore, it is evident that English teachers at "Empresa Publica" measure students' communicative capabilities based on students' performance in conversations. Research reveals positive outcomes for teachers and students when classroom assessments integrate a reflective practice from the instruction/learning process. (Black & Wiliam, 1998).

According to Kenneth and Stevens (2007), "A rubric is a multi-purpose scoring guide for assessing students' products and performances" (p.3). Most rubrics used for EFL learners in "Empresa Publica" include grammar, vocabulary, fluency, pronunciation, and communicative strategies (Patricia). Also, *"Rubric is an essential tool. Without it, students' performance does not have an objective. It is working under my perception..... So, the Rubric supports the grade student gets with a bias thought"* (Nick). In summary, all students surveyed and teachers confirmed that rubrics are essential tools to evaluate speaking objectively.

Students level of satisfaction about the way their speaking is evaluated

	Frequency	Percent	Valid Percent	Cumulative Percent
Disatisfied	5	8,2	8,2	8,2
Enough satisfied	16	26,2	26,2	34,4
Valid Satisfied	34	55,7	55,7	90,2
Very satisfied	6	9,8	9,8	100,0
Total	61	100,0	100,0	

Table 10. Students level of satisfaction about the way their speaking is evaluated

Chi-Square	35.590 ^a
df	3
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 15.3.

Table 11. Chi-Square

Analysis

As shown in the chart, most students are satisfied and enough satisfied with the assessment tools English teachers use, with 55,7% and 26,2% respectively. However, 8,2% indicated that they are dissatisfied, and 9.8 feel very satisfied with the speaking assessment process. As majority the group scored between satisfied and enough satisfied. A Chi-square analysis reveals that statistically significantly assessment tools used to evaluate their speaking are accepted by students and supplies student's needs $X^2(3) = 35,59, p < ,001$. Recent studies show that the assessment practices adopted by teachers of oral expressions effectively develop students' speaking performance (Ghermaoui, 2017). However, assessment tools can vary on students' performance since not all have the same interaction in class and use of Language outside the classroom. Teachers are not satisfied with the fluency acquired at the end of the process. Some factors include different levels of motivation,

frustration in using technological tools, limited hours of English teaching, and different learning experiences. Some comments from interviews include:

"They look for a way to express their ideas despite they use incorrect structures. I always have noticed that my students try to think first in their mother tongue to feel more confident. They do not have that level of fluency expected. By the way, I think time and practice are not enough. If they use more the target language. They will be more confident" (Gallardo)

"I am not satisfied with the current results. There are several failures to overcome. For example, not all students have the same level of motivation and are familiarized with technology. Not having this knowledge about technological tools, they get frustrated and sometimes it can be an excuse to avoid speaking activities" (Nick)

"High percent is not able to communicate, so it is a bit disappointing. However, by sharing the screen, I notice students answer my questions in Spanish and make the conversation easier even with topics that should have been covered in previous levels. It is expected that students from the final level can interact in English with fluency. However, they are students who come from different teaching experiences" (Patricia).

3.6 Use of technological resources to evaluate speaking

	Frequency	Percent	Valid Percent	Cumulative Percent
Always	16	26,2	26,2	26,2
Usually,	24	39,3	39,3	65,6
Sometimes	15	24,6	24,6	90,2
Valid Hardly ever	4	6,6	6,6	96,7
Never	2	3,3	3,3	100,0
Total	61	100,0	100,0	

Table 12. Use of technological resources to evaluate speaking

Chi-Square	10.672 ^a
df	3

- a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 15.3.

Table 13. Chi-Square

Analysis

The following chart shows the use of technological resources to evaluate students' speaking skills. As shown, 39,3% and 26,2% indicated that teachers usually and always use digital resources to assess speaking. Also, 24,6% revealed that teachers sometimes use digital resources, and 6,6% say that it hardly ever happens. Thus, data reveals that technology present in the speaking assessment process since is statistically significantly students chose the category "Usually" by $X^2(3)=10,67, p=.014$. Recent studies have shown that English teachers access some new technologies (Bahadorfar & Omidvar, 2014). Kunning (2019) agrees that technological tools such as the internet, podcasts, videos, and speech recognition software engage learners in controlled actions and help them to improve language skills such as speaking with specific feedback.

In the same way, interviews reveal that technological resources are essential in the EFL class at Empresa Publica during the last year due to the pandemic. Although students sometimes are not familiarized with technology, it has become the standard way to evaluate speaking. Also, the collaboration among teachers has played an essential role in this adaptation from classrooms to online learning.

"I always use technological resources in each class. They can include apps and situations students are familiarized with. Some problems arise when students do not know how to use them" (Nick).

"If we talk about speaking, before the pandemic, not so much because communication was face to face when we had an oral test. Nowadays, it is an obligation the use technology in class. I always liked the use of technology in class, and I have tried to implement it. I consider technology as a tool, not a challenge" (Gallardo).

"Well, before the pandemic, it has been a direct evaluation. The objective is to allow students to speak more. Nevertheless, now with previous experience, I use Flipgrip, for example. They are tools that I have used before. However, as I said before, students based what they say on memorization It is the students' responsibility to present good homework or task. I can evaluate

their pronunciation, but for communication, I think the best way has a face-to-face conversation" (Patricia).

3.7 Students awareness about Virtual Reality

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	50	82,0	82,0	82,0
No	11	18,0	18,0	100,0
Total	61	100,0	100,0	

Table 14. Students awareness about Virtual Reality

Chi-Square	24.934 ^a
df	1
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 30.5.

Table 15. Chi-Square

Analysis

As shown in the figure, most students know about virtual reality technology and its applications. In contrast, 18% indicate unknowledge about the technology since they are unfamiliar with any application type. A chi square analysis determined that statistically significantly there is more “Yes” than “No”. Based on the interviews, teachers know the main features of this technology. For instance, *"I would define Virtual Reality as the technology to simulate environments or places. Simulations similar to real places with devices and software programs"* (Nick). Also, *"Yes, I have heard the term virtual reality. It is familiar for me due to my son's video games. So, I think it is an excellent opportunity to work with students. Virtual Reality always is going to be designed based on our preferences, places we want to go, people to whom we want to talk. Therefore, the context is virtual"* (Gallardo). Thus, it is evident that VR application in the EFL class would be accepted as most students and teachers from interviews know this technology.

3.8 Smartphone accessibility

Smartphone accessibility			Do you have a smartphone?		Total
			Si	No	
Smartphone brand	Apple	Count	6	0	6
		Smartphone	10,0%	0,0%	9,8%
	Samsung	Count	34	1	35
		Smartphone	56,7%	100,0%	57,4%
	Huawei	Count	9	0	9
		Smartphone	15,0%	0,0%	14,8%
	Xiaomi	Count	7	0	7
		Smartphone	11,7%	0,0%	11,5%
	Motorola	Count	2	0	2
		Smartphone	3,3%	0,0%	3,3%
	LG	Count	2	0	2
		Smartphone	3,3%	0,0%	3,3%
	Total	Count	60	1	61
		Smartphone	100,0%	100,0%	100,0%

Table 16. Smartphone accessibility

Analysis

The following chart shows the most common smartphone brands students have. It shows differences in smartphone operating systems and also the applications used as apps developed differently for these operating systems (Metruk, 2020). As shown in the picture, almost all students have a smartphone and are familiarized with them. Also, the most used smartphones among participants are brands such as Samsung (57,4%), Huawei (14,8%), Xiaomi (11,55), and Apple (9,8%). Smartphones from these brands are capable of running mobile VR apps. Mobile VR does not require advanced software and hardware since applications such as Google cardboard requires minimum specs and a screen to project content with an inexpensive VR headset.

3.9 Internet connection availability at students' houses

Internet connection availability at students' houses			Means of internet access		Total
			Wifi	Movil data	
Place of resident	Zona urbana	Count	35	1	36
		59%	58,3%	4.9%	59,0%

	Zona rural	Count	25	0	25
		41%	41,7%	0,0%	41,0%
Total		Count	60	1	61
		100%	98,3,0%	4,9%	100,0%

Table 17. Internet connection availability at students' houses

Analysis

The following chart represents the internet connection availability at students' houses. According to the survey, most students have internet access through a wifi connection (98.3%). In contrast, 4.9% have limited internet access using mobile data. In addition, some students do not live in urban areas (41%), so the signal is not available in these zones. Based on the survey, it is evident that internet connection is present in the students' daily lives through smartphones and other devices.

3.10 Students' use of smartphones in the EFL class

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	1,6	1,6
	Rarely	5	8,2	9,8
	Sometimes	25	41,0	50,8
	Usually	19	31,1	82,0
	Always	11	18,0	100,0
	Total	61	100,0	100,0

Table 17. Internet connection availability at students' houses

Chi-Square	31.869 ^a
df	4
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.2.

Table 19. Chi-Square

Analysis

The following chart describes the students' use of smartphones in the EFL class. Based on the survey, 41% and 31% of students usually and sometimes use smartphones to complement their English learning. Also, just 18% always use smartphones to learn English and 8,2% rarely. Data from the Chi square analysis determined that participants statistically significantly choose more between sometimes and usually than the other categories by $X^2(4) = 31,86, p < ,001$. Survey reveals that students are independent learners since they use smartphones to reinforce their learning outside the English class. Recent studies have shown positive attitudes towards smartphones in the EFL class and some issues related to perception and potential use of smartphones, such as poor performance in planning students' language learning and underuse of mobile applications (Metruk, 2020).

According to Yaman, Senel, and Yesilel (2015, as cited in Metruk 2020), smartphones have demonstrated tremendous potential useful gadgets in EFL classes since students have become more autonomous in learning, also offering access to different materials through the internet. Interviews reveal teachers' acceptance towards using the smartphone as a tool to complement their teaching but with some limitations. Interviewers confirm the importance of technology in the EFL classroom:

"That is the integration of technology in the EFL class. Nowadays, smartphones are essential tools..... Some students are in class, and it is easy for them. My smartphone is here. I have my laptop there. For those who have more technology access, they have even tablets. So, I allow them to use their devices". (Nick).

"I do not allow them to use smartphones when they have an exam or similar situations..... Many times I share the internet with my students and work in groups. As teachers, we have to know how to use technology in an appropriate way" (Gallardo).

"Because of our political institution, students cannot use smartphones in class. Nevertheless, in my case, I would allow it. Why not taking advantage of technology? In the end, a smartphone is access to any type of information, for example, any word or expression. They look for it on Google translator, and even they have the pronunciation" (Patricia).

3.11 Use of translators in speaking activities

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	1,6	1,6
	Rarely	11	18,0	19,7
	Sometimes	31	50,8	70,5
	Usually	14	23,0	93,4
	Always	4	6,6	100,0
	Total	61	100,0	100,0

Table 20. Use of translators in speaking activities

Chi-Square	45.148 ^a
df	4
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.2.

Table 21. Chi-Square

Analysis

The following figure shows the use of translators in speaking activities. As shown in the figure, half of the students sometimes tend to use translators when speaking. Following that, 23% mention that they usually use translators and 18% rarely. In contrast, the remaining 6,6% always use translators to speak, and just 1,6% do not use them. In the same way, a Chi square analysis revealed that most students statistically significantly chose more the options “Sometimes” and “Usually” compared to other categories in $X^2(4)=45,14$, $p<,001$. Students use translators to understand expressions and become more aware of multiple meanings of an English word, although they are considered independent users. Some studies (Hsieh, 2020; Carreres, 2006) have found

that translators help students pay attention to the coherence and contextualization of English. Also, students fully understand text in English and extend their vocabulary used in speaking activities.

$\chi^2(1) = 24.93, p < .001$.

According to Calis and Dikilitas (2012), the use of translators is a learning practice preferred by learners as it promotes different aspects of learning, and learners confirm the grammatical patterns in the target language and L1. Indeed, teachers support the use of translators, arguing that *"In the end, a smartphone is an access to any information, for example, any word or expression. They look for it on Google translator, and even they have the pronunciation"* (Patricia). In summary, most students at "Empresa Publica" tend to use any translator in speaking activities since it is an aid to understand expressions and prepare an answer fully.

3.12 Students' perspective towards their speaking development based on teachers' assessment tools

	Frequency	Percent	Valid Percent	Cumulative Percent
Never	2	3,3	3,3	3,3
Rarely	6	9,8	9,8	13,1
Sometimes	22	36,1	36,1	49,2
Usually	26	41,6	41,6	91,8
Always	5	8,2	8,2	100,0
Total	61	100,0	100,0	

Table 22. Student's perspective towards their speaking development based on teachers' assessment tools

Analysis

The following graph shows students' perspectives towards their speaking development based on teachers' assessment tools. As shown, 41,6% and 36,1% of students surveyed consider their speaking is usually improving thanks to the assessment methods used by teachers. Also, 8,2% agree that it is what they expected since their speaking constantly improves. In contrast, the rest 9,8% and 3,3% are not satisfied with their speaking performance. This information shows that

students consider their speaking improves in most cases based on teachers speaking assessment activities. However, communicative competencies are not limited to roleplays, dialogues, or presentations; they reflect students' ability to communicate in any context. Correspondingly, SLA research suggests that students understand English grammar well and even score high in examinations, but the performance is limited (Nguyen & Pham, 2018).

Glover (2011) asserts that speaking proficiency is evidence that learning a foreign language is achieved. In summary, most students believe their speaking is improving based on teachers' assessment tools. However, achieving fluency is a personal process since interaction, motivation, and language use outside the classroom are essential. Interviews support this idea: *"In speaking activities with my students, I try to persuade students to talk clearly and relaxed. Of course, students tend to feel nervous when talking to teachers, but I try to reduce that pressure. As a professional in the field of English teaching, I feel I must encourage students to speak in a relaxed environment and allow them to talk about topics they like..... the amount of interaction in the target language always is going to depend on their level of motivation in class"* (Gallardo).

3.13 Students' perception of virtual Reality in speaking development

	Frequency	Percent	Valid Percent	Cumulative Percent
Rarely	5	8,2	8,2	8,2
Sometimes	12	19,7	19,7	27,9
Valid Usually	33	54,1	54,1	82,0
Always	11	18,0	18,0	100,0
Total	61	100,0	100,0	

Table 23. Students' perception of virtual reality in speaking development

Chi-Square	29.426 ^a
df	3
Asymp. Sig.	.000

- a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 15.3.

Table 24. Chi-Square

Analysis

The following figure shows students' perception of virtual Reality in speaking development. As data reveals, half of the participants say that Virtual Reality may be an alternative tool to improve speaking. Also, 19,7% mentions that VR in some cases would be a helpful tool and 18% agree with the speaking improvement through this technology. In contrast, 8.2% consider VR not enough to improve speaking skills. Based on a Chi square analysis, participants statistically significantly chose more between usually and sometimes than other categories by $X^2(3)=29,42$, $p<,001$. Based on these results, there are positive perceptions toward using VR as a complementary tool to evaluate speaking since students know the benefits of this technology. In the same way, results reflect that perceived usefulness is a significant factor influencing students' positive attitudes toward virtual Reality (Alqirnas, 2021).

Research reveals that Virtual Reality shows itself as a prospective key for creating a natural language environment in EFL countries. Xiangyu and Meihua Chen (2016) support the use of VR in EFL contexts based on three aspects. First, it could simulate an authentic foreign environment to any target country. Second, VR could encourage learners' motivation to learn and modifies the environment for language learning. In summary, most students have positive attitudes towards using VR to develop their speaking despite few students not thinking the same.

3.14 Students tendency to use mobile VR apps

	Frequency	Percent	Valid Percent	Cumulative Percent
Rarely	4	6,6	6,6	6,6
Sometimes	11	18,0	18,0	24,6
Valid Usually	22	36,1	36,1	60,7
Always	24	39,3	39,3	100,0
Total	61	100,0	100,0	

Table 25. Students tendency to use mobile VR apps

Chi-Square	17.492 ^a
df	3
Asymp. Sig.	.001

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 15.3.

Table 26. Chi-square

Analysis

The following figure shows the tendency of students to use VR apps. Two-thirds of surveyed students (36,1% and 39,3%) agree with VR apps in smartphones. Also, 18% feel less confident about using this technology, and just 6,6% mention they are not prepared for its use. More people statistically significantly chose between always and usually than other categories based on the Chi square analysis by $\chi^2(3)=$. It is noticeable that most students are familiarized with mobile apps to complement them with VR content which reflects students' acceptance to use different technologies. A study carried out by Cicek, Bernik, and Tomicic (2021) found that college students have an interest in using new technologies and confirmed the advantages of using VR systems. In the same way, several researchers (Parmaxi, Stylianou, and Zaphiris, 2017) have emphasized the positive impacts of VR in education and the incorporation in teaching practice despite the need for technical knowledge or the cost of VR devices. In conclusion, there is evidence of students' acceptance of VR apps and their use.

CHAPTER IV: PROPOSAL

4.1 Introduction

Fluency is the capacity to talk without hesitation and to communicate effectively. Speaking is a productive skill that reflects how much fluent an English learner student has become. Talking about receptive skills in this study, there are different methods to evaluate students speaking performance, such as roleplays, interviews, picture descriptions, and oral PowerPoint presentations. However, teachers and students agree that speaking is not improving, and students from final levels do not achieve the fluency expected. The introduction of digital resources in the EFL class such as videos, audios, animations, web pages, online platforms, digital books, mobile applications has been a tool to enhance productive and receptive skills for students. Virtual Reality shows itself as an alternative instrument to evaluate speaking through the simulation of 3D environments, allowing the learner to interact using the target language. According to Xiangyu and Meihua Chen (2016):

VR technology would help advance the quality of and learner's experience from an authentic EFL learning environment. While the prospect of gaming and learning is

desirable, there are crucial determinants of its success, such as the cooperation between EFL teachers and VR developers and the sufficient and continuous funding" (p.26).

It is worth mentioning that Virtual Reality applications in Language Teaching are not new. The access to internet connection and digital resources acceptance through Smartphones in this investigation led to the creation of a MOBILE VR PLATFORM as a support for teachers and students in the assessment process of receptive and productive skills (Listening – Speaking). However, this prototype resulted from information from teachers and students from "Empresa Publica" by including real-life scenarios and interactive activities that encourage learners to speak. In this way, students practice the communicative skills learned in class, but teachers can also monitor their speaking performance and use it as an additional speaking assessment tool.

The activities developed in the present proposal are based on Communicative Language Teaching (CLT) and the principles of Computer-Aided Language learning (CALL). CLT encourages students to learn how to use the target language in real communicative situations. Segalowitz and Patsy (1999) assert that CLT methodologies' main feature highlights authentic communication, where learners desire to understand and speak. CALL defines as the combination of pedagogy and technology based on the educational needs proposed on the Multiple Intelligences theory. It is a methodology that supports three learning components: Development, Evaluation, and Implementation (Hubbard, 1996). Examples of language teachers using CALL tools include online tests, platforms, web pages, and Virtual Reality. Moreover, all levels are based on expected B1 speaking interactions from the Common European Framework of Reference for Languages (CEFR), the international standard for language ability.

Students will find 3D scenarios with specific instructions to perform speaking activities based on daily situations on this platform. Information from surveys revealed that students feel more confident talking about daily routines and personal preferences such as hobbies. The platform includes pre-speaking activities with vocabulary related to each topic. The platform is a downloadable Android Package (APK), and an additional VR headset must be used. The exercises consist of short conversations with specific instructions where students can interact, such as making

a reservation in a hotel or ordering food in a restaurant. Also, this proposed platform can be used as an alternative assessment tool for teachers or supporting material in class.

4.2 Justification

The analysis from surveys and interviews determined evidence of incorporating digital resources in the EFL class at "Empresa Pública." Also, teachers are willing to accept new technologies that include Virtual Reality to evaluate speaking. It should be emphasized that 95.1% of students have internet access, and 98% have smartphones capable of running Mobile VR apps, being Samsung and Huawei being the most common. The present proposal justifies introducing English teachers at "Empresa Pública" alternative technologies for assessment through VR. Besides, it implies that teachers determine students' strengths and weaknesses regarding speaking.

This proposal will benefit English teachers and students at "Centro Académico de Idiomas." Teachers will update their digital repertoire to evaluate student's communicative performance, and students will be encouraged to use what they have learned in class in the simulation of communicative situations. Students can use this instrument even offline since most content can be downloaded. Also, teachers can apply this tool in their classes using different activities to complement or evaluate speaking, expecting better results in these receptive and productive skills (Listening and Speaking).

4.3 Objectives

General objective

- Adapt Virtual Reality technology as an assessment tool to evaluate English oral production in students at "Centro Académico de Idiomas."

Specific objectives

- Identify topics that students are interested in encouraging English speaking.
- Develop 3D simulation activities based on Virtual Reality to evaluate speaking in students.

4.4 Proposal name:

English Virtual Reality Assessment Tool (EVRAT)

EVRAT is a virtual reality mobile app oriented to practicing and assessing receptive and productive English skills (Listening and Speaking). It consists of three levels or scenarios where the main objective is allowing English learners to interact based on dialogues simulated by the program. Each level has two game modes, normal and assisted. In the normal mode, dialogues and questions do not project on the screen, just the instructions about the topic at the beginning. In the assisted mode, dialogues, questions, and instructions are projected on the screen with a short Spanish translation. Each level has pre-speaking activities before the conversation where learners can review grammar, vocabulary, and expressions related to the topic. For the conversation, the learner will hear a sound (Bip) and automatically start speaking.

The program records learner's interactions, and each intervention has a limited time depending on the type of question. After each intervention, learners will have two options. The first option will allow the student to listen to what he/she spoke and compare it with a possible correct answer provided by the program; learners cannot re-record a new answer. The second option allows learners to listen to their intervention and repeat it if necessary. The program will show a report with all the recorded interventions and transcriptions at the end of the session. The program analyses and sends this information through email. So, teachers can access this information and evaluate students speaking performance.

4.5 App's logo

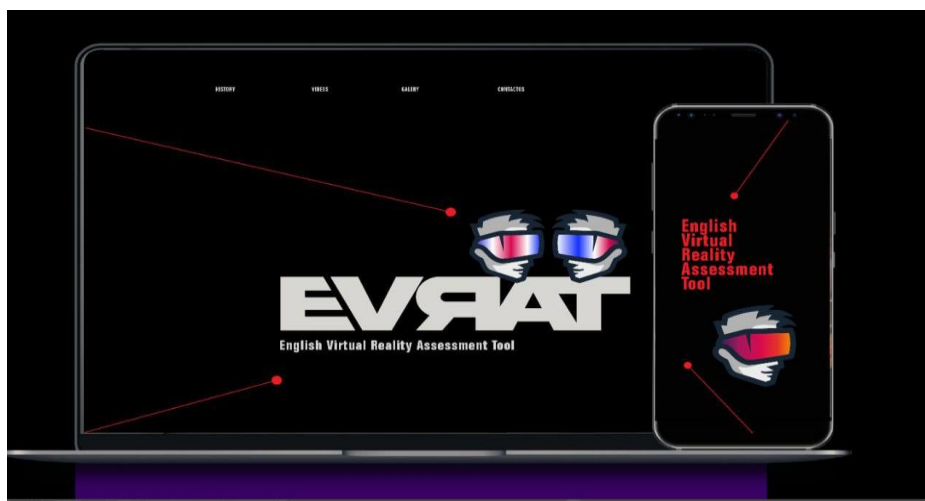


Figure 2: App's logo

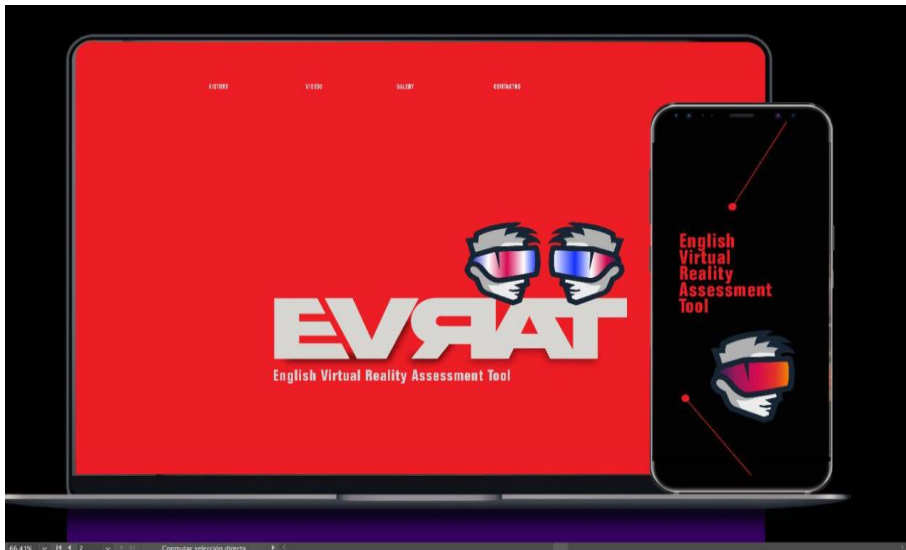


Figure 3: App's logo

4.6 Hardware used

4.6.1 Smartphone

The smartphone used for the development of the project was a Samsung Galaxy A21. It is worth mentioning that the app employed was an APK (Android Package). It is a file format created by Google and runs in any android smartphone. Also, Mobile VR requires android 7.0 or superior motion sensors and 1GB of ram. The technical specifications are as follows:

Display	IPS LCD; 6.5 inches, 102.0 cm ² 720 x 1600 pixels, 20:9 ratio
Processor	Mediatek MT6765 Helio P35 (12nm)

Storage	64GB 3GB RAM
Operating system	Android 10
Battery	Li-Po 4000 mAh, non-removable
Size and weight	193 g (6.81 oz); 167.8 x 76.7 x 8.1 mm (6.61 x 3.02 x 0.32 in)

Table 27: Technical specifications of Samsung Galaxy A21

4.6.2 Headset

The main advantage of the present headset is its price. For this mobile VR app development, a VR box headset was bought for 10\$, including a generic controller. The advantages of the VR box are described in chapter 2 with the general specifications. The technical specifications are as follows:

Model	VR BOX
Size	170 * 120 * 105mm
Weight	330g
Lens	HD Optical Resin Lens
Lens Diameter	42mm
Phone supported	Android & iOS smartphone, Screen size from 4.5" to 6.0", resolution 1080P or above, Phone Width ≤ 80mm,

Table 28: Technical specifications of VR BOX headset

4.7 Software used

4.7.1 Unity (Game Engine)

The present app was created and tested in Unity 2019.2. A cross-platform game engine oriented to creating 3D content simulations for videogames in computers, consoles, and mobile devices. Unity facilitates the compression of game objects and resolution settings for each platform. The current project used the components for google cardboard and 3D Fbx modeling.



Figure 4: 3D model of an airport

4.7.2 Language programming

The language programming used for the creation of EVRAT was C#. It is a modern programming-oriented object language that enables the creation of mobile applications. Desktop applications, web applications, and web services use C# at a large scale. However, C# is also used in game development. It is a natural language that supports different game engines.

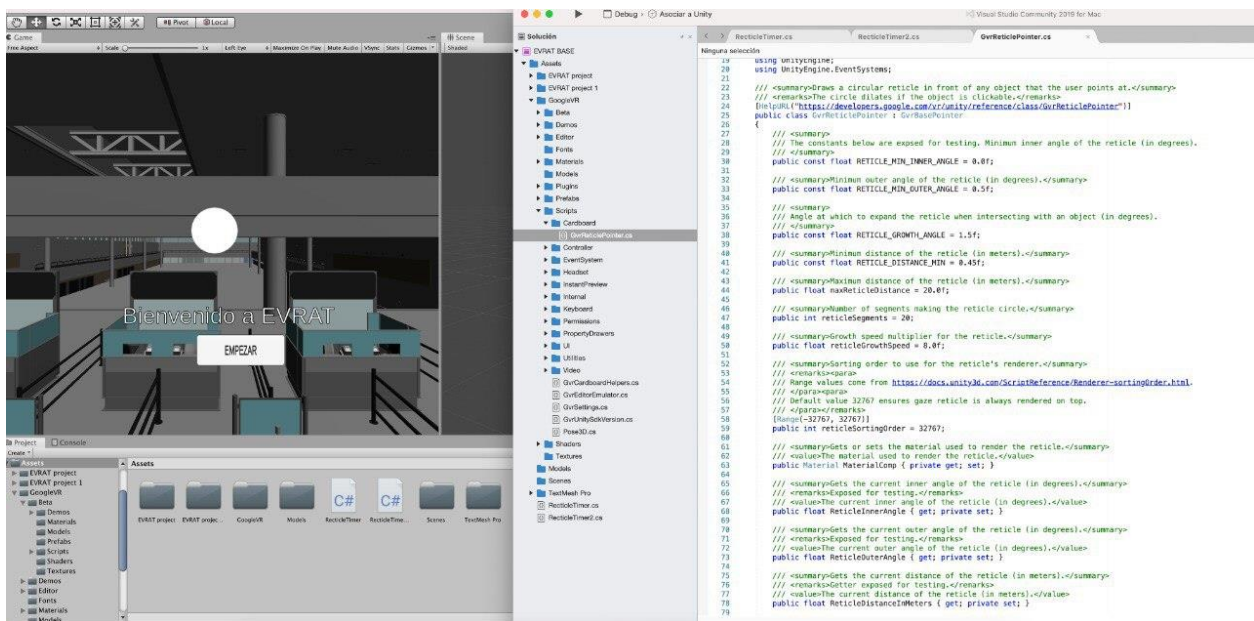


Figure 5: Language programming

4.8 Design of levels

The content for developing levels resulted from data obtained in surveys and interviews from the previous chapter. After considering several options, the final version of the application includes the simulation of three scenarios: An airport, a restaurant, and an interview show, for the initial rendering of game objects. The simulation of these environments proved to be the most common theme that encourages speaking in students at “U Emprende.” Components from Google Cardboard were used for the first simulation of game objects in 360 views.

After testing, the first scenarios were included and converted to an Android Package. In addition, some participants from Indiana Wesleyan University recorded the dialogues for all levels. So, the app includes voices from native English speakers. The three scenarios are a prototype that includes speech recognition software that will allow teachers to evaluate students speaking

performance in real-time. The final version will run three scenarios with free coding for future updates.

Figure 6: Google Cardboard simulation test (First test)

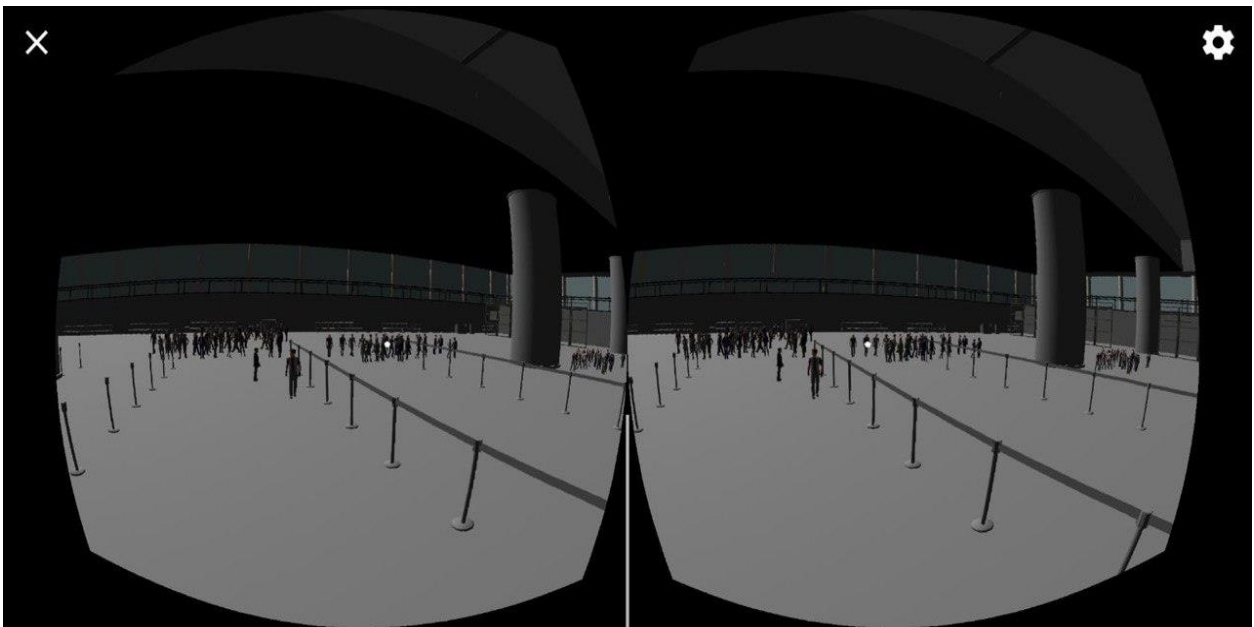
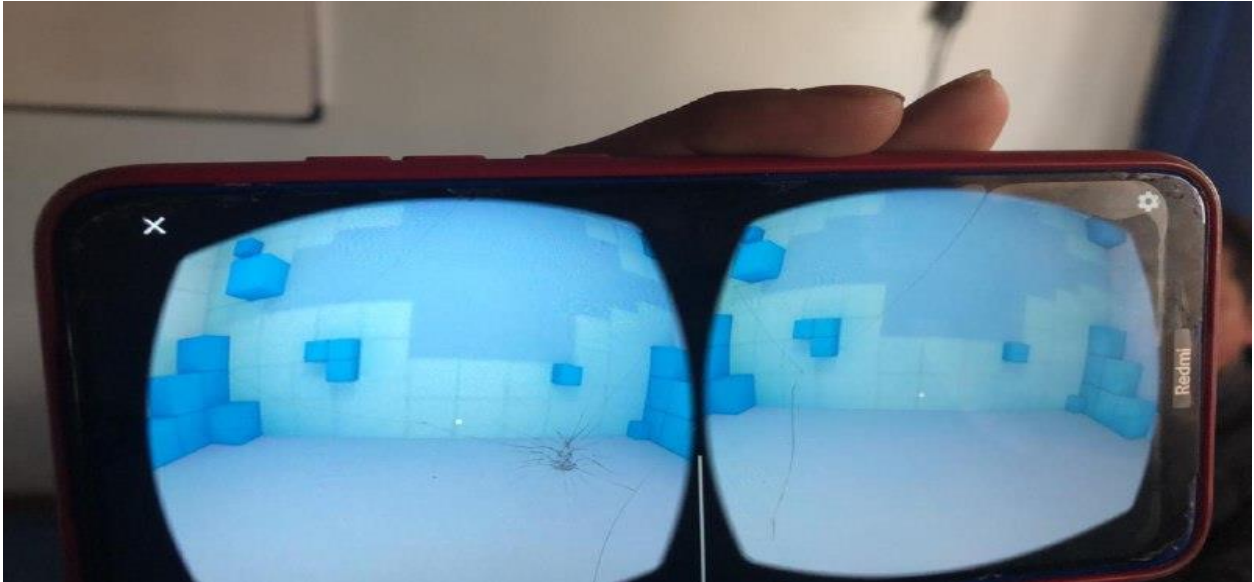


Figure 7: Default point of view after turning on the application (Second test)

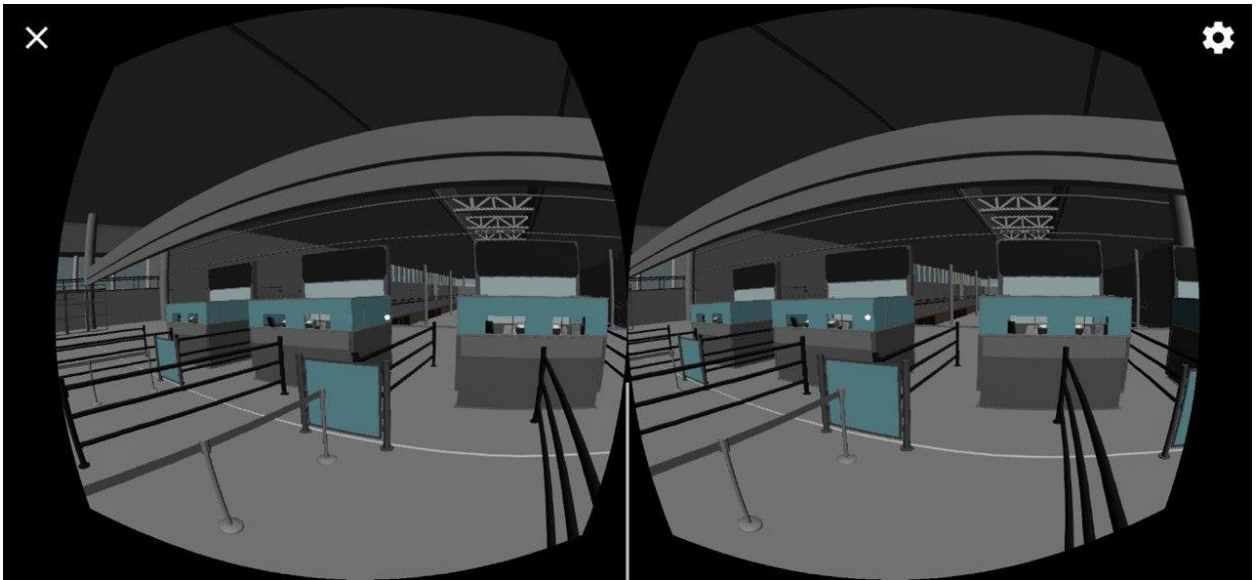


Figure 8: Slightly turning right from the default point of view (Second simulation)

4.9 App interface

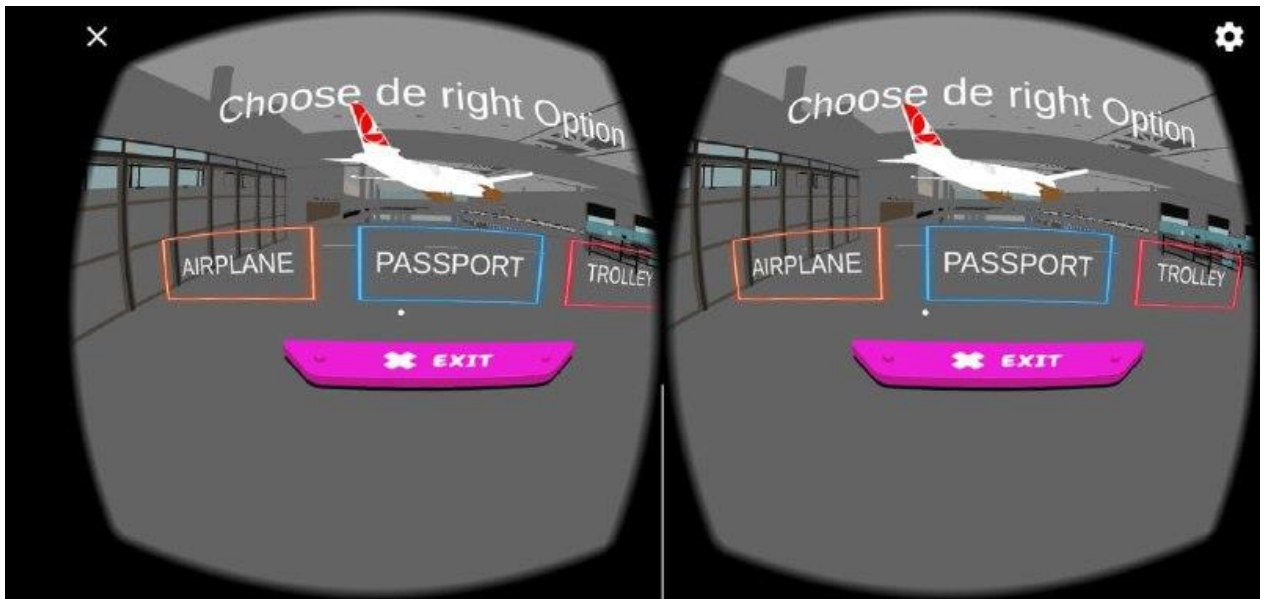


Figure 9: Warm up activity (Tested on Galaxy S10)



Figure 9. Dialogue simulation (Tested on Galaxy S10)

Level 1

Topic: At the airport

Warm-up:

- Match the pictures with the correct definition. (Airport vocabulary)

Instructions

- At this level, you are at an airport. You are talking to a customer officer for the check-in. You are coming from Korea, and this is your first time in Canada. The objective is to explain why a cat is in your suitcase. Answers can vary. You will have 5 seconds before each question to prepare your response.

Dialogue

A: *Welcome to Canada. May I see your passport, please?*

- Say an affirmative expression

B: *Sure, here it is.*

A: *Where are you coming from?*

- Say you come from Korea

B: I'm coming from Seoul, Korea. (Possible correct answer)

A: What is the purpose of your visit?

- Choose one: Business or vacation.

B: I'm here on business. (Possible correct answer)

A: How long are you planning to stay?

- Choose: weeks or days
- Say you will stay for a semester and include a reason (optional).

B: I'll be staying for three weeks. (Possible correct answer)

A: Where will you be staying?

- Choose one: a hotel or a friend's house.

B: I'll be staying at a hotel (Possible correct answer)

A: Have you ever been to Canada before?

- Say it is your first time.
- Say this is your third time in Canada; include information from your last time in Canada (optional).

B: No, this is my first time. (Possible correct answer)

A: Do you have anything to declare?

- Say a negation expression

B: No, nothing. (Possible correct answer)

A: Let me check your suitcase, please.

- Say an affirmative expression

B: All right, no problem

A: I think we have a problem, why is there a cat in your suitcase?

- Say your answer.
- Include vocabulary from the previous section.

Level 2

Topic: Restaurant

Warm-up

Put words in the correct order.

- Have – reservation – a – got – you- ?

Have you got a reservation? (Correct answer)

- You – booked – table – a – have - ?

Have you booked a table? (Correct answer)

- Like – see – to – I – would – please – menu – the .

I would like to see the menu please. (Correct answer)

- Like – drink – anything – would – you – to - ?

Would you like anything to drink? (Correct answer)

- Bill – I – like – would – bill – the – please.

I would like the bill please. (Correct answer)

- Much – is – it – how - ?

How much is it? (Correct answer)

Instructions

At this level, you are at a restaurant with a friend of yours. You will talk to a waiter. You like fast food, but currently, you are on a diet. This level's objective is to explain why you are on a diet and pay for your food. You will have 5 seconds before each question to prepare your answer.

Part 1

A: Good afternoon, have you got a reservation?

- Greet the waiter and say you have a reservation for two people.

B: Good afternoon, yes, I have a reservation (Possible correct answer)

A: Please help me with your last name.

- Say your last name and spell it.

B: Sure, it is Smith: S – M – I – T-H (Possible correct answer)

A: That's correct, follow me please

- Say you want to see the menu.

B: I would like to see the menu please. (Possible correct answer)

Part 2

A: Are you ready to order now?

C: Yes, I will get the vegetable soup. Fish and cheeps with lemonade and as dessert ice cream, please.

A: What about you, are you ready to order?

- Say you are not ready to order and ask for some recommendations.

B: I am not ready to order. What can you recommend to me? (Possible correct answer)

A: Well, I would recommend the chicken soup as an entrance. As the main dish, the Mexican pizza with French fries and chocolate cake as dessert. It is quite popular and delicious here.

- Deny the recommendation, say you are on a diet, and ask for vegetarian options

B: It sounds good, but I cannot eat it. I am on a diet. (Possible correct answer)

A: Oh, I see, I can recommend you the vegetarian option. It includes a vegetable soup, a vegetable lasagna with a garden salad, and almond cookies as dessert.

- Accept the recommendation and ask for extra almond cookies for home.

B: It sounds delicious, I will order that, and please help me with some extra almond cookies for home please. (Possible correct answer)

A: Would you like anything to drink?

- Choose diet drink: (soda, lemonade, beer, apple juice without sugar, water, red wine)

B: I would like a glass of water please. (Possible correct answer)

A: Of course, Anything else?

- Ask for the price.

B: yeah, how much is it? (Possible correct answer)

A: The total is 14,99. Would you like to pay by cash or with a credit card?

- Choose one: cash or credit card.
- Say you include a propine (optional).

B: I will pay by cash. (Possible correct answer)

A: Thanks, I will bring your food.

Part 3 (Two people)

C: I know you don't like to work out at the gym, but you are thin. Why are you on a diet?

- Explain the reason you are on a diet.

LEVEL 3

Topic: Interview show

Warm up:

1. Complete the chart with the expressions in the boxes.

Expressions to give a reason	Expressions to talk about past events	Clarifying one's point idea	Ask for clarification
<ul style="list-style-type: none">- I was worried because it was my first time singing.- Many people thought it was a free concert	<ul style="list-style-type: none">- I started singing when I was only seven years.- My first band won a local contest, and then	<ul style="list-style-type: none">- Let me explain that- Let me put it in another way.	<ul style="list-style-type: none">- What do you mean by?- Could you repeat, please?

<p>because of the unknown artist.</p> <ul style="list-style-type: none"> - Since I did not have enough experience playing the guitar, I had to take lessons. - I had to learn quickly as the concert was in a week. 	<p>we became famous.</p> <ul style="list-style-type: none"> - It was a radical experience for us to upload our songs on YouTube. - We have given concerts in many states, and local people have been nice to receive us. 	<ul style="list-style-type: none"> - In other words - To put it differently 	<ul style="list-style-type: none"> - Could you give us an example? - I wonder if you could say that in a different way
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Instructions

At this level, you are a guest at a popular show interview. You are a famous musician, and you will talk to the host of the show. You have a band and play different instruments. The objective is to talk about your band's creation and how you became a success. You will have 5 seconds before each question to prepare your answer. Answers can vary, and are open to including other details.

A: Welcome to the Music Show program. This is Borton your host, and today I have a special guest. Please tell the audience a bit about you.

- *Introduce your self*
- *Include general information such as*
 - *your name*
 - *where you are from: Washington*

- *where you live: Boston*
- *age: 23*
- *Say this is your first time on TV*

B: Hi, it's nice being here. Well, my name is John. I'm 23 years, and I am from Washington, and I currently live in Boston. (Possible answer).

A: I know Boston has excellent guitarists. However, do you play any other instrument?

- *Option 1: Say you play piano*
 - *Not like because singing is more difficult*
- *Option 2: Say you play the violin*
 - *You like melodies, but it is a costly instrument*
- *Option 3: Say you play drums*
 - *You are learning from youtube*

B: Oh yes! I play the violin. I like the melodies you can add to the music. However, it is a costly instrument (Possible correct answer).

A: What do you mean by that?

- *If you chose piano:*
 - *Say it takes many years of practice to sing without hesitation.*
 - *Make up an example.*
- *If you chose violing*
 - *Say it is an expensive instrument*

- *Average violing prices: 3000\$ - 10000%*
- *Include additional information*
- *If you chose drums*
 - *Say it is easier to learn on the internet*
 - *You can practice with music videos*
 - *Include additional information*

B: Look, the Violin is one of the most expensive instruments in the world. The average price is between 3000\$ and 10000\$ dollars. So, It is a luxury piece that even some professional musicians cannot afford. (Possible correct answer)

A: That's true, but no matter what instrument is. Your voice surprises people. Tell me more about that. How did you discover this talent?

- *Say you started singing*
 - *Ten years old*
 - *Your dad/ guitarist (optional; you can include additional information)*
 - *Your mom/ singer (optional; you can include additional information)*
 - *Upload your videos to youtube for hobbies*
 - *Covers without instrument*
 - *Friends and relatives encouraged you to sing in local contests*

B: Well, everything started when I was ten years. My parents are musicians. My dad was a guitarist in a band, and my mom used to be a singer at a local church. So it was not a surprise for me. I started singing covers of my favorite songs and uploaded them to Youtube, but just as hobbies. I

did not expect to be famous soon in my neighborhood and school. Many friends and relatives encouraged me to participate in local contests.

A: I didn't know about that. But I assume you started to join with people like you to share a good time with the music. Tell us a bit more about this:

- *Talk about your first band, include information such as:*
 - *You met people of your band on social media*
 - *The drummer was your friend*
 - *You won a local contest (Include additional information)*
 - *You uploaded videos to youtube.*

B: I had a Facebook account by then, so many people chatted me to perform some covers. The drummer of my first band was a friend of mine. He had a Youtube channel where we used to upload our first songs. We became popular soon and won a local contest. (Possible correct answer).

A: That is an excellent start for a band like yours. However, could you tell us about your first concert? How did you feel? Had any problems?

- *Say you were nervous*
 - *Many people went to the concert (Include additional information)*
 - *It was a free concert*
 - *You did not have much experience playing the guitar (you can choose any other instrument).*
 - *Include additional information*

- *B: I was a bit nervous because it was my first time singing in front of many people. Many went to the concert since it was free. I didn't have enough experience playing the guitar, so I had to take lessons. But in the end, it was a good concert, and of course, we were more famous. (Possible correct answer).*

A: and do you have more concerts for this year?

- *Say you have three concerts:*
 - *Washington: a concert at a university*
 - *Miami: a concert for charity*
 - *New York: a concert for a contest.*
 - *You can include dates (optional)*

B: We have three concerts for this year. The first in April, it is at a university in Washington. The next is in July in Miami. It is a concert for charity. The last concert is at the end of the year, in New York. We will be participating in a festival. (Possible correct answer).

A: and there you are, our special guest for tonight. Thanks for sharing this great time with us. I'm sure you will have a great career ahead. Do you have anything to say before we finish?

- *Say goodbye*
- *Free option*

The app is available on Play Store at: <https://play.google.com/store/apps/details?id=com.evrat.www>

CHAPTER V:

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

The present research determined that there is interest in the application of Virtual reality as an assessment tool for speaking in students at “Empresa Publica.” Although students are satisfied with the assessment methods used, such as roleplays, oral PowerPoint presentations, online interviews, teachers are not satisfied with the fluency acquired by students at the end of the process. Some factors include different levels of motivation, frustration in using technological tools, limited hours of English teaching, and different learning experiences. Information from surveys and interviews concluded that intermediate students feel more confident discussing their daily routines and preferences. Indeed, all data collected allowed the creation of EVRAT (English Virtual Reality Assessment tool) adapted to the interests and preferences of students and teachers at “Empresa Publica”.

Data revealed that technology is present in the speaking assessment process at “Empresa Publica.” In the same way, interviews revealed that technological resources were essential in the EFL class at “Empresa Publica” last year due to the covid – 19 pandemics. Although students sometimes are not familiarized with technology, it has become the standard way to evaluate

speaking. Also, teachers and students at “Empresa Publica” know about virtual reality technology and its applications. Therefore, it opens opportunities for teachers to update and implement innovative technologies for productive skills evaluation in the teaching-learning process.

Finally, the researcher concluded that it was possible to develop virtual reality as an assessment tool for receptive and productive skills. The result of the research was the creation of EVRAT, the first mobile VR app in Ecuador oriented to assessing receptive and productive English skills such as listening and speaking. Data from surveys showed that the most used smartphones among students were brands such as Samsung (57,4%), Huawei (14,8) %, Xiaomi (11,55), and Apple (9,8%). Smartphones from these brands can run mobile VR apps. Thus, the EVRAT project proved to be a positive adaptation of Virtual Reality for the EFL class.

Recommendations

- EVRAT is a mobile VR app that will be available on the Play store in September. It uses a free code for future updates. So, UTN university should invest in the design of new app versions and launch them on other markets such as Appstore. Teachers, students, and developers could work together to minimize costs for future updates.
- Encourage the use of EVRAT in speaking examinations at “Centro Academico de Idiomas” and educational institutions to test its actual impact. EVRAT opens new lines of research in the ELF field due to its characteristics in speaking assessment.
- Students and teachers from the UTN University and the English career can benefit and promote the first implementations of VR in public schools in Ecuador.
- Additional research is needed to support future applications of similar programs in public and private schools.
- University should train English teachers in the use of this type of technology within the EFL classroom.

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ANNEXES

Annex A: Students' survey

UNIVERSIDAD TÉCNICA DEL NORTE

Facultad de Educación, Ciencia y Tecnología

Effects of 3D environments as an assessment tool to encourage English oral production in second and fourth level students at "Empresa Pública UTN" , Ibarra, 2020-2021

Objetivo

- Determinar la perspectiva de los estudiantes de primeros niveles y últimos niveles de la Empresa Pública, en lo referente a las tecnologías utilizadas para evaluar su producción oral.

Introducción

Un cordial saludo estimado estudiante, soy Juan Andrés Peña Torres, estudiante de la Carrera de Pedagogía de los Idiomas Nacionales y Extranjeros de la Universidad Técnica del Norte y me gustaría requerir su ayuda con este cuestionario para mi trabajo de titulación. Por favor, responda a las siguientes preguntas relacionadas con el uso de la realidad virtual como herramienta para desarrollar el speaking en inglés. Este cuestionario no es una prueba; por lo tanto, no existen respuestas correctas e incorrectas. Solo me interesa SU opinión. Por favor sea honesto, porque su honestidad garantiza el éxito de mi estudio. El cuestionario solo tomará 10 minutos y se puede realizar desde cualquier dispositivo electrónico sea teléfono inteligente u ordenador.

Además, me gustaría informarle que no mostraré los resultados. Este cuestionario no está relacionado con su institución; en consecuencia, ni los profesores ni las autoridades tendrán acceso a sus respuestas. Como lo habrá notado, tampoco estoy preguntando sus nombres, este cuestionario es completamente anónimo, y de carácter CONFIDENCIAL, así que sea lo más honesto posible.

¡Muchas gracias por su ayuda

Si tiene preguntas acerca del cuestionario, no dude en ponerte en contacto conmigo:

Juan Andrés Peña

japenat@utn.edu.ec

0962714011

Instrucciones

- La información recolectada en este cuestionario es de carácter investigativo.
- El cuestionario incluye preguntas abiertas y directas. Por lo tanto, más de una respuesta es aceptable dependiendo del tipo de pregunta.

Cuestionario

1. Genero:

- a. Masculino
- b. Femenino
- c. Otro

2. Rango de edad

- a. 18-21
- b. 22-25
- c. 25 – 30
- d. Más de 30

3. Lugar de residencia

- a. Zona urbana
- b. Zona rural

4. Se siente más confiado cuando habla inglés con: (marque una respuesta)

- a. Docentes de Ingles
- b. Hablantes nativos

- c. Amigos.
5. **¿De los siguientes enunciados, cuales encuentra mayor dificultad al momento de hablar inglés? (Elige 4 como máximo)**
- a. Hablar con dos o más personas
 - b. Empezar la conversación
 - c. Mantener la conversación
 - d. Hablar ideas en general
 - e. Hablar ideas en específico.
 - f. Hacerme entender
 - g. Entender lo que me dicen
 - h. Ordenar mis ideas para hablar
 - i. Otros
6. **¿De los siguientes enunciados escoge los tópicos con los que te sientes más confiado al momento de hablar inglés? (Elige mínimo 3).**
- a. Deportes
 - b. Viajes
 - c. Pasatiempos
 - d. música
 - e. Comida
 - f. Lugares
 - g. Descripciones de lugares u objetos
 - h. Temas académicos
 - i. cultura
 - j. otros
7. **¿Como evalúa el docente su speaking? (Elija 3 mínimo)**
- a. Dramatizaciones
 - b. Juegos de roles
 - c. Mediante grabaciones de audio
 - d. Descripción de imágenes
 - e. Entrevista (online)
 - f. Presentaciones de un tema en específico
 - g. Other
8. **¿El docente usa una rúbrica al momento de evaluar su speaking?**
- a. Si
 - b. No
9. **¿Qué tan satisfecho se siente con la manera en la que el docente evalúa su speaking?**
- a. Insatisfecho
 - b. Un poco satisfecho
 - c. Satisfecho
 - d. Altamente satisfecho

10. ¿Qué tan frecuente usa el docente recurso digitales (aplicaciones móviles, programas, páginas web) para evaluar su speaking?

- a. Siempre
- b. Usualmente
- c. A veces
- d. Casi nunca
- e. Nunca

11. ¿Alguna vez ha escuchado el término “realidad virtual”?

- a. Si
- b. No

12. ¿Tiene un teléfono inteligente?

- a. Si
- b. No

13. Seleccione la marca de su teléfono inteligente

- a. Apple
- b. Samsung
- c. Huawei
- d. Xiaomi
- e. Sony
- f. Motorola
- g. BlackBerry
- h. LG
- i. Realme

14. ¿Tiene acceso a internet en su domicilio?

- a. Si
- b. No

15.

Para la siguiente parte, use las respuestas provistas en el recuadro.

1	2	3	4	5
Nunca	Casi nunca	A veces	Usualmente	Siempre

	1	2	3	4	5
1. ¿Usa su teléfono inteligente para complementar su aprendizaje de inglés?					
2. ¿Usa algún tipo de traductor para realizar sus actividades de speaking?					



¿Considera usted que su speaking está mejorando con 3. los métodos de evaluación de su docente?					
¿Considera usted que la realidad virtual podría 4. desarrollar su speaking?					
¿Considera factible utilizar aplicaciones de realidad virtual en su teléfono inteligente?					

Al enviar este cuestionario accedo voluntariamente a formar parte de este estudio:

Gracias por su cooperación

Annex B: Teachers' interview

UNIVERSIDAD TÉCNICA DEL NORTE

Facultad de Educación, Ciencia y Tecnología

Effects of 3D environments as an assessment tool to encourage English oral production in second and fourth level students at "Empresa Pública UTN" , Ibarra, 2020-2021

Objetivo

- Determinar la perspectiva de los docentes de Inglés de la Empresa Pública, en lo referente a las tecnologías utilizadas para evaluar la producción oral en los estudiantes de los últimos niveles.

Introducción

Un cordial saludo estimado Docente, soy Juan Andrés Peña Torres, estudiante de la Carrera de Pedagogía de los Idiomas Nacionales y Extranjeros de la Universidad Técnica del Norte y me gustaría requerir su ayuda con esta entrevista para mi trabajo de titulación. Por favor, responda a las siguientes preguntas relacionadas con el uso de la realidad virtual como herramienta para desarrollar el speaking en inglés. La presente entrevista conlleva preguntas de carácter personal en su práctica como docente de inglés; por lo tanto, no existen respuestas correctas e incorrectas. Solo me interesa SU opinión. Por favor sea honesto, porque su honestidad garantiza el éxito de mi estudio. La entrevista solo tomará 10 minutos y se puede realizar desde cualquier dispositivo electrónico sea teléfono inteligente u ordenador.

Además, me gustaría informarle que no mostraré las intervenciones de la entrevista. Esta entrevista no está relacionada con su institución; en consecuencia, otros profesores ni las autoridades tendrán acceso a sus respuestas. Como lo habrá notado, al ser una entrevista para recolección de información, sus nombres serán tomados en cuenta. Sin embargo, todo este proceso es completamente anónimo, y de carácter CONFIDENCIAL, así que sea lo más honesto posible.

¡Muchas gracias por su ayuda

Si tiene preguntas acerca del cuestionario, no dude en ponerte en contacto conmigo:

Juan Andrés Peña

japenat@utn.edu.ec

0962714011

Instrucciones

- La información recolectada en la presente entrevista es de carácter investigativo.
- La encuesta contiene preguntas concretas y directas. Por lo tanto, más de una respuesta es aceptable dependiendo del tipo de pregunta.

Lugar de la entrevista:

Nombre del entrevistado:

Nombre del entrevistador:

Fecha de realización:

1. ¿Cuál fue la razón por la que decidió ser docente de Inglés?
2. ¿Qué tiempo ha sido docente?
3. ¿Qué niveles ha enseñado?
4. ¿De las 4 destrezas comunicativas, cual considera la más importante y por qué?
5. ¿Qué tan frecuente usa el español para impartir sus clases?
6. ¿Qué instrumentos utiliza para evaluar la producción oral en sus estudiantes?
 - a. ¿Cuál usa más y por qué?
7. ¿Qué aspectos considera al momento de evaluar el speaking?

8. ¿Qué temas usted ha notado que parecen más familiares a los estudiantes y les motive a hablar en Inglés?
9. ¿Utiliza una rubrica al momento de evaluar el speaking a sus estudiantes?
 - a. Si
 - b. No
 - c. ¿Por qué?
10. ¿Se siente satisfecha con el desempeño de sus estudiantes en los speakings utilizando estas herramientas?
 - a. Si
 - b. No
 - c. ¿Por qué?
11. ¿Qué tan frecuente utiliza recursos digitales (aplicaciones móviles, programas, páginas web) para evaluar el speaking en sus estudiantes?
 - a. ¿Qué tan frecuente actualiza sus conocimientos en el área digital para evaluar las destrezas comunicativas en sus estudiantes?
12. ¿Alguna vez ha escuchado el término “realidad virtual”?
 - a. ¿Qué usos cree que podrían aplicarse en la enseñanza de inglés?
13. ¿Permite a sus estudiantes usar teléfonos inteligentes en sus clases?
14. ¿Considera factible la utilización de aplicaciones móviles de realidad virtual como herramienta para promover las destrezas comunicativas?
15. ¿Qué características consideraría innovadoras para un programa de realidad virtual que permita al estudiante interactuar con escenarios o situaciones donde tenga que hablar inglés?



Annex C: Consent to apply the surveys and interviews at “Centro Académico de Idiomas”

UNIVERSIDAD TÉCNICA DEL NORTE

Facultad de Educación, Ciencia y Tecnología

MSC. Selena del Rosario Cabezas Yépez
Directora del Centro Académico de Idiomas, Empresa Pública UTN.

Presente

Estimada magister,

Reciba un cordial saludo. La presente carta tiene como objetivo informarle que el estudiante Juan Andrés Peña Torres, con cédula de identidad 1717909277 de la Universidad Técnica del Norte, de la carrera de licenciatura en Pedagogía de los Idiomas Nacionales y Extranjeros, se encuentra realizando su trabajo de investigación para titulación. El tema del presente trabajo es “Effects of 3D environments as an assessment tool to encourage English Oral production in senior students at “Empresa Pública UTN”, Ibarra, 2020 – 2021.” (Efectos de ambientes 3D como una herramienta de evaluación para promover la producción oral en Inglés en estudiantes de últimos niveles en la “Empresa Publica UTN”, Ibarra, 2020 – 2021). El cual se relaciona con el proceso de enseñanza-aprendizaje del idioma inglés. En tal virtud, solicito muy comedidamente su autorización para que el mencionado estudiante recabe información en el centro académico de Idiomas (CAI) que usted dirige mediante encuestas y entrevistas dirigidas a estudiantes y docentes.

Se garantiza que los aportes de todos los encuestados y entrevistados de la instrucción serán anónimos y tendrán uso exclusivamente académico. Además, este estudio no conlleva ningún tipo de riesgo, los participantes no recibirán ningún beneficio o compensación de carácter económico por su contribución. Como aporte a la institución, se garantiza también el derecho de los participantes a conocer los resultados de esta investigación, bajo esta virtud el estudiante se compromete a retribuir los siguientes productos:

- Si la autoridad de la institución lo solicita, se hará una presentación de resultados a la comunidad educativa.
- Entregar a la institución los hallazgos de la investigación en un documento final tanto físico como digital.

Si tiene alguna inquietud sobre esta investigación, se puede comunicar con el MSC. Christian Andrade docente-tutor del presente tema de investigación al teléfono: 0999906618, o al correo electrónico: cdandrade@utn.edu.ec .

Cordialmente,

Christian D. Andrade Molina
 Docente
 Universidad Técnica del Norte

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