



# **TECHNICAL UNIVERSITY OF COTOPAXI**

## **PUJILI EXTENSION**

### **PEDAGOGY OF NATIONAL AND FOREIGN LANGUAGES UNDERGRADUATE PROGRAM**

### **RESEARCH REPORT**

## **“TECHNOLOGICAL TOOLS FOR TEACHING ENGLISH BY PRE-SERVICE ENGLISH TEACHERS”**

Research report before obtaining the bachelor's degree in National and  
Foreign Language Pedagogy, English Major

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**MARCH-2025**

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As Tutor of the research project with the title:

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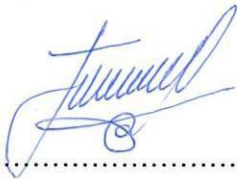
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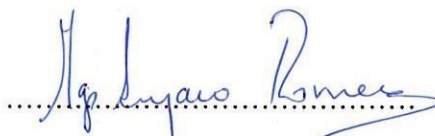
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## **GRATEFULNESS**

First of all, we want to thank God and our parents because thanks to their support, effort, work, and daily advice, today we are fulfilling another dream. Also, to the Technical University of Cotopaxi and the teachers for allowing us to fulfill our dream of becoming professionals in this emblematic institution. Also, to each of our friends who accompanied us on this path, giving us confidence and believing in us. Finally, this achievement is not only the reflection of our effort but also of the love and dedication of all those who have accompanied us. Today, looking back, we see that each step taken has brought us closer to the realization of our goals, and this is only the beginning of a road full of new challenges, learning, and success.

*Natalia and Joselyn*

## **DEDICATION**

This project is dedicated with all my heart to my parents Rosa Moyolema and Geovany Lascano and to my godparents, who with their love effort, and unconditional trust have guided and supported me every step of the way, helping me fulfill one of my biggest dreams. To my dear friends Joselyn, Alexandra, and Julissa, for their sincere friendship, for always being by my side and giving me their unconditional support, and especially to Elian, who has been my strength in every moment of this long journey, motivating me to move forward when I needed it most. This work is the result of my dedication and I dedicate it with all my love to all of you. I love you with all my being and I will always carry you in my heart.

*Joselyn Lascano*

### **DEDICATION**

This research work is dedicated to God, who has enlightened my path in every challenge. To my dear parents who have been my greatest support along the way. To my father Luis Sigcha, whose dedication and effort as a police officer have allowed me to achieve my goals, always giving me what I needed to continue my studies regardless of the difficulties. To my mother Blanca Lema, for her unconditional love and every gesture of affection, especially in the most demanding moments, such as those long days of study when I never lacked words of encouragement. Her sacrifice has been my greatest motivation. Thank you for always being by my side and believing in me. Finally, to my group of friends with whom I started this journey, thank you for being by my side and believing in me.

*Natalia Sigcha*

# TECHNICAL UNIVERSITY OF COTOPAXI

## PUJILI EXTENSION

**THEME: “TECHNOLOGICAL TOOLS FOR TEACHING ENGLISH BY PRE-SERVICE ENGLISH TEACHERS”**

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### ABSTRACT

The use of technological tools is essential in modern education, especially for pre-service English teachers. This is because technological tools enrich and facilitate the process of teaching and learning the English language, as they allow access to various innovative online teaching resources, making classes attractive by encouraging students' engagement in learning a second language. In addition, the use of technological tools promotes a practical and engaging educational environment. The objective of this study was to identify the technological tools used for teaching English by pre-service English teachers of the eighth cycle B of the National and Foreign Languages Pedagogy English career at the Technical University of Cotopaxi, Pujilí campus. The research used a quantitative methodology, focusing on descriptive data analysis to identify the technological tools used in teaching the English language. The technique was a survey, and the instrument was a questionnaire composed of 9 multiple-choice questions designed to diagnose technological tools. The study members were 28 pre-service English teachers from the eighth semester B, their ages were between 20 and 27 years old. The participants were selected through intentional sampling, given the exploratory nature of the study and the ease of access, selecting the participants according to the needs. This study highlights the importance of technological tools in teaching English. The pre-service English teachers use YouTube and PowerPoint to facilitate visual interaction, Facebook as a social tool, Kahoot, and Quizizz to encourage active participation in the classroom. Overall, technology is perceived to bring great benefits to learning and teaching, highlighting the importance of ongoing professional development in the field of educational technology.

**Keywords:** Education, english language, pre-service english teachers, technological tools.

# TECHNICAL UNIVERSITY OF COTOPAXI

## PUJILI EXTENSION

**Título: “HERRAMIENTAS TECNOLÓGICAS PARA LA ENSEÑANZA DEL INGLÉS POR PARTE DE PROFESORES DE INGLÉS EN FORMACIÓN”**

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### RESUMEN

El uso de herramientas tecnológicas es fundamental en la educación moderna, especialmente para los profesores de inglés en formación. Esto se debe a que las herramientas tecnológicas enriquecen y facilitan el proceso de enseñanza y aprendizaje del idioma inglés, ya que permiten el acceso a diversos recursos didácticos innovadores en línea, haciendo atractivas las clases al incentivar el compromiso de los estudiantes en el aprendizaje de una segunda lengua. Además, el uso de herramientas tecnológicas promueve un ambiente educativo práctico y atractivo. El objetivo de este estudio fue identificar las herramientas tecnológicas utilizadas para la enseñanza del inglés por los profesores de inglés en formación del octavo semestre B de la carrera de Pedagogía de los Idiomas Nacionales y Extranjeras - Inglés de la Universidad Técnica de Cotopaxi, campus Pujilí. La investigación utilizó una metodología cuantitativa, enfocándose en el análisis descriptivo de datos para identificar las herramientas tecnológicas utilizadas en la enseñanza del idioma inglés. La técnica fue una encuesta y el instrumento fue un cuestionario compuesto por 9 preguntas de opción múltiple diseñado para diagnosticar herramientas tecnológicas. Los integrantes del estudio fueron 28 profesores de inglés en formación del octavo semestre B, sus edades estaban entre los 20 y 27 años. Los participantes fueron seleccionados mediante muestreo intencional, dado el carácter exploratorio del estudio y la facilidad de acceso, seleccionando a los participantes de acuerdo a las necesidades. Este estudio destaca la importancia de las herramientas tecnológicas en la enseñanza del inglés. Los futuros docentes utilizan YouTube y PowerPoint para facilitar la interacción visual, Facebook como herramienta social, Kahoot y Quizizz para fomentar la participación activa en el aula. En general, se percibe que la tecnología aporta grandes beneficios al aprendizaje y la enseñanza, lo que destaca la importancia del desarrollo profesional continuo en el campo de la tecnología educativa.

**Palabras clave:** Educación, idioma inglés, profesores de inglés en formación, herramientas tecnológicas.

## INDEX

COVER PAGE .....	i
STATEMENT OF AUTHORSHIP .....	<b>¡Error! Marcador no definido.</b>
COPYRIGHT REFUSE.....	<b>¡Error! Marcador no definido.</b>
ENDORSEMENT OF THE TUTOR OF THE RESEARCH PROJECT .....	<b>¡Error! Marcador no definido.</b>
ENDORSEMENT OF APPROVAL OF THE DEGREE TRIBUNAL.....	<b>¡Error! Marcador no definido.</b>
GRATEFULNESS .....	iv
DEDICATION .....	vii
DEDICATION .....	viii
ABSTRACT.....	ix
RESUMEN .....	x
1. GENERAL INFORMATION.....	1
2. PROBLEM STATEMENT .....	2
3. OBJECTIVES.....	3
3.1 General Objective.....	3
3.2 Specific Objectives.....	3
4. ACTIVITIES AND TASK SYSTEM IN RELATION TO THE OBJECTIVES PROPOSED .....	4
5. JUSTIFICATION .....	4
6. SCIENTIFIC AND TECHNICAL FOUNDATION .....	5
6.1 Background.....	5
6.2 Theoretical Framework.....	6
1. Education .....	6
2. Teaching - learning process in English language .....	9
3. The role of the pre-service English teachers in English class.....	10
4. English language teaching today with technology.....	11
5. Technological tools in education.....	11
5.1 English language technology tools can help improve teacher-student interaction .....	12
5.2 Visual Tools .....	12
5.3 Social Platforms.....	12

5.4 Educational Tools .....	13
6. Visual Tools .....	14
6.1 Computer .....	14
6.2 Projector .....	14
6.3 Whiteboard .....	15
6.4 Microsoft Excel .....	15
6.5 PowerPoint.....	16
6.6 YouTube.....	17
7. Social tools.....	18
7.1 Facebook.....	18
7.2 Google Drive .....	19
7.3 LINE.....	19
7.4 Instagram .....	20
7.5 Messenger.....	21
8. Educational tools.....	21
8.1 Google classroom .....	21
8.2 Nearpod .....	22
8.3 Kahoot .....	23
8.4 Quizlet .....	24
8.5 Padlet.....	24
8.6 Edmodo .....	25
8.7 Quiver.....	25
8.8 Plickers .....	26
8.9 WI-FI.....	26
8.10 Word.....	27
8.11 Quizziz.....	27
9. Impact of technological tools in English language teaching - learning .....	28
10. Factors affecting the effectiveness of technological tools in English language teaching. ....	29
11. Improvements in student motivation and engagement.....	30
12. Challenges and barriers in the use of technology tools.....	31
13. Perspectives and trends in teaching English with technology.....	32
14. Artificial intelligence and adaptive learning .....	32
15. Augmented and virtual reality in teaching English.....	33

16. AR and VR applications.....	34
7. METHODOLOGY .....	34
7.1 Research Approach .....	35
7.2 Research Method.....	36
7.3 Research Context and Participants .....	36
7.4 Ethical Considerations.....	36
7.5 Data collection.....	37
7.6 Data Analysis .....	37
8. ANALYSIS AND DISCUSSION OF RESULTS .....	38
9. RESEARCH IMPACTS (technical, social, environmental, education, or economic) .....	47
10. CONCLUSIONS AND RECOMMENDATIONS .....	49
11. REFERENCES .....	51
12. APPENDIX.....	<b>¡Error! Marcador no definido.</b>

## INDEX GRAPHIC

<b>Graphic 1.</b> <i>Which of the following technological tools does your school provide in the classroom? .....</i>	38
<b>Graphic 2.</b> <i>Do you use a computer while teaching?.....</i>	38
<b>Graphic 3.</b> <i>What visual applications do you use to support your teaching in class?....</i>	39
<b>Graphic 4.</b> <i>Have you ever used a smartphone for teaching?.....</i>	40
<b>Graphic 5.</b> <i>Which of the following smartphone applications do you use in teaching? .</i>	41
<b>Graphic 6.</b> <i>Do you have knowledge of educational technological applications?.....</i>	43
<b>Graphic 7.</b> <i>Using technological applications in EFL classrooms .....</i>	43
<b>Graphic 8.</b> <i>What is your level of technology literacy? .....</i>	44
<b>Graphic 9.</b> <i>Do you think technology is necessary in teaching?.....</i>	45

## **1. GENERAL INFORMATION**

**Theme:** Technological tools for teaching English by pre-service English teachers

**Starting Date:**

October 2024

**Ending Date:**

March 2025

**Place of Research:**

Technical University of Cotopaxi Pujilí Campus

**Sponsoring Faculty:**

Technical University of Cotopaxi Pujilí Campus

**Sponsoring career:**

National and Foreign Language Pedagogy: English

**Macro Project of the Major:**

Formative Processes in the Teaching-Learning of the English Language and its Academic Discourse

**Research Group:**

González Ortiz Olga Lorena, PhD.

Lascano Moyolema Joselyn Lissette

Sigcha Lema Natalia Noemi

**Knowledge area:**

Education

**University Research line:**

A transdisciplinary study of education and linguistics in linguistic-communicative contexts for teaching the English language Education, communication and design for human and social development.

**Extension sub-line:**

Teachers' professional development, school management and learning communities.

## 2. PROBLEM STATEMENT

As technology takes over classrooms, traditional pedagogical practices are being left behind, prompting the upgrading of classrooms to include technological tools that enhance the teaching-learning process, especially in English language teaching. According to (Mei et al., 2018) the study explores how pre-service English language teachers in China examine technology, emphasizing the factors that influence their adoption of these technological tools. Their research highlights that while technological tools offer great opportunities to enhance English language teaching, low levels of readiness to use them pose a challenge for those who wish to use them and are related to limited experience and confidence with technological tools, which affects their ability to integrate technology into language teaching, and a lack of infrastructure that impedes the use of these technological tools, which are critical barriers to their broader integration into language teaching.

The advancement of technological tools has revolutionized the teaching and learning of English, but many pre-service English teachers still lack the skills to integrate these resources into their teaching practices (Wah & Hashim, 2021). Research highlights that pre-service English teachers effectively trained to teach English are linguistically prepared and able to adapt technological tools to the classroom. However, pre-service English teachers benefit when their academic programs encourage the practical application of technological tools, which they then have the opportunity to include in real classroom contexts. These experiences in pre-service English teachers improve confidence in their own abilities, allowing pre-service English teachers to make efficient use of technological tools, and engaging students more actively to manage the use of technology in the classroom with confidence and security.

In the context of Ecuadorian education, the integration of technological tools has shown both significant benefits and notable challenges, particularly for pre-service English teachers. Arteaga and Valdiviezo (2020) highlight that although there is a legislative framework that promotes the use of technological tools in teaching, many educators face

obstacles such as a lack of ongoing commitment to these tools and revealed resistance to incorporating technology into their classrooms, instead of taking advantage of technological tools for interactive learning. In addition, differences in access to resources, especially between public and private institutions, demonstrate the need to improve training and infrastructure to enhance the use of technological tools in teaching English. The contribution of this research is to provide essential information about the lack of knowledge of student teachers at the Technical University of Cotopaxi about the technological tools that may be available in the educational units where they were assigned. The study aims to answer the following research questions:

- What are the most used technological tools in teaching English during teaching practices?
- How do technological tools influence the process of teaching English during teaching practices?

### **3. OBJECTIVES**

#### **3.1 General Objective:**

- To identify the technological tools used for teaching English by pre-service English teachers in the eighth cycle B of the English degree at the Technical University of Cotopaxi.

#### **3.2 Specific Objectives:**

- To determine a theoretical framework of several technological tools in the English language teaching.
- To analyze the technological tool most used in English language teaching, based on the answers obtained in the questionnaire.
- To establish conclusions and recommendations about the technological tools used by pre-service English teachers.

#### 4. ACTIVITIES AND TASK SYSTEM IN RELATION TO THE OBJECTIVES PROPOSED

Specific Objective	Activities	Result of activities	Verification Means
- To determine a theoretical framework of several technological tools in the English language teaching.	-Literature review -Comprehension of information related to technological tools. -Design the theoretical framework	-To obtain relevant information.	-Theoretical framework
-To analyze the technological tool most used in English language teaching, based on the answers obtained in the questionnaire.	-Apply a Questionnaire	-Data collection Informed consent Transcription	-Questionnaire Analysis and discussion of results .
- To establish conclusions and recommendations about the technological tools used by pre-service English teachers.	-Collect ideas and analysis of data obtained from the questionnaire.	-Extracts of the pre-service English teachers' opinions.	Recommendation and conclusion. Descriptive analysis

#### 5. JUSTIFICATION

Education is fundamental to the humanistic and academic formation of all members of society. It is essential to understand how knowledge can be received and transmitted in various ways. However, pre-service English teachers face difficulties in effectively integrating technological tools into their teaching practice. This situation is due to the lack of generalization in the use of technological tools and the scarcity of technological materials available in schools. According to Salvatierra and Valeria (2023) in "Educational Planning and Digital Technologies in Latin America", policies aimed at integrating technologies into pedagogical practices are presented mainly as suggestions

for teaching that seeks to innovate, rather than as guidelines for generalized pedagogical change (p. 36). In other words, in Latin America, educational policies to integrate technologies are proposed as recommendations for teachers seeking to innovate, rather than as mandates for broad pedagogical change.

This research would contribute to the English language teaching career by knowing what tools will be available to pre-service English teachers who start their practices in different institutions. Therefore, it is essential to understand the reality and the tools they use during their pre-professional practices, through the different points of view and opinions generated by those who are in charge of imparting significant knowledge to students.

This study will not only benefit future research but will also provide information for university students interested in the application of tools and thus be more qualified. Therefore, given the level of complexity involved in the use of technology, it is essential to explore the visions that a student teacher experiences when teaching a class focused on the proper use of tools for teaching a foreign language such as English.

## **6. SCIENTIFIC AND TECHNICAL FOUNDATION**

### **6.1 Background**

The studies have been found, at international, regional, and local levels, related to our research topic. These studies will help us support our research project by identifying the technological tools used by English pre-service English teachers to teach the English language in their eighth semester.

With the increasing influence of technology in education, it is crucial to assess the readiness of pre-service English teachers to use ICT in language teaching Zhafira & Rizal (2024). Likewise, Batane & Abraham (2017) stress that strategies involving all stakeholders to ensure a seamless environment for pre-service English teachers are important. However, Alghamdy (2018) warns about the unwillingness of some teachers

to guide pre-service teachers and the scarcity of technological resources. Despite this, Park and Son (2022) note that prospective teachers consider themselves proficient in technology. Finally, Arif and Kurniawan (2022) recommend using popular technology tools such as YouTube and Google Translate, highlighting students' positive attitudes towards these technologies.

The use of technological tools during teaching practice benefits pre-service English teachers. Gutiérrez (2017) points out that English teachers positively value technology as a resource for the teaching process in ESL classes. Similarly, Guillén-Gámez et al. (2019) highlight that the use of ICT by pre-service teachers is influenced by factors such as gender, age, motivation, and technological integration. Likewise, Mendes and Finardi (2020) analyze the successful integration of technology in pre-service English teachers in Brazil through blended learning. In the context of pre-service English teachers at the Biângulo Taguatinga School in Lima, Vasco (2021) illustrates that the use of ICT contributes to the development of pre-service teachers' competencies. During the pandemic, Aguilar-Cruz and Medina (2021) highlight that the practice of online teaching provided adaptability skills to pre-service English teachers.

The use of technological tools as a means of teaching English allowed pre-service English teachers to gain experience and improve their performance in modern classrooms (Álvarez et al., 2022). Likewise, Quintana et al. (2023) highlight that the practitioners showed solid skills in using these tools for language teaching. However, Solano et al. (2017) warn that technology is rarely used in public schools in southern Ecuador and emphasize the need to incorporate technological tools in ESL classes. Alvarado et al. (2020) highlight that implementing technology in schools is a difficult task due to the lack of materials and resources. Finally, Montalván et al. (2023) recommend using technology to motivate pre-service English teachers in their pre-professional practices.

## **6.2 Theoretical Framework**

### **1. Education**

According to Doharey et al., 2023 “Education is a broad term that is related to knowledge, experience, learning, and teaching” Education is multifaceted since its purpose is not only limited to learning but also to the dissemination of different skills and knowledge.

According to several educational approaches, Doharey et al (2023). “Education is the process of acquiring knowledge, skills, values, and attitudes through several forms of learning.” (p.1) (par.6). This definition highlights that education is not only focused on something specific but also involves the development of comprehensive skills for good development in the society to which we are exposed every day.

The curriculum design regarding the teaching of English is designed to be inclusive. According to the Ministerio de Educación del Ecuador (2019). The curriculum in English is designed for students in General Basic Education and the Unified General Baccalaureate who are non-native English speakers. Ecuador's population is diverse, comprising several cultures with different levels of bilingualism. It is important to note that the curriculum is designed to be inclusive since in terms of teaching the English language it is adapted for students who are multilingual as well as monolingual since there is great diversity in the country as well as linguistic diversity, which results in promoting a qualitative education. It is noteworthy to note that the curriculum not only seeks to teach the English language to students as a language but also to develop creative and social skills to encourage the development of critical thinking so that students actively participate in a globalized world that is constantly changing.

Education, especially in the area of English, is important for the development of professional and academic skills in students. According to the Ministerio de Educación del Ecuador (2023), the General Basic Education curriculum comprises sub-levels, and each of these is distributed with weekly instruction periods indicated for each subject. In English as a foreign language, the Elementary sub-level, which refers to second, third, and fourth grade, and the Basic Secondary sub-level, fifth, sixth, seventh, and three weekly pedagogical hours are distributed per week so that the stated objectives are met.

The incorporation of these carefully crafted frameworks for English language classes prioritizes the development of language skills by the national curriculum. Also, the pre-

service English teachers need to be aware of and understand these essential guidelines, as they allow them to plan within the guidelines of teaching practices by curricular objectives. This clarity regarding the time allotted for English language hours fosters better preparation of educators to address and cope with all the needs of students.

English education is divided into five areas: culture, professionalism, language, curriculum development, and ethical commitment. It is a process aligned with globally accepted standards such as TESOL (Teachers of English to Speakers of Other Languages) and CEFR (Common European Framework of Reference for Languages) It provides a framework that establishes educational methods, content, and objectives. The CEFR's levels of competence, A1, A2, and B1, are used as a reference to evaluate students' advances in learning English. These frameworks ensure the development of linguistic and cultural competencies and prepare students to embrace all the new technological advances. It is important to highlight that these established standards play an important role in the teaching of English (Ministerio De educación, 2022).

The incorporation of standards in the educational curriculum is important because it promotes the teaching and learning of the English language. According to Ministerio De educación (2022). With regard to the English language, the curricular standard in Ecuador establishes that for students of Basic General Education (EGB) through high school. EGB must reach level PRE-A1 at the end of the third year, the next level A1 at the end of the fifth year, and level A2 when they finish the seventh year. In high school, it is hoped that students can reach level A1 at the end of the ninth year, level A2 when the first year of high school is concluded, with regard to level B1 when the third year is completed.

The importance of English language Education, mainly in teaching and learning English in a globalized world like the one we are in now, is essential since it is part of professional and personal development. According to Ilyosovna (2020) learning English is not only focused on the development of communication skills, it also helps to strengthen other skills such as understanding and studying other cultures in students, strengthening cultural awareness. Also, Ilyosovna (2020) regarding the technological advances that are made every day, education plays an important role since these same technological tools are used in classrooms, which results in providing opportunities to pre-service English teachers by

appropriately training them, developing necessary skills that bring with them many advantages for their practices in the classroom as well as their linguistic skills. In the field of language learning, the use of technology can strengthen adaptability and digital education.

The teaching of the English language in modern education seeks to enrich the experience of using technological tools, considering that English is essential to develop skills in both the educational and professional fields, according to Baxodirovna (2024). In a globalized world like the one we are in now; English has become an essential skill for development. It must be emphasized that to teach it, new methodologies must be adopted that meet the needs of students, such as the use of technological tools.

## **2. Teaching - learning process in English language**

Teachers play a crucial role in enhancing foreign language teaching, as they are responsible for selecting and adopting new teaching methods that promote the integration of language skills and facilitate the acquisition of a high-quality second language. In doing so, they contribute not only to the improvement of the Colombian education system but also to the academic development of students (Aldana, 2018). Furthermore, teachers must be attuned to their students' dynamics and adjust their teaching methods and behaviors accordingly. Since students have varying needs, learning styles, and techniques, teachers need to understand these differences and tailor their lesson plans to address the learning goals of all students, not just a select few. It is equally important for educators to identify potential barriers to learning as early as possible (Munna & Kalam, 2021).

Finally, Aksyah & Marhaban (2021) emphasize the importance of teachers becoming more creative and engaging with online learning platforms to improve the teaching and learning process. To succeed with these platforms, teachers are advised to use relevant learning media and provide content that is both engaging and meaningful. For this reason, the ability of teachers to maintain flexibility, adjust to the needs of their students, and

integrate cutting-edge techniques such as online platforms to establish a welcoming and stimulating learning environment is essential to successful language instruction.

### **3. The role of the pre-service English teachers in English class**

According to Ghufron et al. (2022) pre-service English teachers constantly experience considerable pedagogical growth during their university training period, which allows them to apply the L2 teaching-learning process from modern perspectives. This development process allows them to apply the teaching theories acquired during their pre-professional practices, and with these, use them to design activities that are effective, based on their own beliefs. Growth in the educational field during the university training process allows for the use of new perspectives in the L2 teaching classroom. By developing their training, pre-service English teachers acquire knowledge of educational theories and can adapt their educational practices to them. This process allows them to develop affective activities through the acquired theories, which promotes personalized teaching.

The role of the pre-service English teacher in teaching is to have the ability to plan a lesson and improve the understanding of the content of the English language, their beliefs and skills influence the learning of their students. As they are aware of the needs and learning challenges of their students, they also have an impact on their education (Ghufron & Riskiyanto 2022). The role of the pre-service English teachers involves understanding the individual needs of each student and adapting their teaching strategies in order to directly influence student motivation and development. In order for students to learn meaningful information, the teacher's role is focused on assuming the duties of a workgroup, which prioritizes activity planning, motivation, and establishing a welcoming and pleasurable environment for them through appropriate presentation of the material in class (Huang, 2018). It is crucial that teachers not only impart knowledge but also promote an environment of trust and fun, which will make it easier for students to learn more effectively and with more enthusiasm.

#### **4. English language teaching today with technology.**

Teaching English with technology can be enjoyable Prayudi et al (2021) mention that using technology in the classroom can involve students in the learning process and create a stimulating environment in the classroom, and teaching through its use can be more fruitful and enjoyable. Pre-service English teachers can enhance conventional teaching and learning methods and keep students engaged by using several applications or reliable web resources. The use of technology in the classroom allows pre-service English to create a more dynamic and engaging environment for students, improving teaching effectiveness and maintaining student interest.

The integration of technological tools can transform traditional teaching methods, making learning more interactive and motivating. On the other hand, Agustrianita and Purnawarman (2019) mention that pre-service English teachers may find it simpler to improve their teaching abilities and attitudes if they have a better understanding of the idea of students' learning styles. Both within and outside of the classroom, it can improve the effectiveness of teacher-student interactions. Since it is very difficult to alter students' learning styles in terms of their personalities and cognitive habits, pre-service English teachers must understand the theory behind learning styles and be able to recognize them more accurately (p.18). To put it briefly, Pre-service English teachers can enhance their instruction by having a thorough understanding of their students' learning preferences. Pre-service English teachers will be able to build stronger relationships with students and improve the learning process both inside and outside of the classroom if they can recognize and accommodate these variances.

#### **5. Technological tools in education**

Technological tools in education can enable Pre-service English to improve the quality of study and their motivation. As mentioned by Kouser and Majid (2021) it is necessary to prepare students to be updated with the use of technological tools in their education. Pre-service English teachers report that technological tools improve motivation and responsibility among them to improve their knowledge and obtain good results (p. 368).

### **5.1 English language technology tools can help improve teacher-student interaction**

According to Zhao et al. (2019), teacher-student interaction improves autonomous learning when acquiring a language. The technological learning environment helped motivate students to put more effort into English language study. In this way, technology and language learning can come together for a better academic outcome.

Technology has advanced both in society and in education, so it will continue to be exponential. Technology is constantly evolving, and with it, our understanding of how to use it effectively. In order for students to learn effectively, the pre-service English teachers must gain experience and expertise and use several technological tools to carry out the teaching-learning process in a positive way (Kouser and Majid, 2021).

### **5.2 Visual Tools**

Kumar, T. (2021) suggests that creating educational spaces that create communicative environments in the classroom are important as the students with the incorporation of role-playing games helps to improve their speaking skills. Teachers should be focused on selecting the best suitable visual tools as these can greatly improve the skills that students need to develop in the language classroom. Pre-service English teachers with the help of visual tools with the correct use and selection of these visual tools considering the ages of the students significantly improve English language learning.

The use of visual tools helps students to take an active role in the classroom, as they assume more responsibility, since these tools constantly motivate them to complete their tasks. (Kumar, T. 2021). Pre-service English teachers should prioritize the use of this type of tools in language classrooms, as it contributes to developing oral skills in their students.

### **5.3 Social Platforms**

The use of social platforms in English language teaching offers opportunities for students to improve their language skills as these social platforms sometimes help them to maintain interactions using English, allowing them to learn and practice the language anytime and anywhere (Ubaedillah et al., 2021). This highlights the potential of technological tools in EFL classrooms, especially with the use of social platforms by pre-service English teachers as they can expand access to learning outside of traditional classrooms by supporting English practice in real-world contexts.

Nowadays, social platforms have become one of the most widely used technological tools to enhance the learning of English as a foreign language. The pre-service English teachers incorporate these technologies in the classroom and by using social media platforms such as Facebook, they feel highly motivated to learn the language skills necessary for learning English, making it more flexible for EFL students (Yadav, MS 2021). Social media, being accessible to pre-service English teachers, allows them to improve and deepen students' understanding of English. It also offers opportunities for pre-service English teachers to explore and have the opportunity to explore new ways of teaching.

#### **5.4 Educational Tools**

The impact of educational tools significantly improves motivation in students because it helps cognitive ability and participation and this is because the use of these educational tools makes learning more autonomous without following traditionalist structures since the ability to solve academic problems that are presented in the classroom is better developed. The incorporation of these tools has been useful in speaking and listening skills in English since it promotes better attitudes for learning a second language in this case in English (Adnan, Ramli, & Ismail, 2021). These educational tools for teaching and learning the English language promote a much more dynamic and accessible approach for students. By integrating these educational tools, pre-service English teachers acquire essential technological skills, thus enriching the experience in the use of these educational tools that go hand in hand with improving the results in the classroom.

The following will categorize the various technological tools that are used in the teaching of English as a foreign language (EFL) by pre-service English teachers. These tools are divided into three main categories: Visual Tools, Social Platforms and Educational Tools. Each of these categories plays a key role in the learning process offering a variety of benefits and approaches to improve students' language skills. The tools within each category will then be described, explaining their relevance to optimizing learning in English.

## **6. Visual Tools**

### **6.1 Computer**

The teaching and learning of the English language together with the use of technological tools transform classes to make them more interactive according to the content. Sultanovich, S. N. (2023) explains that the development of skills that are linked to listening comprehension it is one of the most important skills in learning the English language, the development of these skills is linked to the use of computers and other technological devices. Through the constant use of technological resources they have access to several digital materials, such as audio, radio, television, and dialogues but always in the target language since this improves the acquisition of grammatical and linguistic structures for the adaptation of vocabulary along with pronunciation. The use of computers enriches learning allowing technological and communication skills to be developed today. In this sense, computers and other tools linked to them make learning English more attractive, thus helping pre-service English teachers improve their teaching practice during their pre-professional internships.

### **6.2 Projector**

The use of technology in modern education modifies traditional methods, thus transforming learning so that it is of interest to students. As described by Pasaribu et al. (2023). The integration of technology in English language teaching with the implementation of projectors, videos, computers, and other technological tools will improve language teaching and learning. Digital projectors are used by pre-service

English teachers as a resource to enhance students' language skills so that when implementing these teaching resources, they are attractive. The application of projectors in the classroom also depends on students becoming familiar with digital tools. In this sense, pre-service English teachers use these technological tools to significantly improve students' knowledge regarding English language learning.

### **6.3 Whiteboard**

In the digital age, technological advances in the classroom have improved and transformed traditional methods. Technological resources play an important role in the academic progress of students, which is essential for learning environments. SPerinpasingam and Danaee (2023) argue that interactive whiteboards offer numerous education benefits and are a valuable resource for improving student participation and efficiency. Traditional whiteboards place the pre-service English teachers as the main character whereas the use of interactive whiteboards encourages the enjoyment of the class by focusing on the learner. Teaching English by including animations, videos audio, and images contributes to the development of the four English skills (speaking, listening, writing, reading) of the English language. Interactive whiteboards provide diverse learning styles by providing audio and text materials, modernizing education, and positioning pre-service English teachers as innovators.

### **6.4 Microsoft Excel**

The evolution of modern education along with the incorporation of educational software facilitates the teaching of the English language, as it provides solutions and encourages the development of students' skills. As mentioned by Bernard and Alam (2020) the use of technological tools in the classroom such as Microsoft Excel, improves the learning experience specifically through Visual Basic for Applications (VBA) when implementing this in the classroom makes the lessons more dynamic and attractive. VBA is useful for other areas as it creates documents and processes numbers, when incorporated into the language classroom it serves as an educational tool by promoting cognitive skills in students. Regarding the creation of personalized learning materials, the options for pre-

service English teachers are varied since it allows the material created to be creative for students using VBA making learning the English language easier. In addition, its implementation increases confidence in the classroom as it can improve students' skills in terms of spelling along with the formation of English language sentences.

Microsoft Excel VBA software is a tool that integrates text, objects, sound, including mathematical concepts into a single worksheet. For effective implementation in the classroom, some difficulties are initially identified in understanding the English language, since it can be difficult to understand the spoken and written form. It is necessary that these tools meet the needs of students. This technological approach contributes to minimizing gaps in language comprehension, making learning experiences enjoyable for students (Bernard & Alam, 2020). These kinds of technological tools can be very useful for pre-service English teachers, as it not only allows them to integrate various elements such as text, objects, and sounds in a classroom, but also gives them an opportunity to experiment with innovative language teaching resources. For pre-service English teachers, learning these programs not only improves their ability to organize and introduce English interactively but also gives them the opportunity to adjust students to the needs of the students.

## **6.5 PowerPoint**

Technological advances allow pre-service English teachers to develop English language skills and competencies in students. The changes that technology has brought about in education are significant in terms of teaching methodologies. According to Ahmad et al. (2022), Microsoft Office is designed to significantly improve educational experiences since it includes PowerPoint, Excel, and Word. In particular, PowerPoint is recognized as one of the tools that allow both pre-service English teachers and students to create attractive and structured presentations that favor the retention of the English language. Lessons with the use of PowerPoint presentations in English learning become more interactive, encouraging motivation in students to be present, thus improving their understanding of the class.

Technology is an ally to facilitate the retention of knowledge of a foreign language as it drives the teaching-learning process through digital presentations. PowerPoint offers a variety of features to incorporate into the classroom, as it has proven to be a valuable tool that offers animations, motion graphics, and vignettes with options to add multimedia elements that help capture students' attention for learning English. Understanding the obstacles that can arise from the use of technology allows pre-service English teachers to optimize its use in language teaching, as it contributes positively to the overall experience. Despite its advantages, challenges can be present, such as technical difficulties or limited access to some PowerPoint resources (Ahmad et al., 2022). The use of technological tools such as PowerPoint can be a very valuable resource for pre-service English teachers before their service, as it enables prospective teachers to create presentations that stimulate second language learning. In this respect, skills in managing PowerPoint and other digital tools will not only enrich your approach to teaching pre-service English teachers but will also prepare them for technological issues in their professional careers.

## **6.6 YouTube**

Technology plays an important role in education, especially in language teaching, thanks to its easy access to the resources needed to enrich learning. Pasaribu, Salmiah, et al. (2023) indicate that in today's educational landscape, accessible platforms such as YouTube have transformed the way in which the English language is taught, proving to be a tool that facilitates language retention and comprehension. The platform supports the development of literacy and language skills, including vocabulary, through the use of YouTube videos in the classroom. In addition, the challenges presented in the classroom when using YouTube are minimal due to the wide range of accessible educational content that is appropriate for all ages.

In the field of language learning, the integration of technology improves student engagement as well as teaching strategies. The use of YouTube in the classroom allows students to significantly develop their speaking skills as it allows both visual and auditory senses to be engaged at all times. Students have free access to watch videos on YouTube, which promotes a deeper understanding of the language, improves critical thinking

progress, and broadens students' knowledge by being exposed to new content (Pasaribu, Salmiah, et al., 2023).

YouTube is a platform with years of evolution since it was created in 2005 showing a wide variety of visual themes that have been used by pre-service English teachers. These days the videos on the YouTube platform have made the class more fun and help students to better understand the subject of the class since through it they will feel motivated and the information will be better understood. All in all, digital platforms do help the pre-service English teachers in class since these are the ones in charge of making the class more dynamic and fun for the students, capturing their attention, and allowing them to commit to their academic tasks and being responsible with them.

## **7. Social tools**

### **7.1 Facebook**

The increasing influence of technology in education has opened up new opportunities to foster academic skills, especially through social media to improve language skills, particularly in writing. As mentioned by Putri, N., & Aminatun, D. (2021) the implementation of technology along with social media such as Facebook helps in the development of teaching materials that help enhance writing skills due to its high demand as it is one of the preferred methods by students. In addition, the embrace of Facebook supports teaching-learning practices, especially in the English language.

Facebook-based instructional materials provide an engaging approach to learning as students are familiar with technological devices and internet use. In addition, it addresses the needs of students that arise in the classroom such as academic writing. The materials are designed to be student-friendly by incorporating features such as interactivity, authentic content, and online support. By being able to implement them inside and outside the classroom, it promotes cultural awareness which supports the development of writing skills (Putri, N., & Aminatun, D. 2021). Using platforms like Facebook as an educational tool provides pre-service English teachers with a great opportunity to integrate technology into their teaching and enhance the development of English writing skills.

Pre-service English teachers can create a more accessible learning environment for students as many are already familiar with using these platforms and can also maximize learning opportunities and personalize their digital generation features.

## **7.2 Google Drive**

In the current educational landscape, the implementation of technological tools plays an important role in language teaching, as it contributes to several materials and resources that motivate students' learning. Кошарна, Н. В., Петрик, Л. В., & Гапон, Л. И. (2022). Cloud technologies have proven to be a support at the primary education level, and one of these is Google Drive. Promoting the use of these tools in the classroom is relevant for the development of communication skills in students, always taking into account aspects such as psychophysiological ones. Google Drive helps create a dynamic and interactive environment in the classroom, as it improves phonetic, lexical, and grammatical skills, along with the four English skills (Listening, Speaking, Reading, and Writing). By promoting Google Drive, pre-service English teachers can facilitate the development of comprehensive language skills for students. In addition, this tool gives pre-service English teachers the opportunity to manage and share educational materials, promote student cooperation, and, in real time, provide feedback. In this way, Google Drive not only optimizes English teaching but also helps pre-service English teachers adapt to a more digital and collaborative approach to education, which is important in the current context of education.

## **7.3 LINE**

The rapid development of digital technologies encourages collaborative and independent learning to improve English language proficiency. LINE application can function as a learning management system to address the lack of opportunities to practice English, implementing this application in the classroom facilitates interaction and breaks away from the traditional classroom environment. In addition, LINE helps to answer questions that arise in students, it also has options to share lessons with the class, and important information to improve skills in some countries where the application is common such as

Thailand, its use is frequent in classrooms to communicate in workgroup environments, which results in students showing a positive attitude towards the integration of LINE (White, 2019). Using apps like Line offers pre-service English teachers a great opportunity to introduce innovation into their teaching methods and promote more interactive and cooperative learning. By integrating Line into the classroom, pre-service teachers can overcome traditional teaching restrictions and create a more flexible learning environment where students can communicate more effectively and cooperate in group work. In addition, teachers can benefit from students' prior pre-service knowledge to enhance more natural and accessible language skills which can be very valuable for pre-service teachers to implement effective technological strategies.

#### **7.4 Instagram**

The role of mobile applications continues to reshape teaching methods leaving behind traditionalists for the use of technology offering modern classroom environments for language acquisition. MU'ZIZAH, N. U. R. U. L. (2023) argues that the use of Instagram for language learning, specifically the account @jagobahasacom, is an effective resource as it offers interactions with technological and human elements, which means that users actively participate in the communication processes. This account is used to support the development of English skills and the greatest beneficiaries are the students as it encourages peer learning, thus being a reliable tool to improve English proficiency with the materials that are published on the Instagram account.

The use of technological tools offers students and pre-service English teachers resources to enhance their English proficiency. Instagram is a medium that is used in a way that encourages students to follow accounts that are designed to offer valuable learning materials and content to users who are interested in learning a different language. In addition, pre-service English teachers can use Instagram as a teaching resource by integrating it into their classes along with their teaching strategies to support the teaching and learning of students (MU'ZIZAH, N. U. R. U. L.2023). This platform enables pre-service English teachers to integrate visually appealing teaching materials such as posts, videos, and graphics that not only attract students' attention but also contribute to peer-

to-peer learning, allowing them to interact with other users with educational content, pre-service English teachers can create a more dynamic, accessible, and motivating learning environment tailored to current trends for students that supports their language skills.

## **7.5 Messenger**

The use of technology in language teaching and its constant change creates new opportunities, especially in remote environments. As noted by Giri, P. C., & Rana, K. (2022) the use of Facebook together with Messenger helps to transmit lessons, especially in virtual education, which means that during the pandemic this social network was one of the most used by students to develop independent learning and self-learning habits in students. Messaging and the creation of groups for students to participate through live sessions to share ideas and practice their English language skills. The impact of implementation of Messenger highlights its positive impact since the lessons that are transmitted to students for the development of the English language especially focus on speaking and understanding basic conversations, thus improving pronunciation skills.

Using platforms like Messenger during English language teaching, especially in a virtual environment, offers pre-service English teachers a powerful tool to promote and enhance students' autonomous learning. By integrating these platforms into their teaching strategies, prospective teachers can create cooperative classrooms. This type of teaching allows pre-service English teachers to adapt their methods to students, improving their comprehension skills which are important for language development. Furthermore, using these tools encourages them to create habits of self-awareness, which is an important skill that pre-service English teachers should cultivate with their students.

## **8. Educational tools**

### **8.1 Google Classroom**

Google Classroom has a significant impact on the learning process as it affects the way teachers manage online classes. Although classroom management in the physical environment includes aspects such as space, rules, and student engagement, it is not

always possible to introduce all of these concepts in the same way in the virtual environment. Teachers use Google Classroom to conduct a variety of activities such as uploading study material, assignments and projects, exams, and virtual meetings. Despite these tools, classroom management remains a challenge, especially with regard to teacher-student interaction. Students actively participate in online classes through the use of Google Classroom, which can enhance their learning. (Ayu & Sari, 2021). It is a platform that lets you see the assignments and resources that the pre-service English teachers have provided. Additionally, Google Classroom is an excellent tool for sharing pertinent information with students, such as providing an area for educational assignments where students can easily and uninterruptedly upload the information. You must enter the class code and a relevant email address.

## **8.2 Nearpod**

NearPod is another platform designed to boost student engagement. It provides pre-service English teachers with an easy-to-use tool to create interactive lessons, presentations, assessments, and digital content. The use of NearPod helped to maintain students' interest during the learning process, which increased the level of interaction between students and the teacher who supported their understanding of the topics learned. Teachers are developing material in the NearPod app and sharing it with students using the code so that students can follow the materials and take the quizzes developed by the teacher. Most students pointed out positive attitudes and favorable comments about the application of the app, stressing that they enjoyed learning and interacting with the tool. Students perceived the use of NearPod as a new and engaging way of learning. However, introducing technology into the learning process can be challenging, so teachers need to choose appropriate tools that meet students' needs. Nearpod stood out with the ability to achieve fast, real-time results in English learning, making it a good tool to motivate students (Kalsum, 2021). With Nearpod, teachers can develop digital lesson plans, share them with students in class, and monitor individual progress. The lessons consist of teacher-designed slides that may include text, videos, images, websites, questions, quizzes, polls, and assignments. Students can follow the lesson on their own devices at

their own pace, or pre-service English teachers can conduct a live session where students follow the lesson in real time.

### **8.3 Kahoot**

Technological tools are the most used today in education, especially in the teaching of a second language such as English. Especially the tools that are focused on assessing student learning. One of these technological tools is Kahoot, a platform designed to promote learning through activities. According to Wang (2023) "The goal of Kahoot! is to increase participation, motivation, enjoyment, and concentration to improve learning performance and classroom dynamics." The use of this assessment tool in classes increases concentration, which causes student participation to be more frequent, fostering a more conducive environment for learning.

In the field of technological tools, these are gaining popularity in classrooms for teaching a second language. Iqbal et al. (2024) mention that the profitability of these applications is not only focused on one educational level, but for different educational levels, being a handy tool for language teaching, it is important to insert gamification elements. Highlighting its competence in education, Kahoot maintains active participation and makes the evaluation process more efficient for pre-service English teachers. This is significant in learning English since students must be motivated to practice constantly, evaluating their linguistic skills actively and dynamically.

The implementation of assessment tools such as Kahoot is not only intended to facilitate the teaching process but also to focus on providing up-to-date opportunities to monitor student progress. Iqbal et al. (2024). argue that the widespread acceptance of technological tools should be completely free, especially for the public sector. Making them available to everyone can result in everyone receiving the same opportunities for second language learners since they can use these tools without restrictions related to funding for them to develop their language skills.

#### **8.4 Quizlet**

The teaching of English in these modern times must be accompanied by technological tools that facilitate the evaluation process and a clear example is Quizlet. As highlighted by Putri (2023). The several functions that this technological tool has, such as its audiovisual resources and several activities to improve vocabulary acquisition. Quizlet adapts to the needs of students since it adapts to their different needs. The integration of this evaluation tool is aligned with current educational processes in the professional practices of pre-service English teachers. In today's times, it is important for pre-service English teachers to use technological tools for teaching English, especially to facilitate the assessment process. This tool is tailored to the individual needs of students, making it useful in practicing professional resources for pre-service English teachers. In addition to supporting assessment, classroom integration in the classroom, but also corresponds to current educational processes that effectively facilitate learning and teaching.

#### **8.5 Padlet**

The use of technological tools is becoming more and more common in modern classrooms. Padlet is a tool used in the educational field that is focused on teaching English. This platform allows the sharing of different content such as images and videos, it also includes documents, it encourages feedback in students, and learning can be mixed. The use of this tool contributes to collaborative and active learning in students as it creates interactive spaces that are accessible, thus improving participation and the development of digital skills (Mahmud 2019). Pre-service English teachers are facilitated to integrate the palette not only in their teaching practices in teaching English but also allows them to experiment and use innovative educational strategies that are important in language teaching in the current context. This platform allows you to share different types of content such as images, videos, and documents that promote feedback among students. Moreover, promotes collaboration and active learning by creating an interactive space available that enhances participation and development of digital skills.

## **8.6 Edmodo**

The technological tools that are used to optimize the teaching of English are increasingly more common. According to Kesuma (2023). Edmodo is a tool that helps facilitate communication between pre-service English teachers and students through groups. The assignment of tasks is also included in this tool and has options that offer feedback by setting evaluations. This technological tool promotes safe and efficient classroom management and constant interaction between pre-service English teachers and students. One of the greatest advantages of this platform is that parents also have the option of getting involved in the education process of their children. Using Edmodo facilitates constant communication between pre-service English teachers and students, which is key in the context of language teaching. In addition, it can assign tasks, offer feedback, and ensure parental involvement, making this tool a valuable resource for improving classroom management and the involvement of the educational community in the learning process.

## **8.7 Quiver**

He points out that few augmented reality applications are accompanied by several content for preschool periods, with Quiver being one of the most used applications. This application works through smart mobile devices, since its content is based on printed coloring pages, this works so that students can color with the colors that the application assigns. The implementation of these technological tools in the classrooms enriches the teaching-learning process. This tool offers more interactive classes for students since it helps them understand concepts that may be confusing in a simpler way and by doing so encourages participation in classes. (Altinkaynak & Özel, 2024) Introducing technological tools that shake in the classroom allows pre-service English teachers to enrich the learning process when producing more interactive lessons. Offering simple and visual teaching for complex concepts, applications such as shake can be very useful for preschool teachers to have innovative methods to attract attention and promote active participation of students in teaching.

## **8.8 Plickers**

According to Al-Qutaiti, Y. O. (2023), Plickers is a technological tool that activates student response systems (SRS). Implementing these tools in the classroom allows pre-service English teachers to provide feedback to students, thus fostering the teaching and learning processes. However, Al-Qutaiti, Y. O. (2023) asserts that the Plickers application is a tool that helps students develop their vocabulary as it relates to English language learning by significantly improving their lexical repertoires. English language pre-service English teachers find this tool useful as they can use complementary tasks to facilitate learning. They also note that Plickers offers multiple benefits in classroom implementation. Using tools such as the Plickers class for pre-service English teachers provides an effective way to activate student participation and offer immediate feedback. This tool not only supports students' vocabulary development but also facilitates the introduction of supplementary tasks that enrich the learning process. Pre-service English teachers can integrate interactive methods to enhance students' understanding and performance.

## **8.9 WI-FI**

Internet access has evolved education, allowing the exploration of interactive resources, thus enriching teaching so that students can explore the resources provided by pre-service English teachers. Hidayat & Mason (2023) emphasizes that pre-service English teachers choose to incorporate the Internet into their lesson plans. The Internet encourages creativity and the expression of ideas through the different educational resources found online. For example, pre-service English teachers allow students to participate in research simulations, debates, and experiences through English language interactions such as virtual trips to offer a better learning experience. The Internet is a medium through which students seek information, fostering critical thinking in a globalized world.

The new digital environments make the integration of technological tools necessary, since education is constantly changing, leaving behind traditional methods, it is important that pre-service English teachers adapt to changes and digital environments. However, the use

of technology in regards to access to it presents several challenges. Salam et al. (2023) explain that the importance of flexibility and access to technology when incorporating it in the classroom is essential, in some cases, students and even pre-service English teachers have limitations to accessing the Internet due to several factors such as financial ones since it requires Wi-Fi installation once the service is accessed, the attractive materials found online are useful and educational for students. The application of technology in the classroom requires that pre-service English teachers choose strategies that cover the needs of students, thus guaranteeing opportunities for quintessential learning.

### **8.10 Word**

Today, the integration of technological tools has redefined education, allowing pre-service English teachers to optimize the effectiveness of English language teaching to meet the challenges presented by online learning. As mentioned by Kusuma, I. P. I. (2022) during the COVID-19 pandemic, the implementation of technological tools gained momentum as pre-service English teachers adapted their teaching methods through the use of technology so as not to disrupt the teaching and learning process. The use of Microsoft Word was one of the tools used by pre-service English teachers for online teaching, even though pre-service English teachers are familiar with some technological tools and learning management systems and applications for creating quizzes, games, and online activities. One of the tools that contributed to facilitating online learning because of its accessibility was Microsoft Word as it was very useful for sharing materials with students. The integration of technological tools such as Microsoft Word allows pre-service English teachers to optimize language teaching in the online learning environment, especially during online classes. While English teachers are already familiar with various technological tools such as Microsoft Word, it stands out as an accessible and useful resource for sharing materials with students, ensuring the continuity of the educational process.

### **8.11 Quizziz**

The use of Quizziz is common in language classrooms as it focuses on its impact on English language teaching and the perceptions of pre-service English teachers are positive as it benefits students. The most prominent results show that Quizziz facilitates students' e-learning and has a positive opinion about this tool (Lim & Yunus, 2021). Pre-service English teachers include Quizziz as its training components make students more engaged in the classroom for English language learning as they are willing to participate in the lessons.

Several studies have emphasized Quizziz as one of the educational tools that highlights its interactive nature, the ability to promote self-esteem and ease of use. It has been identified as one of the most popular applications for assessing students and progress with students when it comes to tracking student learning. In addition, its effectiveness in classrooms where a language is intended to be taught helps the development of grammar and presents a high potential for improving language learning, especially in the context of vocabulary (Huei et al.,2021). The Quizziz app stands out as an interactive, easy-to-use educational tool for pre-service English teachers, as it offers opportunities to integrate technology into the classroom in a dynamic way. Not only does it facilitate self-esteem and interaction, but it also facilitates understanding of the subject matter, and it also promotes an active environment. Furthermore, this tool can be the key for pre-service English teachers to introduce innovative methods, improving both student learning and progress monitoring throughout the educational period.

## **9. Impact of technological tools in English language teaching - learning**

Followed by Sheeraz, et al. (2022). The impact of technology on second language teaching has a significant impact as in these modern times technology is taking a stronghold in education. These tools help teaching and learning for students in the classroom because they are interactive and can be understood more easily and students find them more attractive.

"Each technological tool has its specific benefits and application with one of the four language parts (speaking, listening, reading, and writing)" (Nomass, 2013, p.111). The

tools used for teaching a second language such as English have their purpose for which they are intended, whether to teach vocabulary or writing, making their use beneficial to education.

Technology goes hand in hand with education, even more so in the teaching of second languages such as English, since the integration of technological tools adapts to new methodologies, and also provides tools to pre-service English teachers to adapt to educational demands. According to Djalilova y Kazoqov (2024). Foreign language pre-service English teachers must investigate and look for technological tools that help strengthen the teaching process to involve students in the study processes, thus motivating interest in learning a second language, English. The use of technological tools in the classrooms contributes to increasing the creativity and cognitive interest of students.

The teaching of a foreign language is interactive since it uses simulation methods based on active approaches and combines learning tools. The impact of technology in the teaching of English is significant since the use of technology makes classes interactive, prioritizing student participation more dynamically and collaboratively. The use of technology not only facilitates language comprehension and acquisition but also helps develop problem-solving skills. It should be kept in mind that the integration of technology should be properly applied to the pre-service English teachers, as it is important to maximize their skills in the use of these technological tools (Djalilova y Kazoqov, 2024). The use of technology to teach English favors interaction and cooperation, which not only facilitates language comprehension and acquisition but also promotes the development of problem-solving skills. To take full advantage of the benefits of these technological tools, it is important that pre-service English teachers receive sufficient training, as their efficient use is important to improve their teaching skills and adapt to the requirements of today's educational environment.

## **10. Factors affecting the effectiveness of technological tools in English language teaching.**

Aljazzaf et al. (2020). Argues that “One of the major weaknesses of E-learning and multimedia technologies is isolation.” While technological tools are a great ally when teaching a second language, there are also disadvantages such as isolation, since facing virtual classes or working from home, causes the interaction between pre-service English teachers and students to be difficult and this results in the lack of proper monitoring of student learning.

According to Aljazzaf et al. (2020), the use of technology can bring consequences such as the development of communication skills, which means that being behind a screen does not maintain a constant interaction with students, which is why their communication skills can be affected. In addition, technological tools come with the help of the Internet, which means that pre-service English teachers cannot maintain adequate control over cheating in assignments or exams.

## **11. Improvements in student motivation and engagement**

Al-Ghabri (2024) asserts that academic skills and confidence are very important as they play a fundamental and essential role in the development of motivation and learning in second language learners. This is related to technological tools as they help students self-regulate their learning. Furthermore, the incorporation of these tools cultivates interactive environments, thus improving student engagement and resulting in efficient learning. It highlights the importance of implementing technological tools in terms of interactive games along with mobile phones that are in daily contact in the lives of students.

These types of applications contribute to language learning, specifically to the English language, such as Memrise, and Duolingo Bussu among others, these applications have a wide variety of content, thus promoting engagement and motivation to learn the English language in students. Students often feel bored as they are not attracted to traditional teacher-centered approaches. (Huseinović, L. 2024).

In education, when it comes to teaching and learning English, participation and motivation play a fundamental role in students. Huseinović (2024), highlights that Gamification is associated with child psychology. The games that are used in classes are

intended so that children can explore and develop new approaches. Thus, improving the motivation of students through the game.

In English language teaching and learning, the implementation of technological tools is being strengthened by improving student participation and motivation. As noted by Huseinović (2024), Gamification helps to make the learning process more enjoyable to achieve the objectives set so that students can develop their language skills while enjoying the learning process. Gamification in the classroom equips students for problem-solving and deepens understanding. Incorporating what are known as rewards, recognition, and points into lessons, helps to motivate learners and encourages active participation in the classroom.

## **12. Challenges and barriers in the use of technology tools**

Integrating technological tools in modern classrooms is important in English language teaching to meet all educational demands. Rintaningrum (2023), asserts that the reliance on the use of books no longer sufficiently addresses all the needs of the students. Technology is a tool that helps to look for alternatives to go hand in hand with modern education. The benefits of integrating technology are several as it helps pre-service English teachers face the obstacles that often arise emphasizing that the use of technology is innovative. Its main objective is to help develop grammatical skills by offering new spaces and grammatical experiences.

The teaching of English and the integration of technological tools can sometimes present significant difficulties when applied in the classroom. The use of technology requires time to prepare what is needed as it involves searching for materials on the internet and sometimes this can be interrupted by a lack of electricity, limiting the use of technology as it prevents the devices to be used from being unavailable due to the lack of charge of the electronic devices. Another common difficulty is the time it takes to complete the academic curriculum, causing the integration of technology to be interrupted by lack of time (Maja, M. M. 2023). The integration of technological tools in English can be a

significant challenge, but with proper use by pre-service English teachers, preparing the necessary resources can significantly benefit the English language learning process.

Furthermore, the use of technology along with training in the use of technology emphasizes the need for proper planning to overcome these difficulties that may arise in the classroom.

### **13. Perspectives and trends in teaching English with technology**

Technology is gaining strength in the educational field as it transforms the educational process, especially regarding the English language. As mentioned by Zainuddin, N. (2023). The incorporation of technology has allowed pre-service English teachers and students to have a constantly active role in the teaching and learning of the English language, positively underlining the importance of technology-assisted teaching and learning of English. The constant use of technology encourages participation, thus improving the pedagogical practices of pre-service English teachers for the development of the linguistic skills of students.

### **14. Artificial intelligence and adaptive learning**

Education in the teaching and learning of the English language is constantly evolving along with technology, allowing for personalized learning experiences. Artificial intelligence (AI) is gaining ground in modern classrooms as it is a tool that transforms the educational process, allowing software to provide feedback. AI can examine students' pronunciation and grammar, as well as their process including their participation, which could give signs of school dropout. In addition, it facilitates the analysis of student performance by collecting useful information.

This data helps pre-service English teachers identify and seek solutions to the learning gaps that arise, thus improving classroom results by personalizing the teaching process to meet the needs of each student. In addition, the use of AI tracks behavior, providing information on the student's learning process (Delgado et al., 2020).

Teaching English in today's technological world is important in terms of professional and personal aspects. As mentioned by Qin, L., and Zhong, W. (2024). The integration of artificial intelligence (AI) in language classrooms positively contributes to several positive aspects such as more personalized learning. Educational systems driven by (AI) strengthen the development of English-speaking skills. In addition, the acquisition of the English language that opts for the use of (AI) makes the learning experience more attractive for students. It is expected that as time goes by, technology will continue to update, thus improving language education. Learning driven by (AI) accelerates the development of different English language skills, improving language proficiency.

### **15. Augmented and virtual reality in teaching English**

Education with technology integration has been revolutionized over the years, providing students with new personalized teaching methods. Adaptive learning is a transformative approach. Education benefits from the integration of technology, according to the needs of students, it provides that learning experiences are personalized according to the progress of students.

Through the algorithms that provide data from artificial intelligence, adaptive learning adapts to the instructional content, to optimize student learning outcomes as it improves participation and academic performance. In particular, adaptive learning enhances the flexibility to adapt to the educational activities of each student. Being able to analyze student data, ensures that students receive training in the skills proposed, thus constantly progressing (Gligorea et al., 2023). Technologies such as augmented reality and virtual reality integration in English offer pre-service English teachers new personalized methods that enhance the learning experience. The adaptive learning method allows English teachers to optimize the curriculum to fit individual student needs and improve their engagement and academic performance which helps make it easier for pre-service English teachers to analyze progress data and deliver more efficient and flexible instruction that provides recommended skill development.

## **16. Augmented reality AR and Virtual reality VR applications**

Augmented reality (AR) has emerged as an innovative tool in language teaching, offering an interactive learning experience for students. The use of apps indicates significant improvements in the English language, especially in vocabulary acquisition and pronunciation. The use of AR in pre-service English teachers is beneficial as it helps the immediate feedback provided by the voice recognition technology incorporated in these apps because it facilitates contextualized learning, allowing students to interact with a real virtual environment, such as restaurants and supermarkets, which increases their motivation and participation as they find it attractive (Azimova & Solidjonov, 2023). Integrating reality into pre-service English teachers' classrooms provides them with an important opportunity to improve their teaching practice and assist in the development of educational settings along with language skills. This is especially important for pre-service teachers, as they are experiencing a realistic virtual environment for the first time. Furthermore, the use of technology increases their engagement and reflects the interest of their future students.

Technological tools provide a more dynamic learning experience in language teaching. Several virtual reality platforms such as Google Expeditions and Google Earth have been successfully implemented in classrooms, as they enhance students' skills such as reading, writing and listening. In particular, the incorporation of Google Earth VR significantly encourages participation, thus improving students' attitudes when learning a new language such as English.

Although there is little research on the application of virtual reality in education, especially in the development of skills, some studies indicate that tools such as Google Earth help improve students' oral skills. Similarly, Google Expeditions is considered a novel educational platform by creating virtual environments for students, thus causing a sensation of improved performance in terms of tasks, as it helps facilitate the understanding of information, thus influencing learning experiences in a better way. By using Google Expeditions, it helps pre-service English teachers bring what they intend to teach students to the center of the study phenomenon since it is not limited to just images, videos, and textbooks, what they intend to do in the classrooms is to improve the experiences of the students (Ebadi, S., & Ebadijalal, M. 2022). These platforms offer an innovative way of teaching English by creating a virtual environment that facilitates the understanding of concepts and improves students' attitudes towards new languages, in this case English. For pre-service English teachers, these platforms allow them to use tools such as Google Earth and Google Expeditions, contributing to enriching their classes, providing interactive experience not only with images and textbooks, but also student participation and performance, significantly improving their knowledge and learning.

## **7. METHODOLOGY**

### **7.1 Research Approach**

This research used a quantitative approach, as it is concerned with describing specific characteristics and significant differences, which allow drawing relevant conclusions in the study (Ghanad, 2023). Quantitative research is particularly suited for studies that require numerical data and statistical analysis to draw objective conclusions. In this case, the study focused on collecting and analyzing numerical data regarding the technological tools used by pre-service English teachers in their teaching practice. The descriptive nature of the study allows for a comprehensive overview of how these teachers utilize technology in their classrooms.

## **7.2 Research Method**

Therefore, a survey was applied to the pre-service English teachers to collect key data and identify the most commonly used technological tools in this study, maintaining a numerical data analysis approach. Furthermore, this work focuses on a descriptive analysis, which is a process that involves collecting data and then proceeding to organize, tabulate, and represent the information collected, with a clear description of the results obtained (Baha, 2016). This process not only helped to summarize the responses, but also facilitated the identification of the most commonly used tools by pre-service English teachers. Descriptive statistics, such as frequencies and percentages, were applied to present the results in a way that is easily interpretable and provides an overview of the current state of technology integration in the teaching practices of pre-service English teachers.

## **7.3 Research Context and Participants**

The research was carried out at the Technical University of Cotopaxi, Pujilí Extension, a public institution. The researchers worked with 28 pre-service English teachers from the eighth cycle B of the national and foreign language teaching degree, men and women between 20 and 27 years of age. To select the participants, the researchers used intentional sampling, which means that the participants were chosen according to the needs of the research (Creswell, 2007). That is, they meet specific characteristics to more accurately address the topic of study regarding the teaching of English through technological tools.

## **7.4 Ethical Considerations**

Ethical considerations were paramount to ensure the well-being and rights of participants. Before administering the survey, informed consent was obtained from all participants, ensuring that they were aware of the purpose of the study, the voluntary nature of their participation, and the confidentiality of their responses. Participants were assured that their data would be used for academic purposes only and that their identities would be kept anonymous. Furthermore, the survey was designed in a way that respected the dignity and autonomy of participants, avoiding any questions that could be considered intrusive or offensive. The study adhered to ethical guidelines to ensure that participation did not cause any harm or discomfort.

### **7.5 Data collection**

A study by Johnson and Germain-Froese (2016), cited in Boonmoh (2019), seeks to identify the technological tools used for teaching English by pre-service English teachers of the eighth cycle B of the Technical University of Cotopaxi. This survey has 9 multiple choice questions answered by pre-service English teachers, it was prepared in Google Forms and sent to the group of eighth cycle B students through a link. In addition, this survey was applied in a foreign language (English) since it is the language they are studying and there is no confusion when answering. The questions were designed to capture the most used technological tools in teaching English, ensuring a comprehensive understanding of the subject. Finally, all participants were given a set amount of time to complete the survey to avoid hasty or incomplete responses.

### **7.6 Data Analysis**

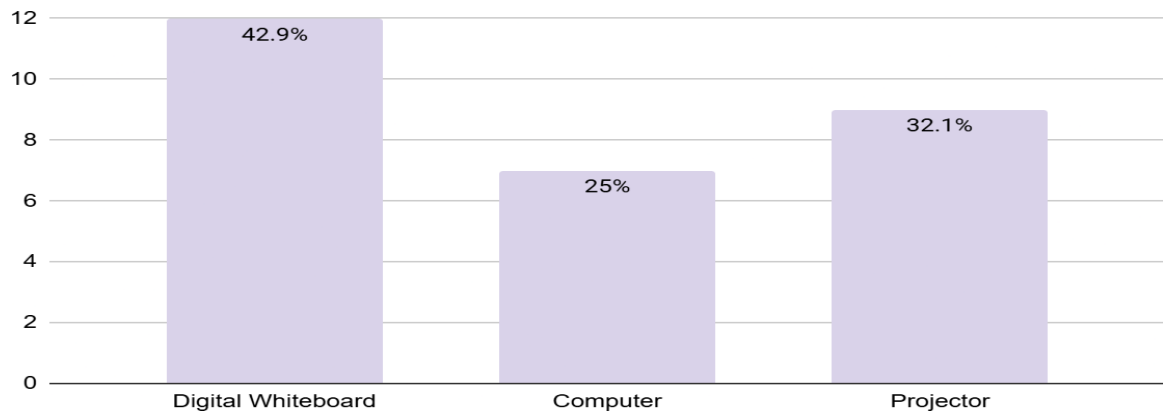
Once the data was collected through the online survey, the responses were tabulated and organized using descriptive statistics. The collected data were quantitatively analyzed by calculating frequencies, percentages, and means to identify patterns and trends in the use of technological tools by the pre-service English teachers. The analysis aimed to determine the most commonly used tools by the pre-service English teachers in their practices. The results were presented in bar graphs to provide a clear and concise overview of the findings.

## 8. ANALYSIS AND DISCUSSION OF RESULTS

### Category 1: Visual tools

#### Graphic 1.

*Which of the following technological tools do your school provide in the classroom?*

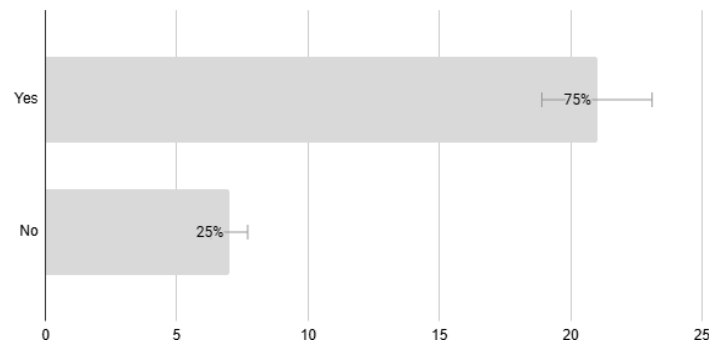


**Created by: Lascano & Sigcha**

The results show that the most commonly used technological tool in classrooms is the digital whiteboard, with 42.9% of students. This data indicates that incorporating technologies promotes more dynamic and visual teaching. In second place is the projector, with 32.1%. Although it is a traditional tool, it is still useful for presenting slides or videos. However, its use could be reduced by more modern tools. On the other hand, the computer is the least used tool in the classroom, with only 25%. Finally, these results suggest that, although schools are moving towards a more technological environment, challenges persist in terms of the implementation of all the tools necessary for teaching and learning.

#### Graphic 2.

*Do you use a computer while teaching?*

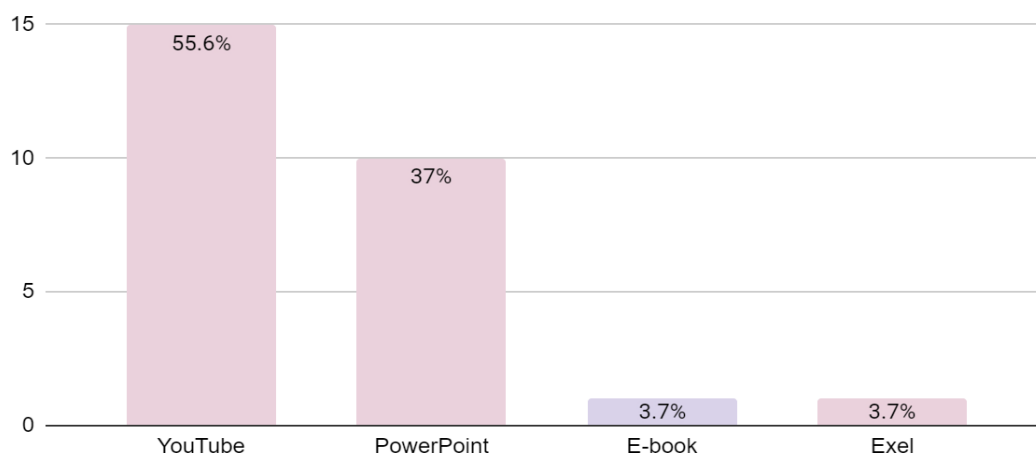


**Created by:** Lascano & Sigcha

The results reveal that 75% of respondents say they use computers during their classes, reflecting the importance of this tool in the educational process. For many pre-service English teachers, the use of computers gives them more dynamic and interactive experiences, thus facilitating the teaching of new languages, and has become indispensable for reviewing content, preparing lesson plans, and accessing educational resources, such as books and digital materials. Others mention that, although not all schools have enough computers, those that do have them are essential to enrich education and facilitate learning.

### **Graphic 1.**

*What visual applications do you use to support your teaching in class?*



**Created by:** Lascano & Sigcha

From the results on visual applications used to support classroom teaching, it is evident that YouTube is the most popular tool, with 55.6% of pre-service English teachers using it in their classes. This reveals the preference for multimedia content, such as educational videos, to enrich and energize the teaching process. In second place is PowerPoint with 37% of participants, indicating that visual presentations are still essential to organize and transmit information effectively in the classroom. On the other hand, E-books and Excel are less common, with 3.7% using them, which reveals that they can be useful in certain contexts. Finally, these results reflect the use of visual tools that allow pre-service English teachers to integrate visual presentations, thus facilitating the teaching of English.

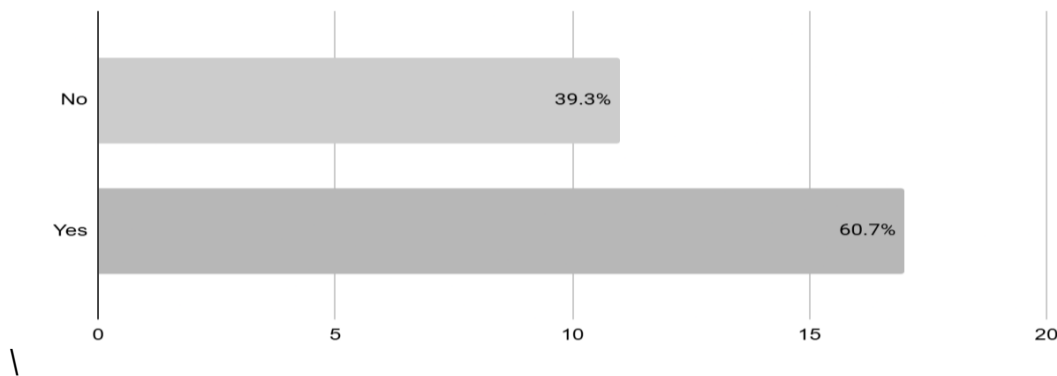
### **Discussion:**

The results highlight the importance of visual tools in the teaching of English by pre-service English teachers. The use of digital whiteboards reflects a trend toward more interactive and up-to-date teaching methods. Although traditional tools such as the projector are still useful, their limited functionality suggests a preference for more modern technologies; on the other hand, the use of the computer is essential, as it allows them to plan classes and design interactive activities. This shows that, despite the challenges in technological infrastructure, pre-service English teachers recognize the pedagogical value of these tools. In addition, the preference for visual platforms such as YouTube reveals a clear preference for the use of multimedia content, which is useful for enriching the teaching process as it offers a more realistic exposure to the language, and tools such as PowerPoint also remain relevant as they allow for the clear and structured organization of information. According to González Cabañas & Núñez Mercado, P. (2024). There is a positive attitude among pre-service English teachers due to its benefits to their professional development. These findings indicate that, although pre-service English teachers are willing to incorporate visual tools to create more engaging lessons, there are still challenges related to access to technological resources and training for their effective use.

### **Category 2: Social tools**

#### **Graphic 2.**

*Have you ever used a smartphone for teaching?*

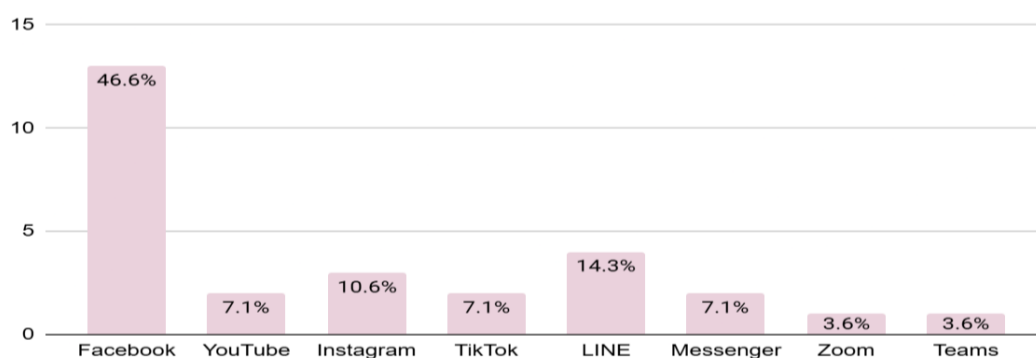


**Created by:** Lascano & Sigcha

The use of smartphones in the educational field has generated divided opinions among pre-service English teachers. 60.7% of pre-service English teachers have used smartphones as support in their pre-professional practices, highlighting them as a tool to consult information, search for English-based exercises, and send assignments to students. Some of them also mention that smartphones are more intuitive than other platforms, facilitating quick access to new educational methodologies. On the other hand, 39.3% choose not to use them, revealing that these devices can become a distraction for both them and students, due to constant notifications and the temptation to access different applications. Finally, although smartphones are perceived as useful tools in certain educational contexts, the lack of control over their use could affect their effectiveness as a teaching resource.

### Graphic 3.

*Which of the following smartphone applications do you use in teaching?*



**Created by: Lascano & Sigcha**

The results reveal that Facebook is positioned as the most used smartphone application in the educational field, with 46.6%. This indicates that, despite its reputation as a social network, it has become a valuable resource in the educational environment, facilitating learning, sharing, and interaction between students and pre-service English teachers. LINE follows, used by 14.3% as it serves to send messages and share files quickly and efficiently. Other platforms such as Instagram and Messenger have a usage of 10.6% and 7.1%, respectively, suggesting that social messaging applications also play a role in education. In addition, pre-service English teachers mention YouTube with 7.1%, evidencing its value as a source of multimedia and educational content, as well as TikTok with 7.1%, Teams with 3.6%, and Zoom with 3.6%, which have a more modest presence. Finally, these applications are perceived as effective tools that encourage interaction, content sharing, and active participation of students, although the frequency of their use varies significantly.

**Discussion:**

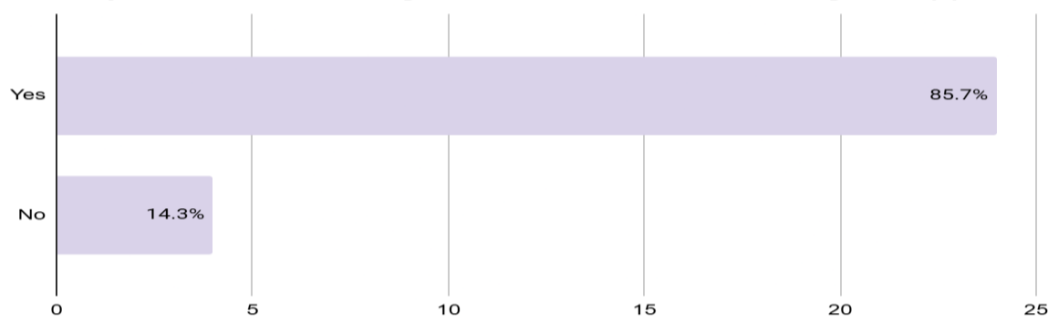
The results show that the use of smartphones generates divided opinions among pre-service English teachers. While some highlight their usefulness for quick access to information, others mention that they can be a source of distraction due to non-classroom-related applications. This highlights the need for proper management of their use in the educational context. In terms of applications, Facebook is the most used, reflecting its ability to facilitate interaction. Platforms such as LINE, Instagram and Messenger are also used for resource sharing. Although applications such as YouTube and TikTok are used less frequently, their presence shows a growing interest in integrating multimedia content in English teaching. However, proper training is crucial to ensure that these tools are used effectively without creating distractions. These findings highlight the value of social tools in L2 learning but although pre-service English teachers are willing to incorporate these social tools to create more engaging activities, they face challenges related to access and use of technological resources. (Manyeredzi & Mpofu, 2022) indicate that, for pre-service English teachers who use smartphones in classrooms to achieve balance in the classroom

by taking advantage of technology and balancing its use, it is necessary to implement school and classroom policies that moderate its use, promoting its advantages.

### Category 3: Educational tools

#### Graphic 4.

*Do you have knowledge of educational technological applications?*

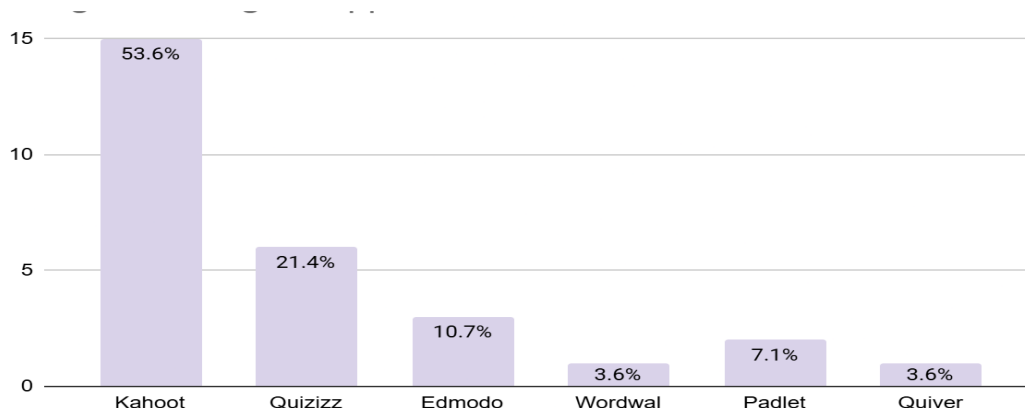


**Created by:** Lascano & Sigcha

Most of the responses indicate that educational technology applications are gaining relevance in academic and professional training. A remarkable 86.7% of pre-service English teachers say that they know fundamental tools for teaching and learning. Many point out that these applications simplify the educational process in which pre-service English teachers teach their classes. On the other hand, the remaining 14.3%, although not as familiar with these tools, mention that the lack of training or experience in the use of educational technology is the main reason for their lack of knowledge. Finally, technological applications are perceived as a powerful tool to improve the quality of education and offer a more dynamic and contextualized approach to learning.

#### Graphic 5.

*Using technological applications in EFL classrooms.*

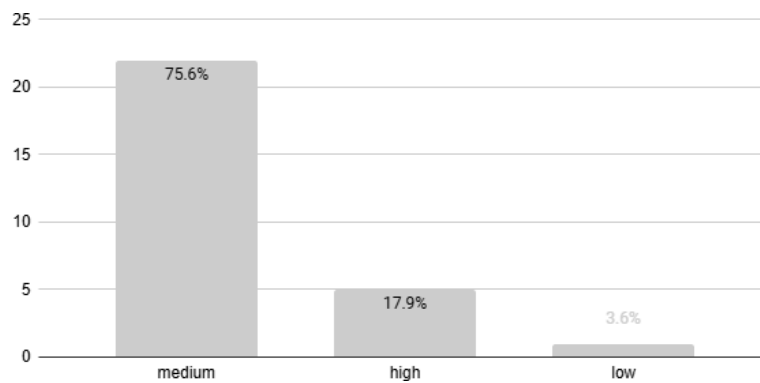


**Created by:** Lascano & Sigcha

In the analysis of the technological applications used in English classes, it is highlighted that Kahoot leads the use with 53.6%. This platform stands out for its playful and competitive nature, which promotes active participation among students. On the other hand, Quizizz with a popularity of 21.4%, is distinguished by its interactive questionnaire format and its flexibility, thus favoring autonomous learning. In addition, Edmodo, used by 10.7%, focuses mainly on class management and facilitating communication between teachers and students. On the other hand, Padlet with 7.1%, allows real-time collaboration thanks to the creation of digital murals. The applications Quiver and Wordwal, which 3.6%, offer creative tools, including augmented reality and interactive games. Although their use is less frequent, they provide significant value to specific educational activities. Finally, these data reflect a clear preference for applications that encourage interaction, play, and collaboration, which are key elements for keeping students motivated and engaged in their language learning.

#### **Graphic 6.**

*What is your level of technology literacy?*

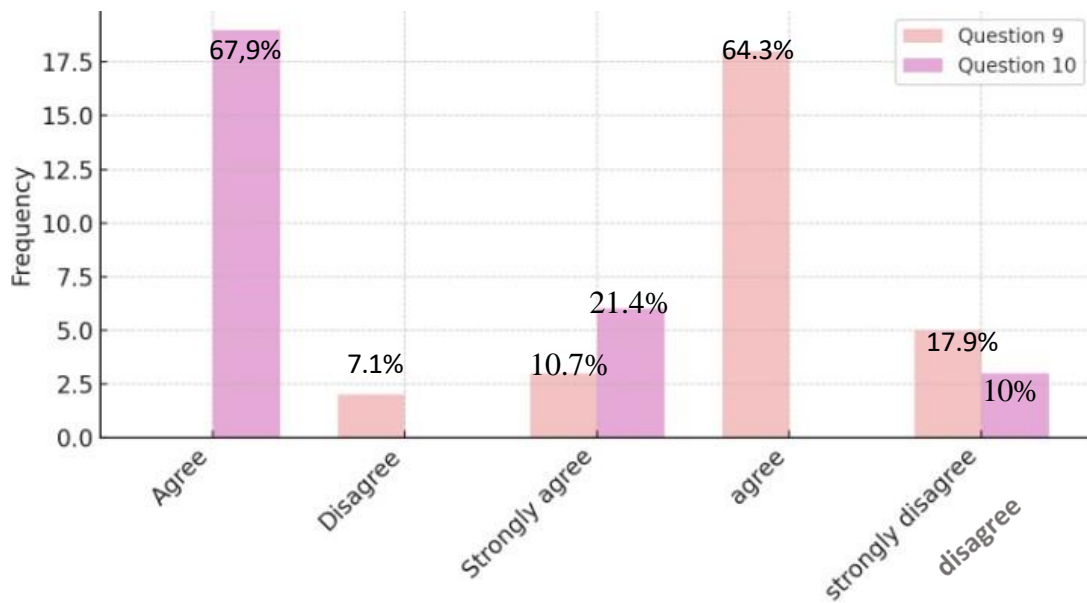


**Created by:** Lascano & Sigcha

The analysis of technological literacy levels reveals that the vast majority of pre-service English teachers, 78.6%, are considered to be at an intermediate level. This indicates that they possess basic knowledge and skills in the use of technologies, although they may not be experts in more advanced tools. On the other hand, 17.9% are classified as having a high level of technological literacy, suggesting that they have greater familiarity and competence in various digital applications and platforms, but only 3.6% are in the low literacy range, which could indicate the need for training in technological tools to improve their performance and use in educational environments. Finally, the data indicate that the majority of participants have a solid base of technological knowledge, although there are still opportunities for development and improvement in this area.

**Graphic 7.**

*Do you think that technology is necessary in teaching and that the use of technological tools can support student learning?*



**Created by:** Lascano & Sigcha

The analysis of responses regarding the role of technology in teaching and learning presents a predominantly positive view among pre-service English teachers. The majority, 64.3%, agree that technology is necessary for teaching, with 10.7% strongly agreeing, highlighting a significant belief in its importance for effective teaching. However, 17.9% strongly disagree, and 7.1% disagree, suggesting a smaller group of educators may prefer traditional methods over technological tools. Similarly, the responses on the impact of technology on student learning reflect a positive perspective, with 67.9% agree that digital technology enhances student learning, and 21.4% strongly agree, indicating a robust belief in technology's potential to enrich the educational process. Only 10% disagree with this statement, signaling that most educators see technology as a valuable tool for supporting and improving both teaching and student learning. In conclusion, the overall sentiment from the majority of respondents is that technology is an essential and beneficial component of the educational landscape, both in terms of teaching effectiveness and student learning enhancement.

### **Discussion:**

The results indicate that educational technological applications are gaining relevance in the training of pre-service English teachers. The majority of pre-service English teachers have knowledge of key technological tools for teaching, which reflects a considerable use of technology in the educational environment. However, some participants mention that the lack of training or experience is the main barrier to its adoption, which highlights the need for training or technological workshops for the use and educational applications. This finding reinforces the importance of technological tools as instruments that improve educational quality. Regarding the specific use of technological applications in the English classroom, a clear preference is observed for platforms such as Kahoot, Quizizz and Edmodo, which are used due to their management characteristics, which favor autonomous learning. The use of Quiver and Wordwal is more limited, but they offer significant value in specific educational activities. Regarding technological literacy, the majority of pre-service English teachers have basic knowledge in the use of digital tools. However, some show greater mastery, indicating that there is still room for improvement in handling advanced tools. Finally, most pre-service English teachers consider technology to be essential in teaching and claim that the use of digital technology can enhance student learning. Technological skills in pre-service English are important according to Dai, W. (2023) The link between competence and the effectiveness of technology itself is ready to integrate digital education tools into their training practices with training and access to technological resources. It is important that they get adequate training to ensure that they can benefit from the potential offered by this technology. In summary, although English teachers are ready to integrate digital education tools into their pre-service practice, they face challenges related to training and access to technological resources. It is important that they receive sufficient training to ensure that they can benefit from the potential offered by this technology.

## **9. RESEARCH IMPACTS (technical, social, environmental, education, or economic)**

This research affects two different areas, which are related to complement each other. The educational area is the main one because identifying the technological tools used for

teaching English by pre-service English teachers of the eighth semester of the PINE career at the Technical University of Cotopaxi was the goal to achieve, but to achieve this objective, it was necessary to know the environment in which the subjects of study develop and thus promote educational inclusion, so the secondary area of impact is the social one.

## 10. CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

- In conclusion, answering the research question, the pre-service English teachers agree that the use of technological tools is an important component of imparting knowledge in the classroom. All the pre-service English teachers detail that the tools are beneficial for any action that leads to the teaching process. However, education requires constant academic training and development since the teaching profession is full of challenges, whether with or without technological tools.
- As a second conclusion, it was determined that technological tools are recognized by the pre-service English teachers as something important since by developing better management and use of technology for education, their pedagogical practice improves. The most used tools such as whiteboards, projectors, YouTube, Kahoot, and Quizz facilitate the experience of making activities more attractive, promoting teaching, and considerably increasing the active participation of students. These platforms together with audiovisual tools contribute to language learning. However, when integrating the use of the computer, it is still limited, which reflects the difficulties and challenges that arise when incorporating technology in the language classroom.
- Finally, the use of technological tools in teaching a second language to pre-service English teachers provides them with opportunities to gain experience and improve their performance in modern classrooms. Furthermore, participants positively emphasize the value of technology as an important resource in the process of learning English as a foreign language. Therefore, it is essential that pre-service English teachers spend considerable time exploring and selecting appropriate technological tools that facilitate the development of teaching in another language, which promotes more dynamic and interactive learning.

## Recommendations

- It is recommended that pre-service English teachers promote the use of technology tools in English language teaching to foster a more dynamic and interactive learning environment. In addition, by incorporating technological tools, they will be able to help their students improve their skills by promoting learning that is relevant to their needs in class. It will also allow pre-service English teachers to develop greater confidence and expertise in the use of technology in their pre-professional practice.
- According to the results, although many technological tools are widely used by pre-service English teachers, access to computers remains limited. It is recommended that educational institutions invest in better equipping the technological infrastructure in their classrooms, ensuring that all pre-service English teachers have free access to the necessary resources to use technological tools in their practices. This includes ensuring access to technological devices and platforms that allow enriching the English teaching process, and eliminating technological barriers that may affect the quality of L2 teaching-learning and teacher training.
- Finally, it is suggested that pre-service English teachers spend time exploring different technological tools that can be applied to teaching English as a foreign language. It is recommended that teacher training programs include spaces such as workshops, and seminars, among others, where the pre-service English teachers can investigate new technological tools and methodologies. In addition, these spaces should encourage critical thinking about the use of technology in the classroom, to ensure that the tools chosen are appropriate for the educational context, developing linguistic skills in students.

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