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**TÍTULO DE LICENCIADO EN CIENCIAS DE LA EDUCACIÓN MENCIÓN  
INGLÉS**

**Ecuadorian high school teachers' perceptions on ICT use in their EFL classes**

**TRABAJO DE TITULACIÓN**

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*Septiembre, 2018*

## **APROBACIÓN DEL DIRECTOR DEL TRABAJO DE TITULACIÓN**

**Magister.**

Gina Karina Camacho Minuche

**DOCENTE DE LA TITULACIÓN**

De mi consideración:

El presente trabajo de titulación: Ecuadorian high school teachers' perceptions on ICT use in their EFL classes realizado por Cadme Espinoza Florencio Olmedo ha sido orientado y revisado durante su ejecución, por lo tanto se aprueba la presentación del mismo.

Loja, 18 de Abril del 2018

f) .....

Gina Karina Camacho Minuche

## DECLARACIÓN DE AUDITORIA Y CESIÓN DE DERECHOS

Yo Cadme Espinoza Florencio Olmedo declaro ser autor del presente trabajo de titulación: Ecuadorian high school teachers' perceptions on ICT use in their EFL classes de la Titulación de Ciencias de la Educación mención Inglés; siendo Mgtr. Gina Karina Camacho Minuche directora del presente trabajo; y eximo expresamente a la Universidad Técnica Particular de Loja y a sus representantes legales de posibles reclamos o acciones legales. Además certifico que las ideas, conceptos, procedimientos y resultados vertidos en el presente trabajo investigativo, son de mi exclusiva responsabilidad.

Adicionalmente, declaro conocer y aceptar la disposición del artículo 88 del Estatuto Orgánico de la Universidad Técnica Particular de Loja que en su parte pertinente dice: Forman parte del Patrimonio de la universidad la propiedad intelectual de investigaciones, trabajos científicos o técnicos y tesis de grado que se realicen a través, o con el apoyo financiero , académico o institucional (operativo) de la Universidad”

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## **DEDICATION**

This project is dedicated to my God, my creator, strong pillar, and source of inspiration, who has been a constant support and motivation to overcome all challenges. This work is also dedicated to my grandparents, Aurelio Cadme Matute and Rosa Andrade Cabrera, who have always loved me unconditionally and whose good examples have taught me to work hard for the things that I aspire to achieve.

Florencio

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## RESUMEN

En un contexto de era digital, esta investigación reporta las percepciones de los docentes de colegios Ecuatorianos en el uso de las Tecnologías de la Información y la Comunicación (TIC). El propósito de éste estudio es investigar y analizar las percepciones de los docentes de Inglés como Lengua Extranjera en el uso de las TICs. La investigación incluyó 20 docentes que imparten Inglés quienes fueron seleccionados de colegios tanto del sector público como del privado. Basándose en el uso de las TICs, el estudio utilizó el método de investigación mixto, un cuestionario, y a una entrevista los mismos fueron usados como instrumentos. El análisis de los datos reveló que algunas características de los docentes como inseguridad personal, ansiedad, y escasa capacitación tecnológica son consideradas barreras o influencias para el uso de las TICs en clase. Además se determinaron las formas como el uso de las TICs es percibido por los profesores de acuerdo a su género y los factores de género que impactan en el uso de las mismas.

**PALABRAS CLAVES:** Tecnologías de la Información y Comunicación (TICs), Inglés como Lengua Extranjera, Percepciones, Barreras, Profesores

## **ABSTRACT**

In the context of the digital era, this paper reports the Ecuadorian high school teachers' perceptions on Information and Communications Technology (ICT) use in their EFL classes. The purpose of this study is to investigate and analyze the English as Foreign Language teachers' perceptions on ICT use. The sample for this study was 20 high school EFL teachers who were selected from Ecuadorian public and private high schools. Drawing on the ICT use, the study was based on a mixed-methods approach and a survey and an interview were used as instruments. The analysis of the data revealed some teachers' characteristics as personal insecurity, anxiety, and poor technology training considered as barriers or influences to use ICT in their classroom. Furthermore, it is determined the ways how ICT use is perceived by teachers according to their gender and the gender factors that impact to use ICTs.

**Keywords:** Information and Communications Technology (ICT), English as a Foreign Language, Perceptions, Barriers, Teachers.

## INTRODUCTION

The integration of Information and Communication Technology (ICT) is indispensable in the learning and teaching process nowadays. In EFL process, technology has enhanced to switch traditional practices into innovative ones. Based on this, Leliani, Agustiani, and Maryam, (2014, p.1) defined ICT as “one kind of supporting media that can help teachers teach EFL students.” Using technology allows creating a student-centered approach where learners can engage in meaningful activities through authentic material.

In recent years, technology has become indispensable in EFL teaching and learning context for young learners. ICT tools in particular have been contributing immeasurably to the academic life of teacher and student in general. In view of the relevance of ICT use, this study will therefore examine Ecuadorian high school teachers' perceptions on ICT use in their EFL classes. This research pretends to answer three main questions:

- Which aspects related to teachers' characteristics are considered by most of the EFL teachers as barriers to use ICT in their classroom?
- Which factor regarding to teachers' characteristics does influence the most on teachers to use ICT in their classroom?
- How is ICT use perceived by EFL teachers in relation to their gender?

ICT use in an EFL class has been researchers' focus of attention for many years. Mahmoudikia, Hoomanfard, and Izadpanah (2014) attempted to provide a clear description of the barriers and factors to teachers' ICT use in teaching. In their study, they concluded that there is the need for further professional development and use of ICT among teachers who have to take advantage of training to meet the ICT-related demands of teachers in today's world.

Another study was carried out by Afshari, Bakar, Luan, Samah, & Fooi, (2009) who revealed non-manipulative and manipulative school and teacher factors which influences on teachers' decisions to use ICT in the classroom. They also determined that an ongoing professional development must be provided for teachers to practice innovative pedagogies and tools for learning.

Rahimi and Yadollahi (2011) also investigated the level of ICT use in teaching EFL and explored the effect of EFL teachers' personal and technology-related characteristics in ICT use. They found out digital portable devices were used more than computer or network applications and ICT use was not related to attitude and gender.

All these previous studies have displayed relevant results related to ICT use in EFL class. In this sense, this study will support educational teachers and administrators to switch

traditional practices because ICTs allow implementing innovative methods. Hence, students will eradicate distance and isolation because ICT tools create a collaborative context where students communicate effectively with people around the world. This paper will also encourage Ecuadorian high schools to consider ICT use advantages and enable teachers and students to apply them effectively and appropriately. Furthermore, these results could be a source of information for future research papers based on ICT use in EFL teaching and learning process. Lastly, limitations have not been noted in the research process.

**CHAPTER I:  
LITERATURE REVIEW**

This chapter addresses to provide a comprehensive review of the literature in which a synthesis of the theoretical framework is emphasized. It is underlying to highlight that technology role has become one of the most relevant aspect in current days; therefore, this chapter embraces different research studies done by the most experts in the field. The literature review consists of three themes: Information and Communication Technologies (ICT) use in English as a Foreign Language (EFL) teaching, teachers and ICT use, and teachers' characteristics regarding ICT use.

### **ICT Use in EFL Teaching**

#### **Definition.**

The term ICT stands for Information and Communication Technologies. "The acronym ICT which is the combination of both terms Information and Communication, were put together in order to emphasize the merging of both technologies" (Tamo 2014, p.298). This term has been specifically defined by different authors. Sarkar (2012) mentions that ICTs collect, store, process, transmit and present information through hardware, software, networks, and media.

Referring to education, Sarkar (2012) emphasized that ICT in education can be considered as an effective tool to improve learning and teaching process and even education management focusing on different education stages such as early childhood development, primary, secondary, tertiary, basic education and further education and training. In this sense, Kalaš et al. (2012) also stated that ICT facilitates the promotion of developmental domains in children and all learners through the use of computer-based technologies which support teaching and learning process, communication and collaboration, self-expression, creation, etc.

Likewise, Bizi and Shittu (2014) remarked that education has been potentially transformed through the use of technological tools such as: radio, television, computers and internet which have made the teaching and learning process an engaging and active one linked to real life. In this respect, Leliani, Agustiani, and Maryani, (2014, p.1) defined that ICT is "one kind of supporting media that can help teachers teach EFL students. ICT is very useful to provide opportunity to both teachers and students in finding teaching and learning resources".

Besides these definitions, Karaca, Can, and Yildirim (2013) as cited in Karaca (2015) add that instead of a supplementary teaching tool, technology should be recognized as a requirement to meet the learning goals of today's students. ICT definition has been clearly stated; therefore, its effective integration represents remarkable switches in EFL teaching and learning process.

#### **Importance.**

The relevance of ICT use is widely acknowledged in general aspects of human life as well as in education field. Bindu (2016, p. 27) carried out a research based on the impact of ICT on education and he found out that ICT application “will have a strong influence on teaching learning process, a wider accessibility of education, motivating learners, creating a congenial learning environment and improving academic performance”. In addition, Sharma and Barney (2007) as cited in Paredes (2017) highlighted the importance of technology application for four reasons: it motivates learners, presents interactive activities, provides instant feedback, and allows instant access to information.

Furthermore, Shyamlee and Phil (2012) analyzed the necessity of technology to language teaching and found that it promotes students’ motivation and learning interest, keeps students engaged in learning, creates a context with accessibility to teaching material and information, and enables students to be independent with communicative competence. Ertmer, Ottenbreit-Leftwich, Sadik, Sendurur, and Sendurur (2012) also carried out a multiple case-study research and found out that technology played an underlying role in classrooms because it reinforces skills, complements or enriches the curriculum and it even transforms teaching.

In similar lines, Nomass (2013) highlighted the role of using modern technology in teaching English as a second language saying that the four main skills of a language, speaking, listening, reading, and writing possess their own technological devices.

Nomass (2013) also included some techniques for each skill. For listening: use of computers, broadcasting, use of CD players, or tape recorders; for reading: use of Computer Reading-Based Programs, use of Multimedia Software, browsing the internet, use of Electronic Dictionaries, reading CD-ROM Based Newspapers; for speaking: use of Internet Voice Chatting and use of Speech Synthesis Programs; for writing: use of Computers, writing E-mails, and use of Internet Text-Chatting. Moreover, Zyad (2016) conducted a research in Morocco in which he determined that teachers do not feel motivated to plan lessons using ICTs when they have crowded classrooms without ICT equipment.

ICT use encourages even teachers and not only learners to learn. The aforementioned affirmation was displayed by Tondeur, et al. (2012) whose study aimed to compile available qualitative research related to training in the integration of technology into pre-service teachers’ future classrooms. He also claimed that when pre-service teachers observe teachers applying technology, they are motivated to implement technology into their practices.

### **Advantages.**

Currently, an effective integration of ICT in EFL teaching process produces several benefits; thus, expert researchers and educators have offered a vast number of them that

motivate teachers from using ICT in the classroom. A good example of such benefit is offered by Houcine (2011) as cited in Leliani, Agustiani, and Maryani, (2014) who synthesized six advantages of ICT use.

The first advantage mentioned by the authors of ICT referred to its opportunity to provide teachers with required material according to learners' needs. Secondly, the researchers clarified that it allows to access to authentic materials. Thirdly, the investigators added that an immediate feedback is possible through ICT application. Another advantage of the author's dealt with the possibility to combine skills in which texts have images and audio has video. The fifth advantage of ICT established by the researchers was to attract students and keep them engaged in learning. The authors finished saying that ICT use offers to practice a specific aspect of a lesson improving learners' language proficiency.

Besides the aforementioned authors, Isisag (2012) examined the necessity of ICT and highlighted four positive effects of ICT on an interesting study. He agreed with Leliani, Agustiani, and Maryani by saying that ICT offers authentic materials and learning personalized guidance, but Isisag included two other benefits of ICT in language in a language classroom. The first benefit is related with the students' opportunity to collaborate and cooperate among partners while they are learning in class. The last major benefit is for instructors who can tutor students more effectively. Additionally, Rastogi and Malhotra (2013) emphasized that ICT provides some advantages, which enable teachers and students save time, study in a constructivist environment, work in a cooperative and collaborative context, and develop higher thinking skills.

Another study that clearly displayed ICT appraisals was carried out by Zyad (2016), who established that ICT use enables learner autonomy, collaborative learning, experiential learning, problem-solving, higher order thinking skills and life-long learning. He also stated that computers constitute a tool, which allows teachers to access and be well prepared in pedagogical terms based on the constructivist principles.

Besides this, a relevant researcher presented a study in which she investigated teachers' perceptions towards the implementation of ICT in EFL teaching and learning process. This study was conducted by Al-Munawwarah (2014) who discovered three benefits of using ICT in English teaching and learning process. Firstly, ICTs integration assists teachers to conduct interesting and enjoyable activities where students feel involved in the process with organized material. Secondly, ICT use promotes learner autonomy because he or she can work with authentic material from online websites becoming an independent student. The third benefit of ICT use focuses on the motivation the students to learn because online material engages students in learning process.



Fortunately, Tamo (2014) synthesized the advantages of ICT use specifically for students. The author highlighted nine benefits of using ICT tools which are implemented effectively in the learning context. ICT tools help expand students' learning experience, increase motivation, enhance enjoyment and interest, facilitate collaboration, foster learner autonomy, enhance self-esteem, increase commitment to the learning task, promote global understanding, develop language skills.

### **Disadvantages.**

Although ICTs use benefits EFL learning and teaching process, there are some disadvantages that can hinder ICT usage. Ziphorah (2014, p.1) explored the challenges of ICT use in teaching a language in a case of South Africa where findings revealed that "most schools still lack technology equipment for teaching and learning, and teachers are not yet fully equipped with the knowledge and skills to integrate technology into the curriculum" In addition, Salehi and Salehi (2012) revealed in their study which was carried out in Iran that high school teachers lack technical support at schools and access to Internet. The authors also mentioned that ICTs use shortens class time needed to learn.

As Ziphorah and Salehi and Salehi, Hadijah and Shalawati (2017) also conducted a research in which they investigated teachers' barriers to ICT integration in teaching English at Senior High Schools in Pekanbaru where they analyzed these issues and discovered that teachers confront five issues such as: accessibility of ICT, time, professional development, and technical support. In the study done by Hertlein and Ancheta (2014), three teachers' barrier-factors to using Information and Communication Technology (ICT) were analyzed in secondary schools in India, which are lack of support, lack of ICT infrastructure and lack of motivation and self-belief from factor analysis. Additionally, these authors included that secondary schools demand teacher training, technical, financial and administrative support.

These barriers have become a paramount consideration in ICT use. Ali, (2015) researched about teachers' use of technology in their classrooms during teaching experience at Anadolu University English Language Teaching Program. The findings of the study revealed a mismatch between teacher training programs and real-world classrooms in terms of technology integration in EFL instruction. Pedagogical implications of the study consist of the need for better integration of technology in EFL teacher training and a stronger link between the placement schools and the university. In related literature, in the city of Eskisehir, Turkey, Eristi and Dindar (2012, p.1, 39), in their study, they aim to "determine teachers' views and their suggestions about the process of technology integration into educational environments and about the problems experienced in the process".

According to these authors, there are some factors that influence ICT use. The first factor refers to the limited number of the staff to facilitate teachers with technological support at schools. The second factor deals with the lack of immediate support at the exact time when it is necessary. The third and fourth factors are the lack of sub-structure and physical conditions. Another factor displays the quality of teachers' efficacy in technology use. The last factor is related to the lack of enough amount time in the process of becoming efficient in technology use increase the problems that teachers experience related by technology application.

## **Teachers and ICT Use**

### **Teachers 'role**

According to experts in education, the role of a teacher who implements ICT resources varies enormously accomplishing underlying educational outcomes. Drigas and Charami (2014) reviewed and presented some representative studies in which they analyzed and concluded that while learners improve vocabulary, reading and speaking skills through ICT use, teachers hold a double role as educators and facilitators emphasizing that they are constantly switching; therefore, teachers should gain knowledge of new tools.

Likewise, Mama and Hennessy (2013, p. 13) explored a study about the uses of educational technology in Cyprus and argued that "technology urged teachers to reconsider their role in the classroom and encouraged them to devote more attention to their students' individual needs, the ways they acquired knowledge and how technology could improve their learning". Hence, Fullan (2013) as cited in Mozafari and Wray (2013) stated that the most relevant role of a teacher is to become a change agent during the challenge to integrate technology into teaching and learning activities.

Therefore, Sharma (2009 as cited in Nomass, 2013) stated that if the role of instructor and the role of technology go together, the learning results can be advanced because the effect of technology has contributed enormously in teaching and learning process. Other researchers as Padilla, Del Aguila, and Garrido (2013) emphasized that when teachers work with virtual classroom content, they become content managers to contribute student's comprehension because they use images, videos, and other multimedia resources. In this point, Al-Munawwarah (2014) study revealed two aspects. The first one emphasizes the use of web-browser, which may help teachers and learners to find various materials. The second one deals with the teachers' necessity to guide students to seek reliable websites in order to avoid obstacles in students' learning

Tamo (2014) highlighted that the integration of ICT definitely provides teachers to perform a paramount role in classroom. He also established that “ICT provides a variety of different approaches as well as learning styles that reinforce the material delivered in other formats. These are useful tools helping the teachers in using different interactive techniques”. (p. 299). Accordingly, Yadollahi (2015) assured that the role of teachers has switched from a presentation tools to supportive tools in language classes. The author argued that teachers are the end users and real agents who play a decisive role in language learning and teaching for technological plans and the subsequent technological process.

In similar lines, a study in which the role of traditional teachers demanded to change, Montrieux, Vanderlinde, Courtois, Schellens, and De Marez, (2014) explained that innovative teachers’ roles and their horizon have been switched. Firstly, an innovative teacher is who becomes a coach adapting lessons and classes according to tablet computers applications. When an innovative teacher applies technology, he or she is not only transforming their lessons with new teaching styles, but also, he or she is broadened their horizon.

### **Teachers’ competences**

In the related literature, teachers are considered the most relevant factor when using ICT; thus their readiness must be focused on acquiring the required technological skills to success. Prestridge (2012, p. 9) held a research in Australia and stated that teachers feel more confident in applying ICT in classrooms when they possess a better personal competency. After having analyzed the available data, the author inferred that teachers do not demand to have high levels of competency with ICT because they are confident implementing it in class.

This paper also explores the relationship between competency and confidence and the impact of this relation. Moreover, Rastogi and Malhotra (2013, p.7) pointed out that their research reveals a strong positive relationship between the possessions of ICT skills by teachers in India. They also analyzed teachers’ proficiency in ICT skills in Word Processing, Telecommunication Skills followed by Essential Computer Skills, Presentation Skills, Networking Skills, Social and Ethical Skills, an average Graphing Skills but poorly in their Teaching-Learning Environment Skills, Grade Book Skills, and Web Design Skills.

In this sense, Mozafari and Wray (2013) claimed that teachers ICT competence are connected to teachers’ attitudes towards using ICT because teachers who are more skillful in technology expect to be more disposed to implement it into teaching. Ziad (2016) established that teachers’ competences can depend on their gender due to male and female perceptions differ since male teachers are more collaborative than female teachers; however, there was a

consensus among teachers who lack coordination with administration resulting in spoiling students' engagement in technology-based activities.

Zyad (2016) also claimed that

ICT as a teaching aid is more complicated in that it demands more specific skills from the teachers. The development of ICT – electronic mail, internet, multimedia, possibilities to use collaborative platforms, undoubtedly, influences the process of using them in everyday classroom teaching and learning. (p.3)

Meanwhile, Yadollahi (2015) agreed that English teachers who have developed English skills such as reading and writing are fewer computers anxious and more competent in using ICT tools in their teaching practices.

### **Teachers' gender**

According to different studies, teachers' gender can vary in ICT integration. Leliani, Agustiani, and Maryani, (2014) presented that there are studies carried out by Volman & van Eck (2001) in which they established that female teachers have lower levels of computer use because they possess limited technology access, skill, and interest.

Additionally, Padilla, Del Aguila, and Garrido (2013) reexamined and revealed existing gender differences focused on playfulness in the context of a blended learning environment. Therefore, their findings provide teachers, course designer and academic institutions some guidelines on the design and implementation of ICT. In their study, these researchers concluded that there are relevant significances between males and females' attitude because males' ratings of perceptions referring to playfulness and attitude seemed to be less than females whose ratings of intention to use technology appeared lower than males.

Another paper researched by Zyad (2016), reported a study to investigate secondary education teachers' attitudes towards ICT implementation in the El-Jadida province, Morocco. This researcher found out three important characteristics. Firstly, female participants display less confidence in using computers because they appear more anxious than male participants (Cartelli and Palma, 2008). Secondly, gender differences towards computer use are decreasing (Shapka and Ferrari, 2003). The last one showed that male teachers were more positive about ICT than females, being either undecided or negative (Jimoyiannis & Komis, 2006).

### **Teachers' Characteristics regarding ICT use**

#### **Psychological Characteristics.**

These characteristics embrace teachers' attitude and behavior towards ICT utility. According to Zyad (2016), in his study, he stated that:

At the educational level, there was agreement among the teachers that the positive attitude they had about ICT in education emanated from the confidence they had in the capacity of ICT in improving the quality of the teaching/learning process. The teachers believed that students could achieve autonomy in learning if they were provided with guidance and orientation from their teachers. Moreover, the interviewees seemed to suggest that the affordances of the Internet would empower students with life-long learning and endow them with skills that would render them resourceful and insightful 21st century citizens. (p. 72).

Besides Zyad's contribution, Kreijns et al. (2013) emphasized that it is indispensable to distinguish three principles of ICT use that affect teachers' behavioral dispositions such as beliefs, attitudes, self-efficacy, subjective norm, and intention. The authors mentioned the first principle, which refers to a general formulation of applying ICT derived from a teacher's desired target behavior. The second principle they said that target, action, context, and timing are specified by a target behavior according to the TACT.

The last principle deals with compatibility among behavior and attitude. One relevant barrier to bear in mind is computer anxiety in ICT integration according several researchers. Regarding these features, it is crucial to highlight their connection with teachers' attitudes. In this sense, Zyad (2016, p. 72) investigated secondary education teachers' attitudes towards ICT implementation in which he stated that "the teachers suggested that ICT was pivotal in granting opportunities for self-development and professional growth. Additionally, they all pointed out that ICT opened up easy access to valuable information, which could have taken ages for past generations to obtain".

Zyad (2016) also discovered three components of attitude. The first one deals with the affective component of attitude in which teachers display happiness when using ICT. The second component refers to the cognitive component of attitude, which is concerned in perceived ease of use and perceived usefulness of ICT, both of which were generally positive. Another component is the behavioral component of attitude where teachers display a behavior readiness in providing a number of conditions to be satisfied. Nevertheless, Yadollahi (2015) confirmed that Computer Education and Educational Technology Teachers displayed a higher level of computer anxiety comparing with English Language Teachers.

### **Educational Characteristics.**

All committed teachers in implementing ICT in class display and practice pedagogical beliefs aligned with their practicum. As the multi-case study in which the emerging typology of beliefs and practices of teachers beliefs and practices with ICT conducted was presented by

Mama and Hennessy (2013, p.6), who assert that “Teachers’ beliefs were explored in relation to their general perspective on the integration of ICT in education, value of technology in teaching and learning, and perceived impact of technology on practice”. Referring to general perspective, the authors said that teachers report positive and enthusiastic belief to use ICT which provide convenient facilities.

Regarding the value of technology in teaching, the researchers stated that instructors deploy a positive belief due to technology contribution in create a constructivist context. Likewise, teachers’ beliefs are positive in the value of technology in learning because of multiple technology advantages. Finally, Mama and Hennessy (2013) recognized that technology has impacted on teachers practice facilitating them to reconsider a different role in class.

In addition, Kim, Kim, Lee, Spector, and DeMeester (2013) carried out a study which purpose is to examine the relation of teachers’ beliefs to their technology integration practices and they discuss that a dramatic and fundamental change of teachers’ understanding, perception, belief, and attitude may result being teachers’ background knowledge based on their elemental and persistent professional development which is originated from an adopted, implemented and innovative process.

As the aforementioned authors, Ertmer, Ottenbreit-Leftwich, Sadik, Sendurur, & Sendurur (2012) also carried out a research to achieve an understanding of the way teachers put their beliefs into practice through a reexamination of the relationship between their beliefs and practices. The researchers’ study revealed that the alignment among teachers’ beliefs and practices starts believing that technology allows students to collaborate among partners. Other teachers’ belief constitutes in taking technology into account to provide students with choices, which represents to be the most fundamental one.

### **Professional Characteristics.**

The relevance to accomplish an effective ICT integration depends on the teachers training. In a study, a systematic review method was used to synthesize the available qualitative research regarding the training of pre-service teachers to integrate technology into their future classrooms done by Tondeur et al (2012).

This investigator found out that:

Teacher educators lacked the knowledge, skills, and self-efficacy to teach or model technology integration to pre-service teachers. It is also clear from the evidence (in five of the sample studies), that teacher educators should be provided with training so they can design their courses based on how pre-service teachers can use the knowledge and skills they gained within their subject area. (p.140)

Takacs (2017) investigated the perceptions of a sample of northwestern New Jersey school teachers and addresses the successful integration of technology into the classroom. He determined that there are 50 % of the instructors who are concerned in having more training in technology and seek out professional development, so technology integration can be effective for students. In addition, Zyad (2016) conducted a research in which he investigated teachers' instructional methodology applied when they use ICT in the classroom and its extent to which teachers implement to obtain pedagogical goals.

Therefore, Mama and Hennessy (2013) contributed with teachers' perceptions that represent the impact of technology in teachers' professional life mentioning that technology contributed to switch teachers' role from a traditional pedagogy to student-centered one enabling teachers to be leading figures in the classroom. Consequently, Tamo (2014), in his study described the effects of ICT use of teachers. The first effect is the organization of their teaching in an effective way, visualizing abstract knowledge and creating real world environments.

Besides this, the researcher mentioned that technology allows having teachers' interaction between colleagues who share same interests and expertise in specific areas around the world. Additionally, Tamo included that ICT tools enable teacher to prepare teaching materials to practice pronunciation and to produce drills, tutorials, and computer based tasks are applied in the class to promote collaborative learning. In addition, the same author explains that teachers can communicate in an authentic and meaningful manner and tutor their students immediately through ICT use.

#### **Personal Characteristics.**

The main personal features of a teacher to employ ICT tools deal with experience, age, gender, and academic degree; however, the most indispensable are analyzed by experts. Yadollahi (2015) stated that in terms of technology use in teaching practices certain personal characteristics such as academic degree, gender and years of experience have been the target of several studies. The author included the age as a possible factor which can be an indirect factor on teachers' technology integration.

With respect to the influence of years of experience in ICT use, Mai (2014) conducted study which aim was to investigate in-service and pre-service teachers' attitudes and perceptions towards using Information and Communication Technology ICT in education. The investigator determined that in-service teachers had higher positive attitudes regarding the teachers' attitudes towards ICT in education, but this difference was not significant. Tamo (2014) concluded that young teachers employ more ICT tools than teachers who are older and have more teaching experience. The author clarified two personal characteristics which may affect in

ICT use. The first one deals with teachers' age and experience because they are involved with the lack of computer knowledge and skills in terms of computer-based or computer-managed instruction. The second one refers to the lack of enough training to use effective ways of ICT tools into language teaching.

### **Previous studies in relation to Teachers' perceptions on ICT use in their EFL classes**

There is a vast of educational studies in which ICT use has been the main focus to research during the last years. Thus, six studies are described in this section, emphasizing on their main findings and contributions to determine teachers' perceptions on ICT use in their EFL class.

The first study was carried out by Ali (2015) who researched at Anadolu university where 86 student teachers performed their practicum. This research aimed to investigate their use of technology in their classrooms. To accomplish this, a questionnaire and semi-structured interviews were applied as instruments to gather data. A qualitative and quantitative analysis indicated that participants did not have enough available technological resources for their classes. They also lacked ICT training based on real life knowledge, and they could not access to basic tools.

In the next paper, Ashrafzadeh and Sayadian (2015) examined the concerns and perceptions of Iranian EFL university instructors of technology integration in their classes. A mixed method was used in this study in which a group of 91 university instructors participated in a survey and nine of them were interviewed. Findings revealed a significant difference in participants' gender related with "trialability" attributes. According to results, there was a lack of administrative facilities, instructors' technology literacy, and accessibility of technology.

Teo, Huang, and Hoi (2017) studied the intentions of English teachers in China to use technology in their classroom teaching. Additionally, the authors analyzed the relationships that existed among perceived usefulness, perceived ease of use, attitude toward use, behavioral intention, computer self-efficacy, technology complexity, facilitating conditions, and constructivist teaching beliefs. 183 participants at 5 Chinese universities participated in this paper completing a questionnaire. Data were analyzed through a structural equation model having as results significant predictors of attitude toward use and relevant antecedents for teachers' behavioral intention to use technology.

For the fourth study, Cardenas and Oyanedel (2016) undertook a qualitative and exploratory case study at a Chilean university. This paper aimed to discuss if and how implicit theories influence the implementation of ICTs. By the time of data collection, 8 female and 1 male teachers who worked for an English Language Teaching undergraduate program



participated completing semi-structured interviews and a self-assessment skill survey. Then cyclical analyses of data were conducted in order to reveal outstanding results such as: perceived affordances of ICTs, use of ICTs in practice, and challenges for implementation of ICTs.

In case of the fifth research, Andrei (2017) reviewed how three middle school teachers of English as a second language (ESL) used technology in the classroom and the factors that influenced their use. Data were collected through interviews and class observations at a West Middle School. The results determined teachers were comfortable users of ICT tools although they did not have training, time, technology support, and resources in well conditions.

Finally, Mahmoudikia, Hoomanfard, & Izadpanah (2014) attempted to give a clearer picture of the teachers' barriers and factors affecting ICT use in teaching. For this investigation, 25 researches were carried out by different Iranian researchers who collected data through survey instruments such as interviews and questionnaires. Findings identified four factors: psychological, professional, educational, and biological ones. They also highlighted first and second- order barriers which could be tackled with changes in teacher training programs and educational policies.

**CHAPTER II:  
METHODOLOGY**

In this second part of this study, once the theoretical framework has been stated, there is the need of specifying the way of studying the aims of the research in their context. Moreover, it is considered to describe later on the target population, participants, and procedures such as research design, research questions, research tools, process of data collection and its appropriate analysis for this methodology of research.

### **Setting and Participants**

This research was carried out in both public and private Ecuadorian schools. Twenty EFL teachers were also part of this research in which they contributed with useful ideas based on their experience. The population was constituted by several high schools of Ecuador. The 45% of teachers were from Azogues city. 25% of the sample was from Cuenca, and 10% of participants were from Quito. There were 5% of teachers from Puyo, 5% of participants from Manta, 5% of teachers from Loja, and 5% of them from Paute. In total, ten Ecuadorian schools were used in this research project.

The participants were a group of twenty female and male teachers who were selected randomly. Ten EFL teachers were from Ecuadorian public high schools. Meanwhile, the other group of ten teachers belonged to private high schools. All of them completed the survey. From the whole group of twenty teachers, six participants were interviewed. It was an equitable process where three of them were male and the other three were female. In terms of age, four participants were in their twenties; nine were in their thirties; six were in their forties; and one was over fifty.

The sample of participants had enough teaching experience to be kept in mind for this relevant research. Six teachers had five years of EFL teaching. Ten teachers had between five and fourteen years. Three participants had among fifteen and nineteen years, and there was one teacher who had over 20 years of experience. The education level of participants represented an underlying component for this paper. All teachers had a Bachelor's degree in EFL teaching. Two of them had a Master's degree, and one of them was studying his Master program.

### **Procedures**

The research took an exhaustive and precise procedure considering aspects as research questions, significant literature, research design, research tools, process of collection of data, and description and analysis of results.

Before starting the research process, the research questions were put forward:

1. Which aspects related to teachers' characteristics are considered by most of the EFL teachers as barriers to use ICT in their classroom?
2. Which factor regarding to teachers' characteristics does influence the most on teachers to use ICT in their classroom?
3. How is ICT use perceived by EFL teachers in relation to their gender?

To begin, this research has examined crucial literature and adequate background to the study, aiming to answer and contextualize the research to be undertaken. The literature review was focused on three relevant themes Information and Communication Technologies (ICT) use in English as a Foreign Language (EFL) teaching, teachers and ICT use, and teachers' characteristics regarding ICT use. Besides these themes, subthemes were relied on the addition more information to each main theme. These subthemes were parameters such as ICTs definition, its importance, advantages and disadvantages, teachers' role, teachers' competences, and teachers' psychological, educational, personal, professional characteristics.

With respect to research design, a mixed research methodology was employed in this study including both quantitative and qualitative approaches. This mixed method approach provided the best opportunities for answering the three research questions of this research. The answers of these questions depended upon a variety of forms of data. The quantitative section, which includes a questionnaire, addressed the research question related to how effective ICT was related to teaching method in the classroom. The qualitative section included the interview.

In order to answer the questions, a survey and a semi-structured interview were compiled from EFL teachers. The questionnaire for the survey was constructed to elicit information regarding the two questions. The first question had 18 items to consider while the second one had 17 items. On the basis of five-point Likert scales, the participants were required to state their level of agreement on the options presented: strongly agree, agree, disagree, strongly disagree, and no answer. As regards the semi-structured interview, it consisted of eight questions attempting to obtain data on the three research questions as well.

The research tools were applied by author's personal contacts in Ecuador. The data was collected via Facebook messenger for the survey. After the experts were located, communication with them was carried out through texting and submitting a formal request to participate in this study. Meanwhile, the interview was implemented face to face in public and private high schools after having the authorization to do it.

For data analysis, four tables were compiled to show the answers for the research questions. The table 1 pretended to answer this question: Which aspects related to teachers' characteristics are considered by most of the EFL teachers as barriers to use ICT in their

classroom? Participants selected their own choices considering 18 items. In the second table, teachers' characteristics that influence the most on teachers to use ICT in their classroom were answered by participants who took into consideration 17 items. The third table pretended to determine how ICT use is perceived by EFL teachers in relation to their gender with 18 items. The last table revealed information to find out teachers' perceptions by gender in relation to the factors that they consider the most influential to use ICT in their classroom.

To describe and analyze the results the five options or alternatives were identified in each table: strongly agree, agree, disagree, strongly disagree, and no answer. Then a quantitative and qualitative description and analysis paragraphs were done considering each item of the questions. To display validity and reliability, all results were supported by theoretical information provided by experts in the Literature review.

**CHAPTER III:  
RESULTS AND DISCUSSION**

### 3.1. Description, Analysis, and Interpretation of Results

Thus far, the study has taken into account the paramount literature, the general background, and the methodology undertaken in gathering the data. Now, the data is analyzed with a view to answering the research questions outlined in Chapter 1 of this thesis. To this point, the analysis has focused on investigating the separate elements of the teachers' survey. In fact, it examines each of the major Likert scale responses which include five options: Strongly Agree, Agree, Disagree, Strongly Disagree, and No answer. Teachers marked one of the options according to their realities in the survey. Besides survey, the interpretation of results is reinforced with interviewees' answers which were part of a questionnaire with 8 questions.

#### Which aspects related to teachers' characteristics are considered by most of the EFL teachers as barriers to use ICT in their classroom?

**TABLE 1. Teachers' characteristics considered by EFL teachers as barriers to use ICT in their classroom**

	STATEMENT	STRONGLY AGREE		DIS-AGREE		STRONGLY DISAGREE		NO ANSWER		TOTAL			
		f	%	f	%	f	%	f	%	20	100 %		
1	I feel insecure about my ability to use ICT as a resource to teach.	0	0	1	5	2	10	17	85	0	0	20	100
2	I do not think I would be able to learn how to use ICT in my classroom.	0	0	0	0	0	0	20	100	0	0	20	100
3	I am afraid that if I begin to use ICT, I will become dependent upon them.	0	0	2	10	14	70	4	20	0	0	20	100
4	I dislike working with machines that are smarter than I am	0	0	0	0	3	15	17	85	0	0	20	100
5	I feel apprehensive about using ICT.	0	0	0	0	18	90	2	10	0	0	20	100
6	I have difficulty in understanding the technical aspects of ICT.	0	0	1	5	16	80	3	15	0	0	20	100
7	It scares me to think that I could cause the computer to destroy a large amount of data by hitting the wrong key.	0	0	0	0	15	75	5	25	0	0	20	100
8	I hesitate to use ICT for fear of making mistakes that I cannot	0	0	0	0	17	85	3	15	0	0	20	100

	correct.												
9	You have to be master to understand how to use ICT	0	0	0	0	16	80	4	20	0	0	20	100
10	I have avoided ICT use because they are unfamiliar.	0	0	2	10	14	70	4	20	0	0	20	100
11	I have not attended any ICT training courses	0	0	2	10	15	75	3	15	0	0	20	100
12	I have attended some ICT training courses; however, I prefer not to use ICT because they somewhat intimidate to me.	0	0	1	5	19	95	0	0	0	0	20	100
13	I am not interested in attending any ICT course	1	5	1	5	0	0	18	90	0	0	20	100
14	I do not know how to use any ICT resource	0	0	0	0	5	25	15	75	0	0	20	100
15	I do not use any ICT resource in class because I think that ICT are not necessary to teach English	0	0	0	0	3	15	17	85	0	0	20	100
16	I prefer not to use ICT because my teaching experience is the most crucial factor in teaching process.	0	0	0	0	9	45	11	55	0	0	20	100
17	I think that age is factor that determine the ICT use in class	0	0	1	5	11	55	8	40	0	0	20	100
18	In my opinion, younger teachers are more skillful to use ICT than the older ones.	0	0	12	60	8	40	0	0	0	0	20	100

N= 20

Author: Cadme Espinoza, Florencio

Source: Ecuadorian high school EFL teachers

Table 1 shows teachers characteristics that are considered as barriers from eighteen parameters according to the selection of one of the five alternatives. One of the alternative was selected by teachers who strongly agreed in *I am not interested in attending any ICT course* with a percentage of 5%. In this respect, Hertlein and Ancheta (2014) asserted that secondary schools demand teacher training. Fortunately, most of teachers thought this was not a barrier in ICT use because they attended ICT training courses and solved possible problems by themselves through video tutorials or students' assistance.



In this sense, another alternative was the agrees option. In, *I have avoided ICT use because they are unfamiliar, and I have not attended any ICT training courses* had two teachers who agreed with these statements. Tondeur et al (2012) affirmed that teachers' training plays an important role because teachers gain confidence in integrating ICT resources in their practices. It is possible to affirm the relevance to facilitate teachers with ICT knowledge in order to feel confident in its use.

Meanwhile, more than a half of teachers agreed with *In my opinion, younger teachers are more skillful to use ICT than the older ones* because 60% of them thought younger teachers are more skillful in technology. In this respect, Paredes (2017) described that young people are digital natives while older people are digital immigrants. Undoubtedly, this principle is applicable for teachers' competence in ICT use, but teachers overcome this dilemma by a constant commitment in ICTs update.

Regarding disagree option; it was selected by a considerable number of teachers for certain characteristics as well. *I feel apprehensive about using ICT* had 90%. In case of *I hesitate to use ICT for fear of making mistakes that I cannot correct* had 85%. The characteristic *I have attended some ICT training courses; however, I prefer not to use ICT because they somewhat intimidate to me* obliterated 95%.

After describing the results, it can be interpreted and analyzed teachers' characteristics, which might constitute other teachers' barrier. Besides psychological characteristics, educational ones influence enormously in this parameter. Although all the 20 teachers thought they would be able to learn how to use ICT in their classroom, the vast variety of technological tools enables teachers to choose the appropriate ones for their practices. Thus, they can select technological tools and plan activities taking into account their personal skills and knowledge to implement ICTs. It is recommended to take enough time in order to solve possible issues.

Based on Ertmer, Ottenbreit-Leftwich, Sadik, Sendurur, and Sendurur (2012), the importance of technology relies on a tool to transform teaching. As stated previously, teachers do not have difficulty in understanding the technical aspects of ICT because their competences allow them to access to tutorials easily and even they can ask for assistance to their own students. Hence, Prestridge (2012, p.9) states that "teachers do not have to possess high levels of ICT competences". Technology is advancing hastily trying to solve all technological problems. Hence, it is natural for teachers not to be scared thinking that they could not use ICT for fear of making mistakes which teachers cannot correct.

Likewise, most of the teachers did not avoid ICT use because they were unfamiliar, and they attended to some ICT training courses. Related to ICT training courses, most of the teachers attended some ICT training courses, and they were not somewhat intimidated for it. Hertlein and Ancheta (2014) mentioned that teacher training, technical, financial and administrative support is needed for secondary schools. In fact, Nomass (2013), the role of using modern technology in teaching English as a second language is to reinforce the four main skills of a language, speaking, listening, reading, and writing.

Related to the parameters in which teachers strongly disagreed, they were the following. 17% of teachers strongly disagreed with the statements: *I feel insecure about my ability to use ICT as a resource to teach, I dislike working with machines that are smarter than I am, and I do not use any ICT resource in class because I think that ICT are not necessary to teach English.* However, 20% of the participants expressed they strongly disagreed with *I do not think I would be able to learn how to use ICT in my classroom.* In addition, the characteristic *I am not interested in attending any ICT course* had 90% of the participants.

With the obtained results, the following teachers' characteristics that can be barriers in ICT use can be interpreted. The first teachers' characteristic deals with teachers psychological ones. Most of teachers did not feel insecure about their ability to use ICT as a resource to teach. There are few teachers who are technophobes according to Paredes (2017). In order to overcome insecurity, teachers need to be confident being familiar with tools and involving in ICT training.

Karaca, Can, and Yildirim (2013) as cited in Karaca (2015) explained that technology has become a requirement to accomplish students' learning goals. In benefit of students, teachers must be aware of some knowledge about new technological tools, which motivate and engage students' attention and interest in learning. Leliani, Agustiani, and Maryani (2014) assured that ICTs embrace supporting media to help in EFL teaching and learning process. With this concept in mind, teachers cannot consider ICT tools as useless teaching resources because they support teaching and learning process. In addition, 18 teachers did not feel apprehensive about using ICT because web 2.0 era is booming, so teachers are digital immigrants who are attracted by technology (Paredes 2017). The globalized life inspires and motivates teachers to be pioneers in learning how to use new technological resources. All fears disappear when teachers consider technology advantages in which students' success is the award. In addition, some interviewees assured they become more confident when they are

involved in ICT learning. If teachers know how to use tools, they can plan and perform effectively activities in class.

The last alternative dealt with no answer section. In this option there was no any teacher who selected it. As all them understood each item and had a specific opinion about the items, they decided to expose them in different options.

**Which factor regarding to teachers' characteristics influences the most on teachers to use ICT in their classroom?**

**TABLE 2. Teachers' Characteristics that influence the most on teachers to use ICT in their classroom**

N°	STATEMENT	STRONGLY AGREE		AGREE		DIS-AGREE		STRONGLY DISAGREE		NO ANSWER		TOTAL	
		f	%	f	%	f	%	f	%	f	%	20	100 %
1	The challenge of learning about ICT use is exciting.	12	60	8	40	0	0	0	0	0	0	20	100
2	I am confident that I can learn technological skills.	13	65	7	35	0	0	0	0	0	0	20	100
3	I feel motivated to use ICT in my class.	14	70	6	30	0	0	0	0	0	0	20	100
4	Learning to use ICT is like learning any new skill – the more you practice, the better you become.	17	85	3	15	0	0	0	0	0	0	20	100
5	I am sure that with time and practice I will be as comfortable working with ICT.	9	45	11	55	0	0	0	0	0	0	20	100
6	I feel that I will be able to keep up with the advances happening in the ICT field.	0	0	11	55	9	45	0	0	0	0	20	100
7	If given the opportunity, I would like to learn about and use ICT.	16	80	4	20	0	0	0	0	0	0	20	100
8	I think that ICT are necessary tools in educational settings.	19	95	1	5	0	0	0	0	0	0	20	100
9	I like to use ICT because they help me innovate my teaching methodology.	18	90	2	10	0	0	0	0	0	0	20	100
10	ICT help me to motivate my students to learn English.	19	95	1	5	0	0	0	0	0	0	20	100
11	If I had any technical problem with ICT during my class, I would continue doing the planned activities.	4	20	16	80	0	0	0	0	0	0	20	100
12	When I have any technical problem with ICT, I do not feel	1	5	10	50	9	45	0	0	0	0	0	100

	frustrated.												
13	Age is not an obstacle to learn about and use ICT in my classes.	1	5	8	40	11	55	0	0	0	0	20	100
14	I know a lot about ICT use because I have attended some ICT training courses	1	5	9	45	10	50	0	0	0	0	20	100
15	I have learned to use ICT resources by myself	1	5	12	60	7	35	0	0	0	0	20	100
16	I think ICT has a positive impact on teaching process	18	90	2	10	0	0	0	0	0	0	20	100
17	ICT use has more advantages than disadvantages in EFL teaching.	19	95	1	5	0	0	0	0	0	0	20	100

N= 20

Author: Cadme Espinoza, Florencio Olmedo

Source: Ecuadorian high school EFL teachers

The 95 % of teachers strongly agreed with the statements: *I think that ICT are necessary tools in educational settings, ICT help me to motivate my students to learn English, and ICT use has more advantages than disadvantages in EFL teaching.* The average for the statements *I like to use ICT because they help me innovate my teaching methodology* and *I think ICT has a positive impact on teaching process* was 90%. *Learning to use ICT is like learning any new skill – the more you practice, the better you become* parameter had 85%.

After having described the information, it can be analyzed and interpreted the real teachers' characteristics which influence in ICT use adding teachers' answers. A good average of teachers thought that ICT are necessary tools in educational settings having more advantages than disadvantages. In fact, some interviewees mentioned that ICTs allow saving time in teaching and learning process, and they can provide immediate feedback especially in cases of students with learning difficulties.

Additionally, the implementation of ICTs tools has become part of daily life in which innovative resources facilitate to perform easier different activities in all fields included education. Thus, teachers are attracted in learning how to engage students' attention and interest in class having as results motivated instructors in implementing these resources.

Based on this, 17 teachers strongly agreed if they practice ICT tools, they would become better user on ICT. One of the most relevant teachers' characteristics in ICT use was the psychological ones. Zyad (2016) explained that the affective component is in which teachers

display happiness when using ICT. In this point, a joyful instructor creates a positive classroom atmosphere transmitting motivation and interest in learning.

For the option agree, it was noticeable a high number of participants selected this alternative. Teachers agreed with the statements: *I am sure that with time and practice I will be as comfortable working with ICT* and *I feel that I will be able to keep up with the advances happening in the ICT field* at 55%. Teachers also agreed with the statement *If I had any technical problem with ICT during my class, I would continue doing the planned activities* at 80%. In *I have learned to use ICT resources by myself*, there were 60% of participants.

To analyze and interpret the aforementioned results, it is underlying to bear in mind teachers' ICT competence and professional characteristics. Almost all of the respondents thought that they would domain ICTs tools in certain way because they were aware of ICT contribution in educational settings. According to Shyamlee and Phil (2012), technology promotes not only students' motivation and learning interest and keeps students engaged in learning, but also, it creates a context in which learners are independent with communicative competence and accessibility to teaching material and information.

Besides technology importance and students motivation, most of teachers made efforts in learning ICT tools by themselves due to they believed ICT use has more advantages than disadvantages in EFL teaching. Isisag (2012) stated four advantages for using technology: authentic materials, learning personalized guidance, students' opportunity to collaborate and cooperate among partners, and effective students tutoring.

Some participants disagreed in three statements. 55 % of participants disagreed with the item *Age is not an obstacle to learn about and use ICT in my classes*, 50% of them disagreed with *I know a lot about ICT use because I have attended some ICT training courses*, and 45% of teacher disagreed with *When I have any technical problem with ICT, I do not feel frustrated*. Some of the interviewees expressed that one disadvantage of ICT use deals with the lack of teachers' training in schools. Ziphorah (2014, p. 1) confirmed in his research that "teachers are not yet fully equipped with the knowledge and skills". To solve this dilemma, over half of participants learned to use ICT resources by themselves. It is well known that technology does not demand teachers' high competence according to Prestridge (2012) who claimed high levels of competence are not demanded to have in teachers. When ICTs are integrated in an effective way, almost all teachers thought ICT had a positive impact on teaching process. The most significant issue constitutes an appropriate selection of ICT tools based on students' needs and interests.

Teachers did not strongly disagree with the statements and no one selected any answer option. There were 0% of teachers who probably had clear convictions in ICTs integration, which was not considered as a barrier when they apply technology in class.

**How is ICT use perceived by EFL teachers in relation to their gender?**

**TABLE 3. Teachers' perceptions by gender in relation to the aspects that they consider as barriers to use ICT in their classroom**

N°	STATEMENT	STRONG-LY AGREE				AGREE				DIS-AGREE				STRONGLY DISAGREE				NO ANSWER				TOTAL	
		M		F		M		F		M		F		M		F		M		F		20	100 %
		f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%		
1	I feel insecure about my ability to use ICT as a resource to teach.	0	0	0	0	1	5	0	0	0	0	0	0	10	50	9	45	0	0	0	0	20	100
2	I do not think I would be able to learn how to use ICT in my classroom.	0	0	0	0	0	0	0	0	0	0	0	0	10	50	10	50	0	0	0	0	20	100
3	I am afraid that if I begin to use ICT, I will become dependent upon them.	0	0	0	0	1	5	1	5	6	30	8	40	2	10	2	10	0	0	0	0	20	100
4	I dislike working with machines that are smarter than I am	0	0	0	0	0	0	0	0	2	10	1	5	9	45	8	40	0	0	0	0	20	100
5	I feel apprehensive about using ICT.	0	0	0	0	0	0	0	0	10	50	9	45	1	5	0	0	0	0	0	0	20	100
6	I have difficulty in understanding the technical aspects of ICT.	0	0	0	0	0	0	1	5	8	40	8	40	2	10	1	5	0	0	0	0	20	100



7	It scares me to think that I could cause the computer to destroy a large amount of data by hitting the wrong key.	0	0	0	0	0	0	0	0	7	35	8	40	4	20	1	5	0	0	0	0	20	100
8	I hesitate to use ICT for fear of making mistakes that I cannot correct.	0	0	0	0	0	0	0	0	9	45	9	45	2	10	2	10	0	0	0	0	20	100
9	You have to be master to understand how to use ICT	0	0	0	0	0	0	0	0	8	40	8	40	3	15	1	5	0	0	0	0	20	100
10	I have avoided ICT use because they are unfamiliar.	0	0	0	0	1	5	1	5	7	35	9	45	1	5	1	5	0	0	0	0	20	100
11	I have not attended any ICT training courses	0	0	0	0	1	5	1	5	8	40	7	35	1	5	2	10	0	0	0	0	20	100
12	I have attended some ICT training courses; however, I prefer not to use ICT because they somewhat intimidate to me.	0	0	0	0	1	5	0	0	11	55	8	40	0	0	0	0	0	0	0	0	20	100
13	I am not interested in attending any ICT course	1	5	0	0	1	5	1	5	0	0	0	0	9	45	8	40	0	0	0	0	20	100
14	I do not know how to use any ICT resource	0	0	0	0	0	0	0	0	1	5	4	20	9	45	6	30	0	0	0	0	20	100
15	I do not use any ICT resource in class because I think that ICT are not necessary to teach English	0	0	0	0	0	0	0	0	1	5	0	0	10	50	9	45	0	0	0	0	20	100

16	I prefer not to use ICT because my teaching experience is the most crucial factor in teaching process.	0	0	0	0	0	0	0	0	3	15	6	30	5	25	6	30	0	0	0	0	20	100
17	I think that age is factor that determine the ICT use in class	0	0	0	0	1	5	0	0	6	30	5	25	4	20	4	20	0	0	0	0	20	100
18	In my opinion, younger teachers are more skillful to use ICT than the older ones.	0	0	0	0	6	30	6	30	4	20	4	20	0	0	0	0	0	0	0	0	20	100

N= 20

Author: Cadme Espinoza, Florencio Olmedo

Source: Ecuadorian high school EFL teachers

Table 3 reveals teachers' perceptions by gender in relation to the aspects that they consider as barriers to use ICT in their classroom. The entire group of teachers was studied along 18 elements in which they marked five alternatives: strongly agree, agree, disagree, strongly disagree, and no answer. Only one male teacher strongly agreed in *I am not interested in attending any ICT course*. It could be because this person had high ICTs competence: therefore, he did not require taking technology courses. However, it is relevant to take into account all teachers must update ICTs knowledge constantly.

Some teachers agreed with the following statements. There were 5% of male and female teachers who agreed with *I am afraid that if I begin to use ICT, I will become dependent upon them, I have avoided ICT use because they are unfamiliar, I have not attended any ICT training courses, and I am not interested in attending any ICT course*. The highest percentage of male and female teachers who agreed was in the statement *In my opinion, younger teachers are more skillful to use ICT than the older ones* at 30%.

According to these results, it could be analyzed and interpreted there was not outstanding gender differences, which could be ICT use barriers. Both males and females rarely felt influenced by psychological barriers. At the moment teachers mentioned they felt afraid, their lack of ICT knowledge was obvious. An interviewed clearly affirmed that teachers had to plan carefully an ICT class because not only teachers' wellness depends on that, but also students' success does.

Referring to teachers who disagreed with the statements, there were the next results. 45% of female teachers and 50% of male disagreed with *I feel apprehensive about using ICT*. Although *I hesitate to use ICT for fear of making mistakes that I cannot correct* had 45% of female participants, it had 45% male participants. Likewise, *I have attended some ICT training courses; however, I prefer not to use ICT because they somewhat intimidate to me* had 40% female teachers, but it had 55 % male teachers.

Based on these results, ICT competence plays a crucial role in teachers' ICT perceptions. Fortunately, males thought they feel apprehensive about using ICT as females do, and they did not hesitate to use ICT for fear of making mistakes that they cannot correct. It is relevant to have in mind that technology provides the opportunity to learn to almost all teachers. In addition, both females and males use some ICT resource in class because they think that ICT are necessary to teach English. If they expect to switch traditional practices into communicative and innovative ones, they must implement ICTs.

With respect to the next option, the following results were described. There were 45% female teachers who strongly disagreed with *I feel insecure about my ability to use ICT as a resource to teach* while there was an average of 50% male teachers who strongly disagreed as well. In *I do not think I would be able to learn how to use ICT in my classroom*, both female and male teachers had an average of 50%. In *I do not use any ICT resource in class because I think that ICT are not necessary to teach English*, 45 % female teachers decided this option, yet 50% male teachers selected it.

In the present study, the analysis of results highlighted the differences between male and female teachers' perceptions related to the factors that influence to ICT use in their classroom. With respect to the first factors, these were teachers' psychological characteristics. It was shown that more male participants did not feel insecure about their ability to use ICT as a resource to teach, and did not feel apprehensive about using ICT. This result confirms previous finding in the literature review in which Zyad (2016) stated that female participants display less confidence in using computers because they appear more anxious than male participants.

Another factor was focused on teachers' personal characteristics. Although male and female teachers deployed their own way to use ICTs, most gender differences were not remarkable. Both teachers considered ICT use as an indispensable tool to teach in the classroom. It does not matter teachers' gender when teaching process has to be improved. Teachers answered all the questions because there was 0% in the option no answer. They could have in mind which characteristics were ICT use barriers according their perceptions.

**TABLE 4. Teachers' perceptions by gender in relation to the factors that they consider the most influential to use ICT in their classroom**

N°	STATEMENT	STRONG- LY AGREE				AGREE				DIS-AGREE				STRONGLY DISAGREE				NO ANSWER				TOTAL	
		M		F		M		F		M		F		M		F		M		F		20	100 %
		f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%		
1	The challenge of learning about ICT use is exciting.	7	35	5	25	5	25	3	15	0	0	0	0	0	0	0	0	0	0	0	0	20	100
2	I am confident that I can learn technological skills.	8	40	5	25	4	20	3	15	0	0	0	0	0	0	0	0	0	0	0	0	20	100
3	I feel motivated to use ICT in my class.	7	35	7	35	3	15	3	15	0	0	0	0	0	0	0	0	0	0	0	0	20	100
4	Learning to use ICT is like learning any new skill – the more you practice, the better you become.	10	50	7	35	2	10	1	5	0	0	0	0	0	0	0	0	0	0	0	0	20	100
5	I am sure that with time and practice I will be as comfortable working with ICT.	4	20	5	25	5	25	6	30	0	0	0	0	0	0	0	0	0	0	0	0	20	100
6	I feel that I will be able to keep up with the advances happening in the ICT field.	0	0	0	0	4	20	7	35	4	20	5	25	0	0	0	0	0	0	0	0	20	100

7	If given the opportunity, I would like to learn about and use ICT.	8	40	8	40	2	10	2	10	0	0	0	0	0	0	0	0	0	0	0	0	20	100
8	I think that ICT are necessary tools in educational settings	10	50	9	45	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	100
9	I like to use ICT because they help me innovate my teaching methodology.	8	40	10	50	2	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	100
10	ICT help me to motivate my students to learn English.	10	50	9	45	1	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	100
11	If I had any technical problem with ICT during my class, I would continue doing the planned activities.	1	5	3	15	6	30	10	50	0	0	0	0	0	0	0	0	0	0	0	0	20	100
12	When I have any technical problem with ICT, I do not feel frustrated.	0	0	1	5	4	20	6	30	6	30	3	15	0	0	0	0	0	0	0	0	20	100
13	Age is not an obstacle to learn about and use ICT in my classes.	1	5	0	0	4	20	4	20	6	30	5	25	0	0	0	0	0	0	0	0	20	100
14	I know a lot about ICT use because I have attended some ICT training courses	1	5	0	0	5	25	4	20	4	20	6	30	0	0	0	0	0	0	0	0	20	100
15	I have learned to use ICT resources by myself	1	5	0	0	7	35	5	25	5	25	2	10	0	0	0	0	0	0	0	0	20	100
16	I think ICT has a positive impact on	9	45	9	45	1	5	1	5	0	0	0	0	0	0	0	0	0	0	0	0	20	100

	teaching process																						
17	ICT use has more advantages than disadvantages in EFL teaching.	10	50	9	45	0	0	1	5	0	0	0	0	0	0	0	0	0	0	0	0	20	100

N=20

Author: Cadme Espinoza, Florencio Olmedo

Source: Ecuadorian high school EFL teachers

Table 4 reveals teachers' gender characteristics that influence in ICT use in which there are 17 elements selected by 5 options: strongly agree, agree, disagree, strongly disagree, and no answer. Referring to the three options, 45% females and 50% males strongly agreed with *I think that ICT are necessary tools in educational settings, ICT help me to motivate my students to learn English, and ICT use has more advantages than disadvantages in EFL teaching*. Even though 50% females strongly agreed with *I like to use ICT because they help me innovate my teaching methodology*, 40% male participants did. *I think ICT has a positive impact on teaching process* statement represented 45% for both females and males.

The analysis of teachers' characteristics that influenced in ICT use, in brief, emphasizes on the similarities and differences between male and female perceptions delivered in the survey and interview. The first differences between male and female characteristics referred to the existence of more males than females who thought ICTs were necessary tools which motivate students to learn, and it has more advantages than disadvantages in educational settings. In this century, technology has become a paramount boom in EFL teaching since it has transformed teaching and learning process to a constructivist approach in which students learn through visuals and more independent. Thus, teachers have changed their center role to a guider and change agent who facilitates students learning providing enough tools where they can find enough available information.

During the interview, most of teachers said that they thought the ICT use is important to teach English because it is important to work with tools which are well known and more attractive for students and it helps students to comprehend in a better way in a globalized world. ICTs enable teachers with a vast number of ways catching students' attention and engaging them to learn in a collaborative and interactive way.

Other teachers' gender difference dealt with more females than males liked to use ICT because it helps them innovate their teaching methodology. According to Nomass (2013), there are specific tools to learn and reinforce the four main skills. In fact, day by day, technology is been updated, and teachers' responsibility is to be well prepared. In this way, they can help students to develop with enough skills to overcome current life necessities. Furthermore, Montrieux, Vanderlinde, Courtois, Schellens, and De Marez, (2014) explain that innovative teachers' roles are to be a coach and to broaden horizon.

Another teachers' characteristic was concerned with males and females thought ICT had a positive impact on teaching process. Based on Shyamlee and Phil (2012), technology is needed in language teaching because it promotes students' motivation and learning interest,



keeps students engaged in learning, creates a context with accessibility to teaching material and information, and enables students to be independent with communicative competence.

In the agree option, 35% female teachers and 25% male teachers agreed with statement *I have learned to use ICT resources by myself. I feel that I will be able to keep up with the advances happening in the ICT* had 35% female and 20% male. In *If I had any technical problem with ICT during my class, I would continue doing the planned activities*, there was an average of 50% females and 30% males who agreed with that affirmation.

Analyzing the previous results, it could be interpreted in this way. Teachers' characteristics regarding their competences had more females than males who learned ICT use by themselves, and they felt to be able to keep up with the advances happening in the ICT. As it was mentioned previously, this era is dominated by technological tools, so they demand outgoing training in order to become skillful. Prestridge (2012) established that competence is directly connected with confidence. Teachers who are involved in ICTs practice possess more confidence to implement in EFL teaching. In case of other teachers' characteristic, it was more accepted for females than males. Females would continue doing the planned activities if they had any technical problem with ICT during their class. This situation displayed that women are more cautious than men even in class time, having a plan B in case of technological issues. It could be a disadvantage for ICT use. According to Eskisehir, Turkey, Eristi and Dindar (2012), teachers overcome the lack of enough amount time in the process of becoming efficient in technology use increase the problems that they experience related by technology application. To support this, some interviewees recognized that ICTs disadvantage dealt with the possibility they failed in class.

The third option was related to teachers who disagreed with the proposed items. 30% of males and 15% of females disagreed with *When I have any technical problem with ICT, I do not feel frustrated*. 30% of male teachers and 25% of females disagreed with *Age is not an obstacle to learn about and use ICT in my classes*. 20% of males and 30% of females disagreed with *I know a lot about ICT use because I have attended some ICT training courses*.

Analyzing the results, it could be interpreted in this way. Apparently, males were more practical in solving technical problems than female. Generally, male possess a deep concentration when they work in technical issues. For this reason, collaboration plays a paramount role in ICT use. All teachers and students need to work helping each other, sharing ICT knowledge and assistance especially to vulnerable teachers who can be older and less skillful in ICTs tools.

In case of strongly disagree and no answer options, there was a percentage of 0%. It possibly meant all teachers clearly considered which factor or factors influenced in ICT application.

## CONCLUSIONS

Some conclusions that can be drawn regarding EFL teachers' characteristics as barriers to use ICT in their classrooms are:

EFL teachers' personal insecurity and anxiety are rarely considered as barriers to use ICT in their classroom. When teachers lack of ICT knowledge and are not aware of how to implement them in an EFL class, they may be afraid to integrate technology in class.

Poor teachers' technology training may be seldom an EFL teachers' barrier in ICT use. The lack of knowledge regarding technology makes teachers feel frustrated performing traditional practices in a globalized life where technology role has become a priority in education.

The persistence in keeping the same traditional teachers role influences on the ICT use appropriately. Teacher's role has been transformed nowadays since it is focused on being a change agent who is responsible about finding out and applying the best methodologies in class where learners have available information on their hands. With ICT use, teachers have become in guiders and facilitators of knowledge.

Teachers' age could represent a barrier for ICT use. Although age is not a direct barrier to use ICT, young teachers are more skillful than old ones in using technological resources. The belief that ICT use depends on gender differences has nothing to do with using it in the classroom. All teachers have to implement technological tools to make their classes more attractive.

## RECOMMENDATIONS

In order to overcome teacher's barriers in ICT use, teachers should bear in mind these recommendations.

Teachers should plan activities in which ICT tools are applied in advanced and taking into account teachers' competences. Taking enough time to plan and prepare activities, will avoid future failure of tools, and hence, teachers' frustrations, anxiety, and apprehensions will be eluded as well. Furthermore, technology does not demand high competences to be integrated; thus, teachers have to select carefully appropriate tools based on their abilities to use certain tools.

Teachers should update their technological knowledge to have constant ICT training in which innovative ICTs can be learned and used. The importance of a sustained training relies on the need to have active students who interact in a communicative context using technology. Consequently, teachers' mission demands to update knowledge and uses.

Instructors should become change agents who possess the desire and persistence to adopt a new role in class using ICTs. The lack of enough ICT sources cannot be a barrier to acknowledge the importance of using ICTs; thus, teachers' priority highlights the integration of technology in class.

A collaborative environment should be created for educational stakeholders' performance. Most of teachers are not experts in ICT domain; thus it is crucial to share ICT knowledge all time. Young teachers and students represent a rich source of information when a new ICT situation is faced.

To overcome gender differences of using ICT tools. Technology is available for all teachers who are disposed in trying to innovate practices in benefit of their students who need risky and persistent teachers.

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## **ANNEXES**

Annex 1



**UNIVERSIDAD TÉCNICA PARTICULAR DE LOJA**  
**La Universidad Católica de Loja**

**MODALIDAD ABIERTA Y A DISTANCIA**  
**TITULACIÓN DE INGLÉS**

**TEACHERS' SURVEY**

Gender: M ( ) F ( )  
Years of EFL teaching experience: ( )  
Age: ( )

**1. For each statement, decide whether you disagree or agree with the statement using the following five - point scale ranging from strongly disagree to strongly agree.**

N°	STATEMENT	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
1	I feel insecure about my ability to use ICT as a resource to teach.				
2	I do not think I would be able to learn how to use ICT in my classroom.				
3	I am afraid that if I begin to use ICT, I will become dependent upon them.				
4	I dislike working with machines that are smarter than I am				
5	I feel apprehensive about using ICT.				
6	I have difficulty in understanding the technical aspects of ICT.				
7	It scares me to think that I could cause the computer to destroy a large amount of data by hitting the wrong key.				

8	I hesitate to use ICT for fear of making mistakes that I cannot correct.				
9	You have to be master to understand how to use ICT				
10	I have avoided ICT use because they are unfamiliar.				
11	I have not attended any ICT training courses				
12	I have attended some ICT training courses; however, I prefer not to use ICT because they somewhat intimidate to me.				
13	I am not interested in attending any ICT course				
14	I do not know how to use any ICT resource				
15	I do not use any ICT resource in class because I think that ICT are not necessary to teach English				
16	I prefer not to use ICT because my teaching experience is the most crucial factor in teaching process.				
17	I think that age is factor that determine the ICT use in class				
18	In my opinion, younger teachers are more skillful to use ICT than the older ones.				

**2. For each statement, decide whether you disagree or agree with the statement using the following five - point scale ranging from strongly disagree to strongly agree.**

N°	STATEMENT	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
1	The challenge of learning about ICT use is exciting.				
2	I am confident that I can learn technological skills.				
3	I feel motivated to use ICT in my class.				

4	Learning to use ICT is like learning any new skill – the more you practice, the better you become.				
5	I am sure that with time and practice I will be as comfortable working				
6	I feel that I will be able to keep up with the advances happening in the ICT field.				
7	If given the opportunity, I would like to learn about and use ICT.				
8	ICT help me to motivate my students to learn English.				
9	When I have any technical problem with ICT, I do not feel frustrated.				
10	Age is not an obstacle to learn about and use ICT in my classes.				
11	I think that ICT are necessary tools in educational settings.				
12	I like to use ICT because they help me to innovate my teaching methodology.				
13	If I had any technical problem with ICT during my class, I would continue doing the planned activities.				
14	I know a lot about ICT use because I have attended some ICT training courses.				
15	I have learned to use ICT resources by myself.				
16	I think ICT has a positive impact on teaching process.				
17	ICT use has more advantages than disadvantages in EFL teaching.				

**Thanks for you collaboration**

**Annex 2**



**UNIVERSIDAD TÉCNICA PARTICULAR DE LOJA**

**La Universidad Católica de Loja**

**MODALIDAD ABIERTA Y A DISTANCIA**

**TITULACIÓN DE INGLÉS**

**TEACHER'S INTERVIEW**

Gender: M (  ) F (  )

Years of EFL teaching experience: \_\_\_\_\_

**1. Do you think the use of ICT is important to teach English?**

YES (  ) NO (  )

**Why?**

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**2. Do you use ICT in your English classes?**

YES ( )      NO ( )

**Why?**

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**3. If your answer was affirmative in the previous question, how do you feel (afraid, nervous, relaxed, confident, etc.) when you use ICT? Why?**

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**4. Do you consider that factors such as psychological, personal, etc., which are related to your characteristics as a teacher, are barriers to use ICT in your classes? (If it is necessary, use some of the statements in the teachers' survey to explain these factors)**

YES (  )            NO (  )

**Why?**

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**Do you consider that factors such as psychological, personal, etc., which are related to your characteristics as a teacher, have a positive influence on you to use ICT in your classes? (If it is necessary, use some of the statements in the teachers' survey to explain these factors)**



YES ( )      NO ( )

**Why?**

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**6. Is there any advantage to use ICT in EFL teaching?**

YES ( )      NO ( )

**Why?**

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**7. Is there any disadvantage to use ICT in EFL teaching?**

YES ( )            NO ( )

**Why?**

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**8. According to your opinion, who uses more frequently ICT in EFL classes, male or female teachers?**

Male ( )            Female ( )

**Why?**

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**Thanks for you collaboration**