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# *Attitude of higher education teacher in virtual education*

# *Actitud de los profesores de educación superior en la enseñanza virtual*

# *Atitude dos professores do ensino superior no ensino virtual*

Rosa María Chicaiza-Chicaiza [I]
rchicaizac@uteq.edu.ec
https://orcid.org/0000-0003-1677-9605

Martha Elva Carrillo-Patarón [II]
mcarrillop2@uteq.edu.ec
https://orcid.org/0000-0003-2359-7658

Jardel Coutinho Dos-Santos [III]
jcoutinhod@uteq.edu.ec
https://orcid.org/0000-0002-8626-7229

**Correspondencia:** rchicaizac@uteq.edu.ec

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I. Licenciada en Idiomas, Master in Teaching English as a Foreign Languge, Universidad Técnica Estatal de Quevedo, Quevedo, Ecuador.

II. Máster en Estudios Ingleses: Aplicaciones Profesionales y Comunicación Intercultural (Universidad de Almería - España), Universidad Técnica Estatal de Quevedo, Quevedo, Ecuador.

III. Magister en Pedagogía de los Idiomas Nacionales y Extranjeros Mención Enseñanza de Inglés, Universidad Técnica Estatal de Quevedo, Quevedo, Ecuador.

**Abstract**

Due to various technological advances, information and communication technologies (ICT) have transformed the way a language is learned. Currently, education implements innovative pedagogical models that allow incorporating technology into the various teaching and learning processes of the English language. Due to the aforementioned, this article describes the results of a survey on the level of digital competence that English teachers have in higher education based on the dimensions proposed by the authors Usher and Pajares (2007), and the variables are also identified that modify said competition. The study was quantitative, descriptive and cross-sectional.

The results showed that 81% of the teachers have a low level of digital competence. Another important finding that was obtained was that the technical, pedagogical and communication dimensions were identified as needs to be attended through training courses with a basic level. Likewise, it was evidenced that the variables of age and maximum degree of studies influence the level of digital competence of teachers. Among the conclusions to be highlighted is that ICTs are very important tools for teaching the English language, as they help to awaken the interest of students, create an interactive environment, provide many supportive resources and help make classes attractive and innovative.

**Keywords:** Digital competence; English language teaching; primary education; TIC.

**Resumen**

Debido a varios avances tecnológicos, las tecnologías de la información y la comunicación (TIC) han transformado la forma en que se aprende un idioma. Actualmente, la educación implementa modelos pedagógicos innovadores que permiten incorporar la tecnología en los distintos procesos de enseñanza y aprendizaje del idioma inglés. Por lo anterior, en este artículo se describen los resultados de una encuesta sobre el nivel de competencia digital que tienen los docentes de inglés en la educación superior a partir de las dimensiones propuestas por los autores Usher y Pajares (2007), y también se identifican las variables que modifican dicha competencia. El estudio fue cuantitativo, descriptivo y transversal.

Los resultados mostraron que el 81% de los profesores tiene un bajo nivel de competencia digital. Otro hallazgo importante que se obtuvo fue que las dimensiones técnicas, pedagógicas y

comunicativas fueron identificadas como necesidades a ser atendidas a través de cursos de capacitación con un nivel básico. Asimismo, se evidenció que las variables de edad y grado máximo de estudios influyen en el nivel de competencia digital de los docentes. Entre las conclusiones a destacar está que las TIC son herramientas muy importantes para la enseñanza del idioma inglés, ya que ayudan a despertar el interés de los estudiantes, crean un entorno interactivo, brindan muchos recursos de apoyo y ayudan a que las clases sean atractivas e innovadoras.
**Palabras claves:** Competencia digital; Enseñanza de lengua inglesa; educación primaria; TIC.

## Resumo

Devido a vários avanços tecnológicos, as tecnologias de informação e comunicação (TIC) transformaram a forma como uma língua é aprendida. Atualmente, a educação implementa modelos pedagógicos inovadores que permitem incorporar a tecnologia nos diversos processos de ensino e aprendizagem da língua inglesa. Diante do exposto, este artigo descreve os resultados de uma pesquisa sobre o nível de competência digital que professores de inglês possuem no ensino superior com base nas dimensões propostas pelos autores Usher e Pajares (2007), sendo também identificadas as variáveis que modificam tal concorrência. O estudo foi quantitativo, descritivo e transversal.

Os resultados mostraram que 81% dos professores apresentam baixo nível de competência digital. Outro dado importante obtido foi que as dimensões técnica, pedagógica e de comunicação foram identificadas como necessidades a serem atendidas por meio de cursos de formação com nível básico. Da mesma forma, evidenciou-se que as variáveis idade e grau máximo de estudos influenciam no nível de competência digital dos professores. Entre as conclusões a serem destacadas está que as TICs são ferramentas muito importantes para o ensino da Língua Inglesa, pois ajudam a despertar o interesse dos alunos, criam um ambiente interativo, fornecem diversos recursos de apoio e ajudam a tornar as aulas atrativas e inovadoras.
**Palavras-chave:** Competência digital; Ensino da língua inglesa; Educação primária; TIC.

## Introdution

We are immersed in a Digital Era, that is, a technologized society, where habits and lifestyles have been transformed by the constant and unstoppable development of digital technologies and the Internet. Technological tools and virtual space have given rise to new ways of communicating,

working, informing ourselves, having fun and, in general, participating and living in a network society (Castells, 2006). The educational field and, consequently, the role of the teacher, which constitutes the focus of reflection in this article, has not been able to resist its influence. The adaptation of both the content and the teaching methodologies has become a necessary, and even urgent, challenge in a constantly changing social context, in which young people, surrounded by screens since birth, have acquired distinctive features those of any previous generation.

The generation of young interactive natives (Bringué and Sádaba, 2009) is already developing today in a technological and unstable scenario. However, it is not enough to handle technology, but being digitally competent is essential. Hence, alternatives to their training and personal development needs are needed, as the lack of effective solutions to their demands is becoming more and more evident. In short, we are talking about the need to rethink the educational process, seeking its optimal adaptation to the new times and contexts that occur in educational centers. Formal educational areas and key spaces in personal and social development, not only of young people, but of the future we want.

Young people define themselves as self-taught regarding the use of the Internet. This is one of the main conclusions of the doctoral thesis entitled Connected Leisure: the e-leisure experience of young people (16-18 years old) in Bizkaia, developed by the first signatory of this article, and which has motivated its preparation . Now, how should we interpret this self-definition of young people? Does it mean that teachers have been left in the background when it comes to the transmission of knowledge in the Digital Age? Are teachers responding to the needs of students who are already digital natives? Are the teaching methodologies you use the most appropriate? In short: should the role of the teacher in the classroom be redefined?

This article focuses on analyzing the role of teachers in the current digital context. First, the way in which the Digital Age has influenced teaching-learning is described. Next, we reflect on the meaning of being digitally competent in the network society; Finally, the main characteristics that teachers must adopt in the face of this change in context are defined.

**Teach and learn in the digital age**

The unstoppable development of digital technologies and the democratization of Internet use have been one of the changes that have most transformed the context of the educational process. Until

recently, it seemed that the school and the teaching staff could become the only guardians of knowledge; but now their competitors are multiplying. ICTs have led to new literacies that enhance 21st century skills and competencies, which are mainly exercised in the digital practices that young people carry out in informal learning contexts (Busque, Medina and Ballano, 2013), mostly in leisure spaces and times.

Here appears the now classic triple terminological distinction established in 1968 by Coombs, Prosser and Ahmed, when distinguishing between formal, non-formal and informal education. Formal learning is that which takes place in organized and structured environments, such as an educational and training center. Non-formal learning or out-of-school education is described as learning derived from planned activities, but not explicitly designated as a training program. Third, informal learning is the result of daily activities related to work, family life or leisure; a type of learning that is not organized or structured in terms of its objectives, duration or training resources (CEDEFOP, 2008).

Without wishing to assess the validity of this triple distinction as a whole, the importance of the spatio-temporal context in its definition cannot be denied. A context that has been peculiarly altered in the Digital Age, two of whose identifying marks are the ubiquity and timelessness of cyberspace (Castells, 2001). In this way, and taking into account that we live in a digital society characterized by constant change, complexity, chaos and ubiquity, we consider that the characteristics of informal learning are the ones that best suit the type of learning that currently exists. it is demanded. A type of learning that, on the other hand, is recognized rather little from the formal sphere. In fact, and despite the fact that other types of competences are gradually taken into consideration, as we will see below, it is very common not to value the knowledge that a person has until they are accompanied by a reference or certification from an academic entity.

Reality shows us that digital technologies have influenced the way of learning and, consequently, the way of teaching typical of the teaching community. Taking as a reference the Theory of Connectivism, elaborated by the theorist of teaching in the digital society George Siemens (2006), we will define the concept of learning typical of a network of networks society.

Connectivism is the learning theory of the Digital Age, which analyzes the way we learn in a digital society that is articulated in a network. It is based, as its name suggests, on connectivity, that is, on the creation of connections. According to the author, connectivism is the integration of principles explored by the theories of chaos, networks, complexity and self-organization (Siemens,

2004). Hence, it is presented as a model that reflects a society in which learning is no longer an individual activity, but a continuous process of building networks. Learning is the equivalent of opening a door to a new way of perceiving and knowing, where our mind must adapt to the environment.

In this sense, the learning of the Digital Age can be defined as a diverse, disorderly learning and far from the traditional perfectly packaged and organized knowledge. Networked knowledge is based on co-creation, which implies a change in mentality and attitude. Go from being mere consumers of the content produced by other people to being the experts and amateurs who are the co-creators of the knowledge.

For this reason, learning in the Digital Age has become especially complex, since being a multifaceted and integrated process, a change in any individual element leads to the alteration of the global network. In the same way, this complexity and diversity in the network gives rise to connected and specialized nodes, which means that we have a partial knowledge of reality and live in a continuous suspended certainty. Online learning is continuous, and therefore it is not an activity that occurs outside our daily lives or exclusively in formal educational contexts. Today "we have already gone from stopping life when we learn (going to school for two to four years, without working ...), to learning in sync with life" (Siemens, 2006: 47).

Therefore, learning today means knowing how to make decisions, since we are faced with a reality of constant change, and “although there is a correct answer now, it may be wrong tomorrow (…), so knowing where and knowing who, they are more important today than knowing what and how ”(Siemens, 2006: 31). In network learning, knowledge is created and configured thanks to the combined activity that occurs between people. Knowing today means being connected, in constant dynamism.

The problem here lies in the abundance of information that exists in virtual space, hence the need to build a network of learning sources (Personal Learning Environments-PLE), from which we can enter and exit at any time. Knowledge is abundant and in just one generation we have gone from understanding it as a criterion of value, to considering the ability to manage it as the true criterion of value.

For all these reasons, it is important to bear in mind that knowledge must be shared in a suitable environment or ecology that enables connected knowledge: schools, classes, virtual spaces,

museums, parks, etc. Spaces that allow conversation, organize meetings, share ideas and dialogue. Structures (classification systems, hierarchies, libraries, etc.) that provide and assist in the process and decision-making; Informal, unstructured, flexible environments, rich in communication tools, constant over time, safe for trust and comfort, simple, decentralized, connected and in which there is a high tolerance for experimentation and error.

**Be digitally competent**

As we are pointing out, the Digital Age has brought about a radical change in the way of learning and teaching, which has caused the conception of an education-product to become an education based on chaos, change and instability. Liquid education is the expression chosen by the sociologist Zygmunt Bauman to define an education that seems to have abandoned the notion of useful knowledge for life to replace it with disposable knowledge: a whirlwind of change, where knowledge seems much more attractive when adapted for instant use, for a single occasion (Bauman, 2007). Therefore, teachers must consider these new variables and adapt.

We are facing a moment of innovation in the fundamental pillars of the current educational system. A change that must take into account not only the characteristics of a networked society and the intrinsic characteristics of digital natives, but must also consider the demands of the labor market. Ultimately, the purpose of teachers is to prepare students for life, a digital life. So far this adaptation has materialized in the creation of new basic competences linked, of course, to ICT and the notion of lifelong learning; competences that are in force today and that have replaced the already old objectives as evaluation indicators.

The competences are the result of agreements that were reached in the European Union prior to the meeting of the Lisbon European Council in March 2000. It was then established that every citizen must possess the necessary knowledge to work and live in the new society of the information. From here, the project of the Organization for Economic Cooperation and Development (OECD) Definition and Selection of Competences: Theoretical and Conceptual Bases (DeSeCo, 2002) was launched, in which the concept of competence was defined as the ability to respond to complex demands and carry out diverse tasks appropriately. This involves acquiring a combination of practical skills, knowledge, motivation, ethical values, attitudes, emotions, and other social and behavioral components that are mobilized together for effective action.

Following the proposed recommendation made by the European Union (2006), this definition was modified, adopting as the definition of competence the "combination of knowledge, skills and attitudes appropriate to the context. The key competences are those that all people need for their personal fulfillment and development, as well as for active citizenship, social inclusion and employment "(European Parliament and the Council of the European Union, 2006: 13).

Thus, after consensus on the definition, the eight competences1 that are gradually assumed by the different States, and among which is Digital Competence, are revealed. This competence not only affects the student body, but also the teacher and the public as a whole. So what does it mean to be digitally competent?

According to the report, being digitally competent means adopting these 5 dimensions:

1. Information: identify, locate, retrieve, store, organize and analyze digital information, evaluating its purpose and relevance.
2. Communication: communicate in digital environments, share resources through online tools, connect and collaborate with others through digital tools, interact and participate in communities and networks; intercultural awareness.
3. Content creation: create and edit new content (texts, images, videos ...), integrate and rework previous knowledge and content, make artistic productions, multimedia content and computer programming, know how to apply intellectual property rights and use licenses .
4. Security: personal protection, data protection, protection of digital identity, use of security, safe and sustainable use.
5. Problem solving: identifying needs and digital resources, making decisions when choosing the appropriate digital tool, according to the purpose or need, solving conceptual problems through digital means, solving technical problems, creative use of technology, update your own competence and that of others.

These five areas of competence, distributed in three levels (basic, intermediate and advanced), constitute the basis of the Common Framework for Teaching Digital Competence2 (2014) prepared by the National Institute of Educational Technologies and Teacher Training (INTEF). However, it would be naive to think that it is enough to ensure the digital competence of teachers to adapt education to the challenges of the Digital Age. This is, of course, a step that cannot be

postponed, but it is not enough. After all, the teacher must help his students to also develop a high degree of digital competence. Meanwhile, it is also necessary to define the profile that teachers should adopt within the framework of this new reality. And even more so when it has been shown that teacher training is a key factor in the process of change (McKinsey and Company, 2007). Hence the relevance of reflecting on the redefinition of the teaching figure. And reflect on the following question: should teachers adopt digital skills or should they rethink teaching skills in a digitized world?

**The role of the english teachers i the digital area**

In the Digital Age, the way of learning has changed and, therefore, the way of teaching must adapt. This means that both the figure of the teacher and the teaching methodologies have to adapt to the way of conceiving the knowledge that has just been exposed. The teachers are direct witnesses of the changes and the characteristics of the current generation of young interactive natives who demand an education according to their needs.

There are many teachers who, on their own initiative, have decided to renew themselves with the aim of continuing to prepare students for the world that touches them; However, there are also many contrary reactions that have led to a rejection of these changes motivated by the technologicalization of life and schools. There is a certain fear of the use of ICT and the Internet and its consequences. In addition, the media have not contributed to projecting the advantages of the network, so that, from the outset, there seems to have been a feeling of insecurity that has had repercussions in the formal educational environment. In the words of John Hartley, a pioneer of cultural studies in England:

For the most part, education systems have responded to the Digital Age by prohibiting school access to digital environments such as YouTube (…) by establishing ‘fences’ or walls under strict teacher control. From this, the boys learn that the fundamental priority of formal education is not to make them digitally competent but to 'protect' them from inappropriate content and virtual predators (Hartley, 2009: 130).

Therefore, how should the teacher act in the face of this change? What should his role be, exactly? New ways of learning, do they leave you out of the teaching process?

The most common denominators attributed to the new role of the teacher in the 2.0 era are: organizer, guide, generator, companion, coach, learning manager, counselor, facilitator, tutor,

facilitator or advisor. These new roles are based on the idea of changing the unidirectional transmission of knowledge for the horizontal exchange of information, abundant, chaotic and unstructured. Today, the teacher-centered educational model as a transmitter of standardized knowledge to a mass of students (a model analogous to that of the mass media) ceases to make sense (Tapscott, 2009). Teachers face the challenge of acquiring skills that train them to help students develop the skills they need: knowledge, skills and precise attitudes to achieve the objectives required from the formal curriculum itself (digital competence and learning to learn , among others) to be able to adapt to the demands of the labor market, and even more important if possible, to be able to discover their true motivations, interests and concerns.

In no case should the teacher become a controller or policeman of what his students do in the classroom. His role is to coordinate and facilitate learning and improving the quality of life of students. While it is true that learning must be experiential and active on the part of the latter, at all times the complement of a teacher is necessary to accompany them in their learning process. Knowledge is online and abundant, but this is precisely what requires a good number of tasks that every teacher must fulfill: detect what is really important, guide the search processes, analyze the information found, select the one that is really needs, interpreting the data, synthesizing the content and disseminating it are some of the many tasks that the teacher must guide.

On the other hand, it is true that the generation of young interactive natives is fluent in technology, but at no time does this indicate that they make a correct, useful and beneficial use for their development and personal learning; and this is where the teacher of the 21st century must influence. "The task of any trainer is to create and foster a learning ecology that enables learners to improve quickly and effectively over the learning they already have" (Siemens, 2010: IX).

In his proposal of Pedagogy of Co-association, Marc Prensky proposes three roles that he considers that teachers should acquire in the era of digital education: the role of coach, the role of guide and the role of expert in instruction. The first of the roles, coach, refers to the action loaded with feedback and motivation in which, inevitably, as if it were a tennis coach, the active participation of the students is needed. The author argues that a coach hardly has to offer theoretical exposure, but rather has to observe and approach the students in an individual and personal way, with the ultimate aim of helping each one to find and pursue his own passion.

The role of guide, rather than motivating, has to acquire the role of assistant to the already motivated student: «[…] being a guide, to a greater extent, requires students to accept that they need one […]» (Prensky, 2011: 82). As is logical, the role of the guide will be easier if both know each other and the teacher understands the passions of the students, which will help them to know in what sense they should guide each student. Third, the role of the instructional expert is for the teacher to bring all the knowledge, imagination, and creativity possible to make the student's learning process effective and attractive. To achieve this, the expert must become a true designer of original learning experiences and, in turn, must practice the art of asking appropriate questions that encourage students to reflect and reconsider a point of view.

For their part, Harrison and Killion (2007) refer to 10 ways in which teachers can contribute to the success of their schools:

1. Resource provider;
2. Instruction Specialist;
3. Curriculum specialist;
4. Support in the classroom;
5. Learning facilitator;
6. Mentor;
7. Leader;
8. Data trainer;
9. Catalyst for change;
10. Apprentice.

Without a doubt, the authors show the role of apprentice as the most important. Teachers must be an example to follow, an example of continuous improvement and lifelong learning.

Meanwhile, Bates (2015), in his latest book Teaching in a Digital Age, exposes how teachers should use available technology to improve both their teaching methodology and the learning of their students. In other words, technology occupies a central place not only in the use of new methodologies, but also in the readaptation of the role of teachers in the classroom.

In short, the Digital Age teacher must maintain an attitude of permanent inquiry, promote the learning of competencies (generate learning environments), maintain continuity from individual work to teamwork (bet on integrated educational projects) and favor development of an ethical

spirit. Technology and information alone do not guide or help or advise students; For this reason, the work of the teacher in digital education is today more important than ever.

Finally, it seems appropriate to highlight that these roles do not focus exclusively on any educational level, although it is true that digital knowledge and skills will vary depending on the educational stage in which the teacher develops their work. Undoubtedly, the context will mark the role that the teacher must adopt at all times.

**Teaching competence for teaching the english language**

National educational reforms have long been promoting the learning of the English language, as well as a change in teaching practices to favor the mobilization of knowledge, skills and communicative attitudes of the foreign language (SEP, 2011). At present, an English language teaching teacher must not only be competent from the linguistic point of view, but also from the pedagogical and methodological point of view, since they must be able to direct the teaching-learning process for the development of the four skills of the English language (reading, writing, listening and speaking). Furthermore, she must also be able to implement teaching techniques and procedures in the classroom according to the learning styles and strategies of her students (Páez, 2001).

Based on the proposal of Perrenoud (2004), the SEP (2010) established the competences that an English language teacher must possess:

Master the teaching content of the English language curriculum (know).

Master the references, functions and structure of the English language (know).

It implements learning activities that favor the mobilization of knowledge, skills and attitudes that intervene in the development of the English language (know-how).

Creates, adapts and creatively exploits materials using various theoretical foundations, methods and second language teaching strategies to promote the learning of the English language (know-how).

It promotes the values of citizenship and human rights of second language cultures (knowing how to live together).

It adequately addresses the cultural and linguistic diversity, learning styles and starting points of the students (knowing how to be).

It works collaboratively and creates academic networks in teaching for the benefit of teaching the English language (knowing how to live together).

It organizes its own continuous training and is involved in processes of personal development and professional self-training (knowing how to be).

It incorporates information and communication technologies in the teaching-learning processes of the English language (know-how).

In this way, in the face-to-face or virtual teaching and learning process of English, the use of ICT and new pedagogical methodologies are combined; This means that there is currently a need for teachers with solid digital competence that impacts the educational field, in order to offer quality and innovation in the training of a second language such as English.

**Digital competence and teaching of the english language**

One of the challenges of any teacher today is to focus teaching on the student and make him more active and reflective during the learning process; technologies have served as support in this process. That is why the English teacher has had to change his way of teaching; he now he is someone who needs to be competent in the design and efficient use of ICT for the didactics of the target language. Likewise, he must possess technological skills to design appropriate learning environments for the student of the new century (Norton and Wiburg, 1998 cited in Villalba 2008). These same authors affirm that the English teacher has to be able to create spaces for interaction and use of the target language, as well as being able to adapt ICT tools to effectively transmit knowledge. Butler (2011), for his part, indicates that, in this new role where the teacher is a guide for learning, if he uses technology to support the teaching of the English language, he can also develop his digital competence and encourage students language and technology skills.

Gutiérrez (2014) defines digital competence as follows:

Values, beliefs, knowledge, skills and attitudes to properly use technologies, including both computers and different programs and the Internet, which allow and enable the search, access, organization and use of information in order to build knowledge ”(P. 54).

Fainholc, Nervi, Romero and Halal (2015) recommend the development of digital competence through the generation of personal virtual learning environments and the use of mobile devices; The interesting thing about doing this is that not only is the technological field covered, but also communication, learning and information management skills are developed, which are important

for the teaching of the English language. In short, in the new teaching-learning scenarios, the English teacher must know how to communicate, relate and collaborate in digital environments (the use of social networks, platforms, blogs, etc.); He must also be able to critically evaluate information in order to generate knowledge and demonstrate it in higher thinking functions.

It should be noted that a teacher with a high level of digital competence is capable of identifying the different ways of representing, collecting, distributing, communicating and interacting with information acquired on the Internet (Bauman, 2004). When they use ICT correctly in the classroom, they demonstrate being able to navigate the Internet critically. Thus, they select reliable and useful information, they appropriate technological language, they include meaningful activities using ICT (such as games, simulations, problem solving, case studies), they are able to develop multitasking and a class sequence including technological resources that have an end, objective or pedagogical criterion (Fainholc et al., 2015).

It is because of the aforementioned that some institutions have established quality standards for teachers and the use of technology in the classroom. In 2008, the International Society for Technology in Education (ISTE) established the following standards for teachers: creativity and innovation, information seeking and management, communication and collaboration, critical thinking, problem solving, and decision making. decision-making, digital citizenship, technology management and its concepts (ISTE, 2008). For their part, Usher and Pajares (2007) constructed a scale for the perception of digital competence, of which four of its dimensions were used for this study.

For the second phase (for the selection of participants), an intentional non-probabilistic sample was used (Casal and Mateu, 2003), since only higher education English teachers were taken into account.

In the third phase (data collection), the questionnaire called Perception of the English language teaching teacher regarding their digital competence was designed, which served to respond to the objectives set out in the study. For the conceptual basis of the instrument, the work carried out by Usher and Pajares (2007) and Cabero, Llorente and Marín (2010) was taken as a reference.

The questionnaire consisted of two sections. The first had the objective of requesting general information: sex, age, teaching experience, last degree of studies, etc. The second section, through

26 items divided into four dimensions: technical, pedagogical, communication and attitude, aimed to know the perception of the primary school English teacher regarding her digital competence.

The scale used in the instrument was of the Likert type. She had a range of response options from 1 to 5, where 1 = Not at all competent, 2 = Not very competent, 3 = Moderately competent, 4 = Proficient, and 5 = Very competent. This type of scale constitutes one of the most used formats when you want to ask several questions that share the same answer options (Cea D'Ancona, 2001).

The questionnaire was developed to be administered online using Google Forms. This is a collaborative tool with easy distribution and access that guarantees users to store data with a high level of security. Thanks to this tool, the instrument could be answered from any device and place; automatically collected the data that would be used in the analysis of the results.

As part of the psychometric analysis carried out on the instrument to determine its reliability and validity, the reagent discrimination test was performed, comparing the scores in each of these. Based on the data obtained, it was determined that the participants whose scores were above quartile 75 would be considered digitally competent; On the other hand, if they obtained scores below the 25th quartile, they would be considered limited in terms of their digital competence. This statistical process was carried out through a t test for independent samples.

Data collection was carried out online, the questionnaire called Perception of the English language teaching teacher regarding their digital competence was sent through the email accounts of the various teachers who participated in the study. The body of the email explained what the purpose of the investigation was; Inside, they were asked to answer the questionnaire in an objective and honest way in order to guarantee the veracity of the results. Finally, they were informed that the information obtained would be confidential, anonymous and its use would only be for the established research purposes.

In the fourth phase, statistical tests were carried out such as obtaining the mean, percentages and frequencies of the data. This in order to categorize the level of digital competence; Student's t test was also performed for independent samples, to determine whether or not there were differences between digital competence and the sex variable. Finally, an analysis of variance was carried out to determine if there was a difference between digital competence and the variables maximum degree of studies, age and years of teaching experience.

## Discussion

Based on the results obtained, the respondents who participated in the study supported having the necessary technology (mobile devices and Internet connection) to design and implement innovative strategies to benefit the teaching-learning process of the English language. They also supported the development of their digital competence.

Derived from the analysis of the dimensions that make up the digital competence construct (Usher and Pajares, 2007), the teachers demonstrated a low level in the technical, pedagogical and communication dimensions. These results are similar to those found by Rangel and Peñalosa (2013), who mention that teachers do not perceive themselves competent during the pedagogical implementation of ICT, since they have problems integrating them into the design and development of their didactic planning; They also comment that they always receive technical training courses and not the didactic use of ICT. Consequently, as commented, English teachers need to consolidate their competence in planning and applying the main technological means for the development of the skills that support the English language, as well as creating collaborative experiences in international contexts for meaningful learning. . The aforementioned is linked to what is established by ISTE (2008), regarding its standards in the use of ICT, since said institute considers it important to develop creativity, communication skills, collaborative work and responsible use of technologies for the benefit of innovation and educational quality. Along the same lines, Ibrahim (2010) and Arteaga (2011) emphasize the fundamental role that the implementation of ICT has in the teaching of the English language, since they favor and motivate learning. In addition to this, Dudeney and Hockly (2007) confirm that the use of technologies such as social networks and videoconferences can provide real and innovative scenarios for collaborative work in international contexts.

Continuing with the result of the analysis of the dimensions, the attitude was the best valued with a medium level. This is similar to that evidenced by Ruiz and Hernández (2018), who highlight the importance of having a good attitude and predisposition for the development of digital competence. The English teachers in this study demonstrated a good attitude, as they consider technology a great benefit for teaching English. They are also open-minded and willing to learn and work with ICT.

## Conclusion

As can be seen in this study, the majority of English teachers in higher education categorized at a low level the various aspects that make up the dimensions of digital competence; only 19% of them obtained a high level (⩾ 80 points). This makes it clear that digital competence must be developed from a basic level. The aspects to be improved are those related to the management of educational platforms, creation or editing of images, development of blogs, podcasts, videos for their subjects and, in general, the creation of interactive spaces for the practice of the English language. The need for training in the design of didactic planning supported by technology and in the ethical use of the Internet was also detected. The proposed actions are aligned with what is stipulated by the federal and state governments, in the sense that the insertion and use of ICT should be promoted, with the intention of developing digital competence and language skills in teachers and students of the different educational levels, and thus motivate the learning of the English language and achieve internationalization.

That said, it is important to train English teachers to develop their digital competence, since emerging pedagogies demand the use of technologies in face-to-face and non-face-to-face environments. Do not forget: the teaching and learning of the English language constantly uses new technological platforms and teachers cannot ignore this, since they are the main media for the meaningful learning of students at any educational level.

Finally, we cannot not mention that the covid-19 pandemic has forced us to change our way of seeing life. Education, like a large part of social institutions, has had to adapt and, in part, reformulate itself. The face-to-face modality to teach was limited and insufficient. Although the virtual modality was already part of the educational field, we had never been in the situation of resorting to it as the only way to continue teaching. The foregoing carries with it a great need to be digitally competent, with the sole purpose of getting ahead and facing the new challenges that arise day by day in our already changing society.

Teachers, in addition to having to adapt teaching methodologies to the new environment, face the challenge of acquiring digital knowledge, skills and attitudes that motivate students to make critical use of technology not only in the classroom, but also in home, in your social life and in your leisure settings. Only in this way will they be contributing to building a collective and exciting response to the challenges that the Digital Age poses to education today. Thus, teachers, like

students, must learn to be digitally competent, but more importantly: they must resignify and adapt their teaching competence to a digitized world.

## Referencias


1. Arnau, J. (1995). Metodologías cuantitativas en la investigación psicológica. Barcelona, España: Experimental. [ Links ]
2. Arteaga, C. (2011). Uso de las TIC para el aprendizaje del inglés en la Universidad Autónoma de Aguascalientes. Apertura, 3(2). Recuperado de http://www.udgvirtual.udg.mx/apertura/index.php/apertura/article/view/206/221. [ Links ]
3. Bauman, Z. (2004). Modernidad líquida. México: Fondo de Cultura Económica. [Links]
4. Butler, M. (2011). The history of CALL: The intertwining paths of technology and second/foreign language teaching. International Journal of Computer-Assisted Language Learning and Teaching, 1(1). Retrieved from https://www.igi-global.com/journal/international-journal-computer-assisted-language/41023. [ Links ]
5. Buzzetto, N. (2012). Social Networking in Undergraduate Education. Interdisciplinary Journal of Information, Knowledge, and Management, 7(1), 63-90. Retrieved from http://www.ijikm.org/Volume7/IJIKMv7p063-090Buzzetto611.pdf. [ Links ]
6. Cabero, J., Llorente, M. del C. y Marín, V. (2010). Hacia el diseño de un instrumento de diagnóstico “competencias tecnológicas del profesorado universitario”. Revista Iberoamericana de Educación, 7(52). Recuperado de https://core.ac.uk/download/pdf/51388280.pdf. [ Links ]
7. Cabrera, J., Sánchez, I. y Rojas, F. (2016). Uso de objetos virtuales de aprendizaje OVAS como estrategia de enseñanza-aprendizaje inclusivo y complementario a los cursos teóricos-prácticos. Educación en Ingeniería, 11(22). Recuperado de https://www.educacioneningenieria.org/index.php/edi/article/view/602. [ Links ]
8. Cajar, M. y Rojas, B. (2015). Influencia de las TIC en el desarrollo de competencias comunicativas del idioma inglés en los estudiantes del grado quinto de la institución educativa Montessori sede primaria de Pitalito - Huila 2014. (tesis maestría). Universidad Norbert Wiener, Pitalito (Huila). [ Links ]

9. Casal, J. y Mateu, E. (2003). Tipos de muestreo. Revista de Epidemiología y Medicina Preventiva, 1(1), 3-7. [ Links ]
10. Cea D'Ancona, M. (2001). Metodología cuantitativa. Estrategias y técnicas de investigación social. Madrid, España: Síntesis. [ Links ]
11. Cozby, P. and Bates, S. (2015). Methods in Behavioral Research (12th ed.). New York, United States: McGraw-Hill Education. [ Links ]
12. Chacón, C. y Pérez, C. (2011). El podcast como innovación en la enseñanza del idioma inglés como lengua extranjera. Pixel-Bit. Revista de Medios y Educación, (39), 41-54. Recuperado de https://recyt.fecyt.es/index.php/pixel/article/viewFile/61449/37462. [ Links ]
13. García, M. and Rey, L. (2013). Teachers' Beliefs and the Integration of Technology in the EFL Class. HOW Journal, 20(1). Retrieved from https://www.howjournalcolombia.org/index.php/how/article/view/23. [ Links ]
14. Díaz, C. H. y Jansson, L. (2011). El aprendizaje del inglés y el uso de tecnologías: percepciones de estudiantes y profesores de inglés del nivel secundario chileno. Matices en Lenguas Extranjeras, (5), 1-37. Recuperado de https://revistas.unal.edu.co/index.php/male/article/view/44697. [ Links ]
15. Dudeney, G. and Hockly, N. (2007). How to Teach English with Technology. England: Pearson. [ Links ]
16. Echeburúa, E., Labrador, F. y Becoña, E. (2009). Adicción a las nuevas tecnologías en adolescentes y jóvenes. Madrid, España: Pirámide. [ Links ]
17. Fainholc, B., Nervi, H., Romero, R. y Halal, C. (2015). La formación del profesorado y el uso pedagógico de las TIC. Revista de Educación a Distancia, (38). Recuperado de https://revistas.um.es/red/article/view/234081/179851. [ Links ]
18. Gobierno del Estado de Yucatán. (30 de marzo de 2019). Plan Estatal de Desarrollo de Yucatán 2018-2024. Diario Oficial del Gobierno del Estado de Yucatán. Recuperado de http://www.yucatan.gob.mx/docs/transparencia/ped/2018_2024/2019-03-30_2.pdf. [ Links ]
19. González, P. (2012). Uso de las nuevas tecnologías en la enseñanza de lenguas extranjeras. Revista de Lenguas para Fines Específicos, 18, 183-212. Recuperado de http://lfe.ulpgc.es//resources/0233536_00018_0008.pdf. [ Links ]

20. González, Y. y Mayora, C. (2013). Percepciones de estudiantes de bachillerato sobre el uso de una red social para la enseñanza del inglés como lengua extranjera: una investigación acción. Anales de la Universidad Metropolitana, 13(2), 65-90. Recuperado de https://dialnet.unirioja.es/servlet/articulo?codigo=4709825. [ Links ]
21. George, D. and Mallery, P. (2003). SPSS for Windows Step by Step: A Simple Guide and Reference, 11.0 update (4th ed.). Boston, United States: Allyn & Bacon. [ Links ]
22. Graddol, D. (2007). English Next Indian. United Kingdom: The British Council. Retrieved from https://www.britishcouncil.in/sites/default/files/english_next_india_-_david_graddol.pdf. [ Links ]
23. Gutiérrez, I. (2014). Perfil del profesor universitario español en torno a las competencias en tecnologías de la información y la comunicación. Pixel-Bit, Revista de Medios y Educación, (44). Recuperado de https://recyt.fecyt.es/index.php/pixel/article/view/61651/37662. [ Links ]
24. Hernández, R., Fernández, C. y Baptista, M. (2013). Metodología de la Investigación (6.a ed.). Ciudad de México, México: McGraw-Hill. [ Links ]
25. Ibrahim, A. (2010). Information & Communication Technologies in ELT. Journal of Language Teaching and Research, 1(3), 211-214. Retrieved from http://dx.doi.org/10.4304/jltr.1.3.211-214. [ Links ]
26. Isaac, S. and Michael, W. (1995). Handbook in Research and Evaluation. San Diego, United States: EDITS Publishers. [ Links ]
27. International Society for Technology in Education [ISTE]. (2008). ISTE Standards for Educators. Retrieved from http://www.iste.org/standards/iste-standards/standards-for-teachers. [ Links ]
28. Lorber, M. (1977). Objectives, methods and evaluation for secondary teaching. New Jersey, Pearson. [ Links ]
29. Morchio, M. (2014). El rol de las TIC en la clase de inglés. Ponencia presentada en el Congreso Iberoamericano de Ciencia, Tecnología, Innovación y Educación. Buenos Aires, del 12 al 14 de noviembre de 2014. Recuperado de www.oei.es/historico/congreso2014/memoriactei/753.pdf. [ Links ]

30. Moreno, T. (2011). Didáctica de la Educación Superior: nuevos desafíos en el siglo XXI. Perspectiva Educacional, 50(2). Recuperado de https://www.redalyc.org/articulo.oa?id=333327290003. [ Links ]
31. Mortis, S., Cuervo, A., Armenta, J., López, R. y Salazar, O. (2013). Competencias digitales en docentes de educación secundaria. Municipio de un Estado del Noroeste de México. Perspectiva Educacional, Formación de Profesores, 52(2), 135-153. Recuperado de https://www.redalyc.org/articulo.oa?id=333328170007. [ Links ]
32. Páez, V. (2001). El profesor de idiomas: sus cualidades y competencias. Revista Comunicación, 11(3). Recuperado de https://www.redalyc.org/pdf/166/16611306.pdf. [ Links ]
33. Pérez, C. y Monteza, C. (2013). Nuevos problemas del aprendizaje en la era digital. Competencias digitales y nuevas formas de aprender. Actualidades pedagógicas, (61). Recuperado de: https://ciencia.lasalle.edu.co/cgi/viewcontent.cgi?article=1208&context=ap [ Links ]
34. Perrenoud, P. (2004). Diez nuevas competencias para enseñar. Querétaro, México. Recuperado de https://www.uv.mx/dgdaie/files/2013/09/Philippe-Perrenoud-Diez-nuevas-competencias-para-ensenar.pdf. [ Links ]
35. Prensky, M. (2010) Nativos e inmigrantes digitales. Institución Educativa SEK. Recuperado de https://www.marcprensky.com/writing/Prensky-NATIVOS%20E%20INMIGRANTES%20DIGITALES%20(SEK).pdf. [ Links ]
36. Ramírez, A., Casillas, M. y Contreras, C. (2014). La incorporación de las TIC a la enseñanza universitaria de los idiomas. Debate Universitario, 3(5), 123-138. Recuperado de https://www.uv.mx/personal/mcasillas/files/2015/12/ARM-TIC-en-idiomas.pdf. [ Links ]
37. Rangel, A. y Peñalosa, E. (2013). Alfabetización digital en docentes de educación superior: construcción y prueba empírica de un instrumento de evaluación. Pixel-Bit. Revista de Medios y Educación, (43), 9-23. Recuperado de https://recyt.fecyt.es/index.php/pixel/article/view/61545. [ Links ]
38. Rodríguez, R. y Gómez, M. (2017). Competencias digitales en la enseñanza-aprendizaje del inglés en bachillerato. Campus Virtuales, 6(2). Recuperado de http://uajournals.com/ojs/index.php/campusvirtuales/article/view/185 [ Links ]

39. Ruiz, M. y Hernández, V. (2018). La incorporación y uso de las tic en educación infantil. Un estudio sobre la infraestructura, la metodología didáctica y la formación del profesorado en Andalucía. Píxel-Bit. Revista de Medios y Educación, (52), 81-96. Recuperado de https://idus.us.es/handle/11441/68941. [ Links ]

40. Secretaría de Educación Pública [SEP] (2010). Marco para el diseño y desarrollo de programas de formación continua y superación profesional para maestros de educación básica. México: Secretaría de Educación Pública. Recuperado de https://gaebc.files.wordpress.com/2011/11/perfil-de-desemped0b5o.pdf. [ Links ]

41. Secretaría de Educación Pública [SEP] (2011). Plan de Estudios 2011. Educación Básica. México: Secretaría de Educación Pública . Recuperado de https://www.gob.mx/cms/uploads/attachment/file/20177/Plan_de_Estudios_2011_f.pdf. [ Links ]

42. Secretaría de Educación Pública [SEP]. (11 de octubre de 2017). El plan y los programas de estudio para la educación básica: aprendizajes clave para la educación integral. Diario Oficial de la Federación. Recuperado de http://www.dof.gob.mx/nota_detalle.php?codigo=5500966&fecha=11/10/2017. [ Links ]

43. Swapna, K. y Tammelin, N. (2008). Integrar las TICS para la enseñanza/aprendizaje de segundas lenguas. Una guía para instituciones educativas europeas de Secundaria, Universidad y Educación para adultos. Austria: Johannes Kepler Universität Linz. Recuperado de https://ensinodelinguascomtic.files.wordpress.com/2010/03/livro_integrar_las_tic_en_ensenanza-aprendizaje_de_lenguas_2008.pdf. [ Links ]

44. Torres, C. y Valencia, L. (2013). Uso de las TIC e internet dentro y fuera del aula. Apertura, 5(1). Recuperado de http://www.udgvirtual.udg.mx/apertura/index.php/apertura/article/view/381/319. [ Links ]

45. Usher, E. and Pajares, F. (2007). Self-Efficacy for Self-Regulated Learning: A Validation Study. Educational and Psychological Measurement, 68(3), 443-463. Retrieved from https://journals.sagepub.com/doi/10.1177/0013164407308475. [Links]

46. Valdés, A., Ángulo, J., Urías, M., García, R. y Mortis, S. (2011). Necesidades de capacitación de docentes de educación básica en el uso de las TIC. Pixel-Bit. Revista de medios y educación, (39). Recuperado de: https://www.redalyc.org/articulo.oa?id=36818685016 [ Links ]

47. Villalba, M. (2008). Recursos de la web 2.0 para la enseñanza de idiomas. Recuperado de https://ced.enallt.unam.mx/ciberestrategias/wp-content/uploads/2009/11/villalba_web2.pdf. [ Links ]

48. Zempoalteca, B., González, J., Barragán, J. y Guzmán, T. (2018). Factores que influyen en la incorporación de las Tecnologías de la Información y la Comunicación en universidades públicas: una aproximación desde la autopercepción docente. Revista de la Educación Superior, 47(186). Recuperado de http://resu.anuies.mx/ojs/index.php/resu/article/view/348 [ Links ]