

Education Quarterly Reviews

Pin, J., Saltos, M., & Villafuerte-Holguin, J. (2023). Contributions of Digital Competencies toward the Speaking Skills in English Language Classes in Ecuadorian Elementary Schools. *Education Quarterly Reviews*, 6(1), 490-503.

ISSN 2621-5799

DOI: 10.31014/ajor.1993.06.01.723

The online version of this article can be found at: https://www.asianinstituteofresearch.org/

Published by:

The Asian Institute of Research

The *Education Quarterly Reviews* is an Open Access publication. It may be read, copied, and distributed free of charge according to the conditions of the Creative Commons Attribution 4.0 International license.

The Asian Institute of Research *Education Quarterly Reviews* is a peer-reviewed International Journal. The journal covers scholarly articles in the fields of education, linguistics, literature, educational theory, research, and methodologies, curriculum, elementary and secondary education, higher education, foreign language education, teaching and learning, teacher education, education of special groups, and other fields of study related to education. As the journal is Open Access, it ensures high visibility and the increase of citations for all research articles published. The *Education Quarterly Reviews* aims to facilitate scholarly work on recent theoretical and practical aspects of education.





The Asian Institute of Research Education Quarterly Reviews

Vol.6, No.1, 2023: 490-503 ISSN 2621-5799

Copyright © The Author(s). All Rights Reserved DOI: 10.31014/aior.1993.06.01.723

Contributions of Digital Competencies toward the Speaking Skills in English Language Classes in Ecuadorian Elementary Schools

Juan Pin Mero^{1,3}, Marcos Saltos Mendoza^{1,3}, Jhonny Villafuerte-Holguín^{2,3}

- ¹ Students of Program PINE at the University Laica Eloy Alfaro de Manabí, Ecuador
- ² Professor at University Laica Eloy Alfaro de Manabí, Ecuador
- ³ Member of the research Project: *Desarrollo profesional del Profesor de Inglés de la Zona 4 de Ecuador*. Grupo de investigación: *Innovaciones pedagógicas para el desarrollo sostenible*

Correspondence: Jhonny Villafuerte-Holguin. Email: jhonny.villafuerte@uleam.edu.ec

Abstract

Digital competences are key factors for the professional developing of teachers of English as a Foreign Language (EFL) in Ecuador. This work aims to identify the contributions of digital competences in the speaking skills of a group of elementary school children. In the research process, the sample was integrated for nine elementary school students and fifteen EFL teachers took. The methodology selected was a mixed. The research techniques used to collect data were semi-structured interviews, contextual observation, and English language pre-tests and post-tests. Results show the teacher's digital competencies evolution and its contribution to the children speaking skills. It concludes that teachers with a higher level of digital competencies can improve children speaking skills. Thus, the students speaking skills in this study changed from 5,02 overage in the pre-test to 8,64 points in the post-test. The changes in speaking skills are significatively positive.

Keywords: Digital Competencies, Speaking Skills, Education, Language, Ecuador

1. Introduction

In 2014, the Ministry of Education in Ecuador recognized the need to improve the English as a Foreign Language teaching and learning process in the whole educational system of education (Villafuerte, 2019). It remarked the high importance of people's interaction and communication worldwide. The National Curriculum Guidelines created in the profiles students must have at each stage of their education are specified.

To Cutipa (2020), managing the proper knowledge of digital competencies has become an essential condition in teaching work because these promote the correct interaction between knowledge and student to obtain a different and innovative way of teaching and the dynamism when learners acquire information.

Gomez_Torres (2022) stated that technological resources contribute significantly to acquiring a second language since students feel more motivated in the XXI century to learn a second language. Likewise, Sousa et al. (2022) stated that students use technology intensively. Teachers should guide and encourage their students to use technology in the classroom. In this way, digital tools are a positive factor and benefit in learning English.

Within the same context, Piña (2020) infers that using technological resources in the planning and development of classes promotes a better level of the students' English communicative skills. He remarks on the growth of fluency and development of speaking in the learners; it makes them active participants and allows them to have a more significant relationship with more real actions and contexts.

The exploration of elementary schools in Ecuador showed there are limitations to empowering ICT in education. In addition, most schools do not have technological access to help the development of communication skills of students, thus emphasizing the acquisition of a second language. EF index 2022 shows that Ecuador is ranked 82 out of 111 countries marked in the ranking, which is evidence of the necessity of overcoming people's English language knowledge (Abanto, 2022).

Students' class participation enhances their critical thinking and production skills and abilities. It goes beyond just understanding the text at this level of thinking. Learners who participate in class demonstrate that they have studied the material well enough and can share their knowledge with the rest of their peers and even give their opinions and perspectives.

The author's motivation is to provide reliable information about teachers' digital competencies contribution to English language speaking skills students in Ecuadorian elementary schools. The authors propose the following research questions:

- 1. What digital competencies do EFL teachers use in their professional practice?
- 2. What are the students attitudes and values toward digital competences?
- 3. How digital competencies contribute to students' speaking skills in english language?

The research hypothesis proposed in this study is as follows:

Ho = The contribution of digital teacher skills to students' speaking skills is insignificant.

This work aims to determine the contribution of teachers' digital competencies to elementary school students' speaking skills in English as a Foreign Language.

2. Literature review

2.1. Speaking skills in children

Speaking skills involving people conveying and receiving a message in diverse milieus with various purposes such as persuading and expressing opinions.

Regarding the theories of linguistics, Halliday & Matthiessen (2004) establish that understanding the contexts allows a more detailed understanding of the terms used in the communication process. For his part, Halliday (2008) affirms that the meaning of the terms exceeds the possible limitations that grammar imposes. However, Almurashi (2016) maintains that learners of a foreign language tend to prioritize using grammatical rules and linguistic structures when using the language. Despite this, Domagała et al. (2021) affirm that language acquisition emerges in the human being from the exchange with people. Culture uses terms that can change from one location to another to refer to the same object.

Besides, "People talk wherever they go, and having skills in any spoken language help in face-to-face conversation, to know what to say, where to say it, and when to say something" (Gudu, 2015, p. 55). Thus, teaching young learners to communicate in English as a foreign language is challenging since many elements may hinder the process of learning a second language. Teachers must seek the appropriate technique, method, or strategy to engage children in the learning process, especially when they learn phrases they do not understand because these are out of local context.

Based on the experience of Piña (2020), he infers that the methodologies to be applied in the XXI century should focus on a virtual environment conducive to students. In this way, the execution of activities and their skills will develop better; in the case of speaking, they will find a more appropriate introduction to more authentic and interactive activities.

In addition, students must live different interactive activities with the target language because people learn a language by using it in a natural environment (Oliver & Philp, 2014, p. 123). To Dewi (2016), when learners work on projects, they are engaged in purposeful communication in a natural context.

The development of speaking skills in elementary school students emphasizes the selection of words (diction), word wrangling, and intonation of reading sentences and expressions (Permana, 2015). Students become motivated and engaged when these two are related. Students need to learn through fun activities other than traditional learning methods that lead them to halt their learning rather than enable it.

Project-based learning is an effective method used to promote learners' English language learning and skills. Research results showed that project-based learning positively affects students' English learning performance and skills (Poonpon, 2011; Wahyudin, 2017). In recent years, project-based learning has been variously integrated into the EFL context to promote authentic learning and teaching of English.

Storytelling may be a proper teaching strategy to develop elementary students' oral production. It demonstrates that learners can learn and understand a target language using stories (Chomsky in Hsu, 2015). Thus, "the best thing for adults helping young learners acquire language would be to expose them to a variety of language input in the form of stimulating stories.

One advantage of teaching young learners is that "most children, when they start to learn a second language, want immediate results, even after their first lesson. They will want to show friends or family that they can speak English." (Sánchez, 2014, p. 19). Consequently, it is essential to preserve students' eagerness to discover and play with a foreign language; one way may be through stories.

Gamification is immersed in the innovation of education to exercise the student as the main character of his learning process. It can increase children's engagement with the course materials and improve their motivation, participation, and achievement results.

Thus, one of the tools to exercise active participation by students is digital resources, which assist teachers today and allow for shaping a digital society, thus turning learners into direct protagonists of their lifelong learning (Longmore et al., 2018).

Gomez-Torres (2018) indicates that acquiring a second language tends to be very complex if one does not have the right resources and strategies to improve student participation. However, meaningful learning leaves small pillars as a base that, little by little, they will develop.

2.2. Digital Competencies

Digital competence is related to the knowledge, capacities, and attitudes to consume, evaluate, and create learning information and to collaborate and communicate with others for learning purposes (European Commission, 2019; He and Li, 2019; Janssen et al., 2013). Thus, research and teaching development must focus on discovering identifiable knowledge assets and specific competencies that could, with a higher degree of probability, empower students to respond adaptively to changing demands at an ever-increasing speed (Gebhardt et al., 2015).

In the educational field, the branch of study called educational technology seeks to solve the needs of a citizenry in the teaching-learning process and the proper use of Information and Communication Technologies such as ICT (Rodríguez & Gómez, 2017). The correct use of technology in the educational process requires educators to have good technical and dynamic knowledge. Meanwhile, Bazalar (2017) states that teachers' digital competencies allow them to use basic programs such as Excel, Word, and PowerPoint and send and receive mail. Likewise,

appropriate treatment of the information, the implementation of websites, and didactic platforms around the EFL teaching. In consequence, ICT in the class of English as a foreign language can provide practices that contribute to the student's development of communicative and linguistic skills and higher thinking skills. Likewise, it increases the motivation of students and the meaningful learning of a foreign language class. According to Amaya et al. (2018, p. 10-21), teachers can use the following strategies to improve:

- 1. Communication and collaborative academic networking. (a) Academic best practices can be shared online, inside and outside the university, (b) Online professional networks allow faculty to complement their professional and career development; and (c) Online collaboration tools encourage collective writing and support faculty in the development of publications.
- 2. Save time by carrying out administrative and school control procedures. (a) Electronic data management facilitates the control and retrieval of student information, (b) Electronic media management improves communication and response time in the delivery of grades and academic performance reports.
- 3. Increase their performance and academic productivity. (a) Access to and analysis of bibliographic information sources available on the Web contributes to incorporating updated educational content and resources into curricula. (b) Electronic formats for elaborating learning activities favor teachers' feedback and evaluation of programmed activities.
- 4. Support and promote educational creativity and innovation. (a) The incorporation of ICTs in the academic work of teachers sets the stage for innovative initiatives, such as the "inverted classroom." (b) Effective ICT management facilitates the design of didactic strategies and teaching techniques that adapt to students' different learning styles and rhythms.
- 5. Complement traditional academic work with the incorporation of technological applications. (a) The use of asynchronous tools, such as self-assessments, sending activities, discussion forums, wikis, and blogs, complements the teaching work in traditional classrooms. (b) Access to success stories in traditional classrooms, (c) success stories in any discipline available on the Web helps students complement their knowledge and academic experience.
- 6. Promote in teachers a positive attitude towards lifelong learning. (a) ICT proficiency provides teachers with the competencies, skills, and attitudes needed to succeed in any work environment, even in their personal lives. (b) By learning about international trends related to education, teachers develop intercultural learning and enhance their academic work.

According to Tamayo (2018. p. 9), there are three levels of knowledge:

(1) the introduction which establishes the provision of resources to educational institutions and familiarization, (2) the application is understood by a broader knowledge of the characteristics of these digital tools in the educational context of the teaching work; and (3) the level of integration the educator can immerse in using ICT with an adequate recognition of the virtual environment, ceasing to be simple digital accessories to become essential elements in teaching.

In such scenarios, Jarrín & Kim (2019, p. 21) affirm that:

It is necessary to know and analyze the continuing education of teachers and their interests regarding innovation in the classroom. Researchers follow three objectives: 1) To analyze teachers' conceptions of methodological innovation from their professional experience; 2) To identify the primary resources and materials they use for their teacher training; 3) To detect difficulties in implementing innovations in the classroom.

According to Arguel et al. (2019), students with higher digital competence can solve cognitive disequilibrium by making sense of digital learning materials. They can deal with learning requirements more effectively, thereby being more capable of addressing challenges in online learning and less likely to suffer from frustrating feelings and emotional distresses. Thus, learners having a higher digital competence can easily interpret and understand online learning materials and perform well in online learning (López-Meneses et al., 2020).

In addition, the implemented methodology encompasses the didactics within the use of ICT as an essential tool in the student's academic training in current times (López et al., 2020). It proves to be conducive to selecting adequate, reliable information and supports learning for problem-solving (Quiñones, 2020). Therefore, instructors with an adequate and optimal level of digital competence can recognize the various ways to present, recapitulate, share

and communicate all the information available from the different sites on the Internet. However, according to Cutipa (2020), teachers' level of digital competence will depend on how much teachers use and know about these technological resources.

2.3. Informatic means and the instruction of English as a Forein Language

To Valdivieso (2016. p. 67), informatic means is a set of resources and tools "for the specific training that allows citizens to handle themselves competently in the digital era, making optimal use of technological means".

People use ICT because they develop the ability to acquire knowledge of human beings which has manifested in a restructuring in organizations, social, professional, and academic (Islas, 2017). ICTs have added value since they integrate a variety of resources along with information in the teaching-learning process (Almerich et al., 2016). Thus, technology has become a communication facilitator, making it practical, quality, and efficient. On the other hand, it is an essential instrument of society within its educational context. Consequently, ICT contributes significantly to classroom development, implementing new methods and strategies of interest to the current students' generation (Vinueza & Gallardo, 2017).

To Urrutia et al. (2017), ICTs give a developmental aid to the content exposed within the curriculum, as well as the integration of resources and tools that provide innovation to the teaching-learning process to favor the development of the students. Thus, digital media in the educational context benefits the teaching-learning process standing out instructors' role as facilitator and guide, the one who uses these resources to address adequately, control, and observe students learning the work of students (Moreno, 2017). Meanwhile, Gómez (2018) argues that ICTs promote a better and more specialized treatment to address students' academic training. They provide methodologies that facilitate teamwork and integration, pose more appropriate resolutions to tasks or projects and, together with the internet, improve the sharing of information and knowledge acquisition. Thus, "Information and Communication Technology are essential to make people's work more productive by streamlining communications and supporting teamwork" (Pita, 2018, p. 504).

The United Nations Educational, Scientific and Cultural Organization (UNESCO) stated in 2018 that technologies framed in the educational context unfold fundamentally with an essential role towards universal access to information and knowledge acquisition. On the other hand, TIC is a transversal axis for teaching with a quality approach towards professional training, self-training, and preparation of future educators, coupled with the correct management of educational institutions. According to Luna (2018), digital tools and technological resources are linked between three essential parts to share knowledge: transmission, processing, and storage. They are allies in developing communicative and technical skills between teachers and students.

The integration of ICT into the educational process requires teachers' training but also urges the necessity of eliminating the traditional schemes of learning that involve a closer interaction of subject and object that transcends the face-to-face lessons. Furthermore, such technology incorporation includes using informatic tools in the learners' life conditions outside the classroom and their appreciation towards correct and suitable management in such contexts (Gámez et al., 2018). Besides, integrating ICT into the educational process establishes a specific nesting between relevance, quality, and concreteness to improve students' learning process, also encompassing the development of practices (Aguiar et al., 2019). Finally, ICT in the teaching-learning process promotes a better understanding and analysis of the contemporary school, which requires innovations to create new attitudes and increase the use of alternatives to achieve learners' optimal performance (Wang, 2021).

Rodríguez (2020) work shows that the appropriate knowledge of ICTs by English language teachers is established as promoting leadership in the teaching-learning process and autonomous work that significantly improves the development of production skills such as speaking. The work of Farfan et al. (2017) is among the previous studies revised in this research. They found that the strengthening of communication skills supported by ICT goes beyond the intention of the syllabus. However, it is immersed in the work of the English language teacher since it significantly helps to analyze the student's weaknesses and strengths for learning. In addition, the significant capacity of the resources offered by ICTs to optimize and enhance the teaching and learning process.

On the other hand, ICT can promote the acquisition of a foreign language within its subject matter and concreteness. Puentes (2020) states that when teachers direct the use of ICT in the English language classroom, a vast improvement demonstrates an advance in oral communication skills. In addition, an essential factor in the children's learning is their wish, interest, and motivation for learning the English language, which substantially favors the level of language acquisition.

3. Methodology

This work is adscripted to the postmodern paradigm. It used a mixed research approach to determine the contribution of English language teachers' digital competencies to developing students' English language speaking skills in elementary school. The research methods used in this work were literature review, exploratory, descriptive, and interpretative.

3.1. Participants

The EFL teachers worked in the 2nd, 4th, and 7th grades at ten elementary schools in Manta, Ecuador. 60% of teachers worked in public, and 40% in private schools. The participants were 15 English language teachers and nine elementary school students. In Addition, 50% of the students were boys, and 50% were girls. They all attended the 7th grade of elementary public schools in the exact location of the teachers.

3.2. Instruments

The research team used the following instruments for collecting information:

- 3.2.1. Contextual observation form. The purpose of this instrument was to identify the students attitudes and values towards the digital competences. The possible answers were: (1) level not achieved, (2) initial level, (3) inprocess achievement level, (4) Higher achievement level. A panel of researchers from the University Eloy Alfaro de Manabí in the fields of English as foreign language instruction, Educational Psychology, and Education evaluated the instrument. The evaluators' recommendations were (a) to train the observers to assign the teaching practices correctly and (b) to run six observations at least. The observations were 12 lessons over four months in online classes using Zoom and Microsoft Teams.
- 3.2.2. Speaking assessment test of Cambridge press (Pre-Test, Post-Test). The purpose of this instrument was to collect data related to learners' speaking skills changes. The instrument was an adaptation of the Cambridge Placement Test made by the research team. The instrument was tested by a professional with more than five-year experience in EFL instruction. Following the experience of Farfán et al. (2017), the research team evaluated: (1) pronunciation quality on topics related to greetings, feelings, colors, animals, body parts, drinks and food, and family members, (2) fluency, and (3) use of the vocabulary. The research team used the instrument in the English language classes for 5 minutes per student.
- 3.2.3. Semi-structured interview guide. The instrument aimed to collect information on the domain level of EFL teachers' digital competencies. The instrument consists of 8 semi-structured questions. Two questions per each category: (1) Communication and collaboration, (2) Problem resolution, (3) Information and literacy, and (4) Digital content creation. A panel of professional researchers of the University Eloy Alfaro de Manabí in foreign language instruction, psychology, and educational management evaluated the instrument. The evaluators' recommendations were (a) to reduce the original version's twelve questions to eight questions that concentrated on the four categories proposed. The instrument focused on EFL teachers of elementary schools in Manta, Ecuador. Each interview lasted 40 minutes using the Zoom application.

3.3. Procedure

Stage 1: It included the selection of participants. Teachers and children's parents or legal tutors signed the consent letter to participate in this research.

Stage 2: Preparation of instruments for data collection. It includes the evaluation process for the panel of experts and the implementation of the recommendations and corrections received.

Stage 3 consisted of the EFL Teacher interview and the categorial analysis of the information collected.

Stage 4: It consisted of the execution of the student's listening skills evaluation and the data analysis using the program SPSS version 24.

Stage 3: Class observation consisted of applying the contextual observation format 12 times over three months.

Stage 4: It consisted of the posttest of students' English language skills and the data analysis.

Statistical Analysis: The process used the SPSS version 24. The studies applied were Kolgomorove Index to confirm the normality of the data series and the T-student index to analyze the hypothesis.

Stage 6: It consisted of the redaction of the information.

4. Results

The results are presented following the order of the research questions that appearing in the introduction section.

4.1. Students' attitudes and values toward digital competencies

The table 1 shows the students attitudes and values during the online practices in EFL classes.

Table 1: Students' attitudes and value observed towards digital competencies in online practice

Degree of development	Degree of development achieved				Remarks	
	1 2 3		4			
The students were punctual at the time of the virtual classes.	0%	5%	15%	80%	It should be mentioned that 30% of students had connectivity problems. They sometimes connected a few	
They were attentive to the explanations of the teachers	7%	0%	10%	83%	minutes late. Students several times were distracted by various situations at their homes. Such as people, noise, etc.	
They turn on their cameras and microphones	0%	2%	15%	83%	Students show more attention to the topic when it involves games.	
They work more collectively	0%	1%	80%	19%	Students showed a positive attitude to work together	
They are attracted by the games on the web sites	15%	0%	10%	75%	Students showed more attention to the subject matter when involving games of duties and rights.	
They ask questions about the subject	0%	20%	15%	65%	Students generally presented a few questions.	
Stay connected in class	0%	10%	85%	5%	Most of the students keep connected until the end of class.	
Feel confident participating in a group	0%	15%	10%	75%	Since it is a group of students that already knows each other, they are confident to participate and work as a team.	
Students concentrate more when it is game time.	0%	0%	10%	90%	Sometimes the students would lose focus for a moment, but by the time of teacher present instructions	

students	returned	to
concentration	on.	

Source: Class observations form (2020).

Note: Achieved=4, In process=3, Initial progress=2, Not achieved =1

Based on the contextual observation, the research team verified the good performance of the students in the different sections of the classes, which proved to be of their entertainment and pleasure with topics of interest and according to the level of elementary school.

4.2. EFL Teachers' perceptions about digital competences

The EFL teachers' perceptions about their digital competences appear in table No. 2. The data corresponds to the beginning of the research (pretest). The categorial analysis used the following categorial tree:

Category 1. - Communication and collaboration. It demonstrates the interaction that teachers in the use of ICT have with other co-workers, and to be able to help and teach their correct use. The subcategories used for the analysis were: Higher, moderate, low level.

Category 2. - Problem resolution, this section demonstrates the capacity that educators have to be able to solve and give a solution within the management of virtual environments. The subcategories chosen for this research were: Higher, moderate, low level.

Category 3. - Information and literacy: Teachers' theoretical and practical usage of the technological resources. The subcategories used were: Higher, moderate, low level.

Table 2: Digital competences of EFL teachers

Teacher's evidences	Sub category:	
Category 1: Communication and collaboration	Level	
P1. It saves time in planning and motivates students to be attentive to the EFL class throughout the day, as well as contributing to all language skills.	High	
P2. ICT helps significantly in the development of the activities, saving time, and making them more appealing for students the wish to participate in EFL class.	High	
P3. ICTs are very important in the learning process. The use of ICT also helped during the pandemic, not only to keep children in learning activity but also to generate new knowledge.	High	
P4. ICTs contribute a lot to the English language teaching process, but if you do not have a good command of digital tools, they are going to harm you instead of supporting you. P5. In my experience as an English and computer teacher, I have been able to make the	High	
most of digital tools that offer free access, they have helped me in the development of language skills and my students enjoy learning.	High	
Category 2: Problem resolution	=	
P1. I have seen great improvements in students' communication skills especially in speaking and listening. However, it does require time to domain their usage.	Moderate	
P2. ICT has greatly facilitated the creation of reports, assignments, evaluations and game routines. The most of my students have improved greatly in language skills. The difficulty is the selection of the appropriate tool.	Moderate	
P3. Errors can occur after creating an activity using ICT, either because of the internet or because the computer becomes slow. Digital tools demand having good informatic devices.	High	
P3. When teachers are not trained in the use of ICT, they can find more difficulties than contributions for improving teaching practices.	High	
P4. Students also have difficulties to access to ICT. Sometimes they do not understand well the use of applications when teacher explains. It requires time.	High	
Category 3: Information and literacy	- -	
P1. I have not dared to evaluate them yet with any digital tool, but I am learning how to run a test through kahoot and quizziz.	Low	
P2. Fortunately, I have been able to evaluate my students 4 times through H5P, an excellent tool that gives you great testing options that revolve around didactics.	High	

able to carry out the development of the tests in a satisfactory manner, I am pleased that with these tools, I can see their average obtained.	
wun inese toots, 1 can see their average obtainea.	
P4. I have used Genially once but it was because my brother had helped me to run it, not	Low
because of my own development. I'm not very good with ICT.	LOW
P5. Google form presents many more possibilities to use in evaluations, but I do not know	Low
how to use it.	LOW
Category 4: Digital content creation	_
P1. I feel confident and secure in front of my students at the time of developing my classes,	– High
also because I have good digital competences.	Ç
P2. Digital competences are essential for every teacher to anticipate the material to use	High
in EFL classes. Usually, I base it on reviewing the material of the unit, adapt it to a power	
point or an informatic application.	
P3. It is essential for every teacher to have the teaching activities already planned using	
ICT, because this avoids improvising, maintaining the role of guide and educator, and	
anticipate problems. I prepare activities and digital resources and I review them the night	
before the EFL class.	
P4. I usually use videos to teach. They should be according to the curriculum and lesson	Low
plan.	
P5. Totally, in every single day I select the resources and activities I am going to use in	Low
class. I always remember that children are very visual.	

Concerning to the category 1: Communication and collaboration. - The evidence showed that teachers understand the contribution of ICT on the EFL instruction.

For the category 2: Problem resolution. – the evidence showed that the main difficulties are related to the access to informatic devices and Internet connection. In addition, teachers training persists as a relevant difficulty to overcome.

For the category 3: Information and literacy. - the evidences show a division of EFL teachers related to those who have developed the digital competences and the group of teachers have poor digital competences.

Finally, for the category 4: Digital content creation. – The evidence shows a new division in the EFL teachers related to the frequency and level of their own digital content production for EFL instruction purposes. Thus, the most of the EFL teachers participating in this research only use video and power point to support their lessons.

4.3. Contribution of EFL teachers' digital competencies toward students' speaking skills in elementary education

Table No. 3, shows the students' pretest and posttest marks and the improvement level reached.

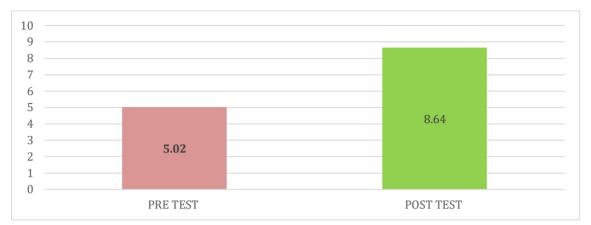
Table 3: Students pretest and posttest marks

Participants	Pretest marks	Posttest marks	Change
P1	3	8	+3
P2	2	9	+7
Р3	4	9	+5
P4	2	7	+5
P5	4	8	+4
P6	2	8	+6
P7	3	9	+6
P8	4	8	+4

P9	3	9	+6

Source: Students pretest and post test results (2021)

The graphic 1 compares the overage pretest and posttest results of students speaking skills.



Graphic 1: Participants EFL speaking skills in pretest and post-test. Source: Research project (2021).

The data collected shows a relevant progress in the students speaking skills when their EFL practices are correctly supported with ICT. When EFL teachers have improved their digital competences, they reach better results in students speaking achievement. Thus, students passed from 5,02/10,00 in the pretest to 8,64 in the post test.

4.4. Hypothesis evaluation

Ho: The contribution of teachers' digital skills on the development of students' English language skills is not significant.

Ha: The contribution of teachers' digital skills on the development of students' English language speaking skills is significant.

Related	samples	Statistics
IXCIAICU	Samurios	Diamsucs

		Media	N	Desviation	Media tipic	
					error a	
Da. 1	VAR00001	3,0000	9	,86603	,28868	
Par 1	VAR00002	8,3333	9	,70711	,23570	

	Related differences				t	gl	Sig.
Media	Tipic deviation	Mean tipical error	95% confidence index				(bilateral)
			Inferior	Superior			
-5,33333	1,00000	,33333	-6,10200	-4,56467	-16,000	8	,000

The p-value = 0.000; p-value < 0.05; therefore, the alternate hypothesis is accepted. Consequently, the strengthening of the digital skills of English teachers has a positive impact on the improvement of elementary education students' English language speaking skills.

5. Discussion

Based on the literature review, the research team agreed with the position of López et al. (2020), referring to teachers requiring a mastery level in digital competencies to manage and transmit EFL knowledge, develop communicational skills, and teaching strategies through the use of ICT.

In addition, the authors ratify the position of Farfán et al. (2017) concerning the contribution of digital competencies to the EFL teaching process, from the execution of the curriculum to diverse goals related to the teaching practice, educational administration, and students' EFL knowledge improvement. In addition, based on the results obtained, authors remark that teachers require at least 40 hours of training courses every semester to update their digital competencies.

According to Puentes (2020), an optimal and efficient response to the innovation of EFL instruction can use or not digital resources. Thus, in the area of English instruction, the use of ICT directed by the teacher demonstrated in this research the improvement of the student's foreign language acquisition process, evidencing an advance in oral communication skills. In addition, an essential factor in the children's learning and the instructors' training is their motivation to learn about the uses of digital applications and informatic devices.

Based on the information collected, the research team can affirm that the EFL teachers participating in this research reported a moderate level of digital competencies. However, improving their training in the digital field is not an obstacle. Teachers' digital competence development is moderate. While some EFL teachers are immersed in digital resources and improve their level of competence, others still need to be more confident before using computers and other informatic devices. Besides, the students show interest in the innovation of teaching methods that include using informatic devices in EFL classes. Thus, students denote better work and progress when classes include ICT use because of their visual and auditory teaching tools.

The analysis of the contextual observations allows the authors to affirm that students had good behavior and appropriate attitudes during all sessions. It was possible to determine a positive degree of acceptance and management of the English classes using the websites.

Concerning the data on English essential vocabulary acquisition using ICT in elementary school students, it is evident a remarkable improvement in their speaking skills. The use of websites that provide a digital resource to reinforce the teaching-learning process is highlighted. Thus, the average of 5.02/10 reported in the speaking skill pretest indicated a need for academic reinforcement. On the other hand, after having executed the activities of the educational intervention to improve teachers' digital competencies, the students' speaking skill posttest obtained 8.64/10 overage. It ratifies that improving teachers' digital skills increase students' speaking skills.

According to all the results, the authors state that using ICT in the classroom contributes to developing the student's language skills. Teachers should use not only textbooks and theory but also virtual platforms and learning environments. They take advantage of that children quickly become familiar with technological resources. In addition, teachers are responsible for self-learning new and updated ways of teaching to go deeper into the field of ICT. They bring to the acquisition and practice of English as a foreign language.

Authors recommend that future and current teachers learn and research those technological tools that can be of great use in the development of their classes since there are many free tools available that allow the creation of content in any subject.

6. Conclusions

Based on the literature review and the results obtained in the research, the authors declare 100% compliance with the planned research aim: To determine the contribution of teachers' digital competencies to elementary school children's speaking skills in English as a Foreign Language. The participants reported a significant change in their speaking skills from 5.02 to 8,64 over 10,0 points. The weakness of this study is the size of the corpus, which does

not allow for generalizing the results. However, this research work contributes to the reflection on the digital competencies of English teachers and their contribution to improving elementary school students' EFL speaking skills performance. The authors invite the scientific community to carry out similar studies to generate new valuable information regarding the research line: Digital competencies and their contribution to English language teaching in elementary education.

References

- Abanto León, J. Y. (2022). El aprendizaje colaborativo y uso de las TIC en los docentes: revisión sistemática. Retrieved from: https://repositorio.ucv.edu.pe/bitstream/handle/20.500.12692/82893/Abanto_LJY-SD.pdf?sequence=1 (11 Feb 2023)
- Aguiar, B., Velazquez, R., & Aguiar, J. (2019). Innovación docente y empleo de las TIC en la Educación Superior. *Revistas Espacios*, 40(2) 1-20. Retireved from: http://repositoriobibliotecas.uv.cl/handle/uvscl/2134 (11 Jan 2023)
- Allais, C. (2015). *Focus on Oral Interaction* In: Rhonda Oliver, Jenefer Philp Oxford University Press, Oxford. Almerich, G., Orellana, N., Suárez, J. & Díaz, I. (2016). Competencias de los docentes en tecnologías de la información y la comunicación: un enfoque estructural. *ELSEVIER*, 110-125. DOI: https://doi.org/10.1016/j.compedu.2016.05.002
- Almurashi, W.A. (2016). An Introduction to Halliday's Systemic Functional Linguistics. Journal for the Study of English Linguistics, 4(1), 70-80. https://doi.org/10.5296/jsel. v4i1.9423
- Amaya, A., Zúñiga, E., Salazar, M., & Ávila, A. (2018). Empoderar a los profesores en su quehacer académico a través de certificaciones internacionales en competencias digitales. *Revista Apertura*, 10(1), 104-115. DOI: http://dx.doi.org/10.32870/Ap.v10n1.1174
- Arguel, A., Lockyer, L., Lipp, O. V., Lodge, J. M., & Kennedy, G. (June de 2017). *ResearchGate*. Retrieved from: Detecting Learners Confusion to Improve Interactive Digital Learning Environments: https://www.researchgate.net/publication/309366496_Inside_Out_Detecting_Learners_Confusion_to_Improve Interactive Digital Learning Environments. (10 Jan 2023).
- Bazalar, E. G. M. (2017). El uso de la plataforma moodle y el nivel de competencias digitales en los docentes de la escuela universitaria de educación a distancia-EUDED-UNFV 2017. Thesis of the program: Maestro en administración de la educación. Universidad cesar Vallejo. Retrieved from: https://repositorio.ucv.edu.pe/handle/20.500.12692/14878 (19. Jan. 2022).
- Cutipa, L. A. (2020). Competencias digitales en la retroalimentación formativa de docentes de una Institución Educativa de San Juan de Lurigancho. Retrieved from: https://hdl.handle.net/20.500.12692/61904 (10 Jan 2023).
- Domagała-Zyśk, E., Moritz, N., & Podlewska, A. (2021). English as a Foreign Language for Deaf and Hard of Hearing Learners. Routledge Focus. https://doi.org/10.4324/9781003162179
- Farfán, G., Villafuerte, J., Romero, A., & Intriago, E. (2017). Tecnologías de apoyo para el fortalecimiento de las destrezas comunicativas en lenguas extranjeras destrezas comunicativas en lenguas extranjeras docentes de inglés. *Revista de Medios y Educación*, *51*(1),183-195. http://dx.doi.org/10.12795/pixelbit.2017.i51.12
- Gómez, O. Y. A. (2018). Las TIC como herramientas cognitivas. *Revista interamericana de investigación*, educación y pedagogía, 11(1), 67-80: https://doi.org/10.15332/s1657-107X.2018.0001.07
- Gomez-Torres, S. Y. (2022). Entornos virtuales en la enseñanza de los docentes de educación básica regular nivel primario: una revisión sistemática. Retrieved from: https://repositorio.ucv.edu.pe/bitstream/handle/20.500.12692/77658/Gomez_TSY-SD.pdf?sequence=1 (10 Mar 2023).
- Gámez, F. I. L., Rodríguez, M. R., & Torres, L. E. S. (2018). Uso y aplicación de las TIC en el proceso de enseñanza-aprendizaje. *Revista Científica de FAREM-Estelí*, (25), 16-30: https://doi.org/10.5377/farem.v0i25.5667
- Gürbüz, C., & Cabaroğlu, N. (2021). EFL students' perceptions of oral presentations: Implications for motivation, language ability and speech anxiety. *Journal of Language and Linguistic Studies*, 17(1), 600-614. Retrieved from: https://files.eric.ed.gov/fulltext/EJ1294925.pdf?fbclid=IwAR1tHcyLYCEwI_unIdq15qFTULI8i4jTgfbxOz 8I7DKrPwPw3owI7tFFUZs (10. Feb. 2022)
- Halliday, M. & Matthiessen, C. (2004). *An introduction to functional grammar*. London: Routledge. Retireved from: https://www.scirp.org/(S(351jmbntvnsjt1aadkposzje))/reference/ReferencesPapers.aspx?ReferenceID=1793

https://www.scirp.org/(S(351jmbntvnsjt1aadkposzje))/reference/ReferencesPapers.aspx?ReferenceID=1/93849. (11.Feb.2023).

- Halliday, M. (2008). *Complementarities in language* (1st ed.). Editorial Commercial Press. Retrieved from: https://www.scirp.org/(S(351jmbntvnsjt1aadkposzje))/reference/referencespapers.aspx?referenceid=234826 9. Beijin.
- Hsu, T.-C. J. (October de 2015). *ResearchGate*. Obtenido de Telling tales: Using storytelling to teach EFL kindergarten students in Taiwan. Retrieved from: https://www.researchgate.net/publication/276343447_Telling_tales_Using_storytelling_to_teach_EFL_kindergarten_students_in_Taiwan/fulltext/5acbaf5ea6fdcc8bfc85fd70/Telling-tales-Using-storytelling-to-teach-EFL-kindergarten-students-in-Taiwan.pdf (19 Feb 2023).
- Islas, C. (2017). La implicación de las TIC en la educación: Alcances, Limitaciones y Prospectiva. *RIDE. Revista Iberoamericana para la Investigación y el Desarrollo Educativo*, 8(15), 861-876. https://doi.org/10.23913/ride.v8i15.324
- Janssen, J., Stoyanov, S., Ferrari, A., & Punie, Y. (July de 2013). *ResearchGate*. Retrieved from: Experts' views on digital competence: Commonalities and differences: https://www.researchgate.net/publication/244476899_Experts'_views_on_digital_competence_Commonalities_and_differences (19 Feb 2023).
- Jarrín, X., & Kim, C. (2019). Improving speaking skill using the speaking practice tool Spacedeck. *Espirales revista multidisciplinaria de investigación científica*, 3(1), 89–90. https://doi.org/10.31876/er.v3i30.619
- Khodabandeh, F. (s.f.). *Teaching English with Technology*. Retrieved from: The impact of storytelling techniques through virtual instruction on English students' speaking ability: https://files.eric.ed.gov/fulltext/EJ1170637.pdf (18 Feb 2023).
- López, A., Burgos, D., Branch, J. W., & Younes-Velosa, C. (2020). Un nuevo paradigma en la enseñanza universitaria basado en competencias digitales para profesores. *Campus Virtuales*, 9(2),71-82. http://uajournals.com/ojs/index.php/campusvirtuales/article/view/737 (22 Sep 2022)
- Luna, D. (2018). Cómo transformamos la vida de los colombianos a través de las TIC. Retrieved from: https://davidluna.com.co (1. Feb. 2022)
- Morales Urrutia, E. K., Morales Urrutia, X. A., & Ocaña Chiluisa, J. M. (2017). Las TICS en la educación intercultural. *Revista Publicando*, 4(11(1), 369-379. Retrieved from: https://revistapublicando.org/revista/index.php/crv/article/view/531 (11 Feb 2023)
- Moreno, M. (2017). Ventajas de estudiar con las nuevas tecnologías. UNI>ERSIA ESPAÑA. Retrieved from: http://noticias.universia.es/ciencia-tecnologia/noticia/2017/08/23/1155196/ventajas-estudiar-nuevas-tecnologias.htm (10. Mar. 2022).
- Murillo-Zamorano, L. R., Sánchez, J. Á., Godoy-Caballero, A. L., & Muñoz, C. B. (17 de March de 2021). SpringerOpen. Obtenido de Gamification and active learning in higher education: is it possible to match digital society, academia and students' interests?. Retrieved from: https://educationaltechnologyjournal.springeropen.com/articles/10.1186/s41239-021-00249-y (11 Feb 2023)
- Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura. [UNESCO]. (2018). Las Tecnologías de la Información y la Comunicación (TIC) en la Educación. Paris: UNESCO.
- Olsson, S. (2018). A qualitative study of how four compulsory school teachers view the role of oral proficiency. Retrieved from: https://www.diva-portal.org/smash/get/diva2:1187797/FULLTEXT01.pdf?fbclid=IwAR2p50ThXjWnsF8MtSYdW_8HTTY CJOpvn0KdnvK8ifvLuHLwhsf1416AsrY (10. Feb. 2022).
- Pita, G. E. C. (2018). Las TICs en las empresas: evolución de la tecnología y cambio estructural en las organizaciones. *Dominio de las Ciencias*, 4(1), 499-510. http://dx.doi.org/10.23857/dom.cien.pocaip.2017.4.núm.1.enero.499-510
- Pernyataan, Y. M. (2022). *University of Makassar*. Retrieved from: The Students' Interest in Using Duolingo as a Learning Media in Speaking: https://digilibadmin.unismuh.ac.id/upload/30388-Full_Text.pdf?fbclid=IwAR0sWE7hos7lXo6nwv0LZHd9fpoJkECrgLL_6heOjIqRk9dfm9LDShT_yTY (10 Feb 2023).
- Piña, E. (2020). Los entornos virtuales de aprendizaje (EVA). Una Estrategia didáctica para la administración de unidades curriculares universitarias. REDIUNP, 1, 2, 18-27. http://www.revistas.unp.edu.ar/index.php/rediunp/article/view/119/104. (10 Feb 2023).
- Puentes, J.M. (2020). Strengthening of the communicative competence of English, in the sixth grade students of the Caldas Institute, through a didactic strategy mediated by ICT. Retrieved from: http://hdl.handle.net/20.500.12749/12482(10 Feb 2023)
- Quiñonez Pech, S. H. (2020). Competencia digital de los profesores de inglés en enseñanza primaria del sureste de México. *RIDE. Revista Iberoamericana para la Investigación y el Desarrollo Educativo*, 11(21). https://doi.org/10.23913/ride.v11i21.752
- Rodríguez, R. & Gómez, M. G. (2017). Competencias dig itales en la enseñanza-aprendizaje del inglés en bachillerato. Campus Virtuales, 6(2), 51-59. Obtenido de: www.revistacampusvirtuales.e. (02 Jul 2022)

- Rodríguez, M. (2020). El uso del video para fortalecer la comprensión y producción oral (listening/speaking) en los estudiantes de Nivel III de inglés en un centro de enseñanza bilingüe de Barranquilla, Universidad del Norte (Thesis) Retrieved from: https://manglar.uninorte.edu.co/handle/10584/9405 (19 Feb 2023)
- Saldaria, Elnida & Ariawan, Vina & Cahyani, Isah. (2019). Speaking skill of elementary students reviewed by gender. *Journal Prima Edukasia*. https://doi.org/10.21831/jpe.v7i1.20363
- Sousa, E., Cruz, E., & Albuquerque, F. (2022). Avaliação das Competências Digitais de alunos do 1.º Ciclo do Ensino Básico: Uma proposta metodológica. *New Trends in Qualitative Research*, *12*, e608. https://doi.org/10.36367/ntqr.12.2022.e608
- Tamayo, W. (2018). Las competencias digitales de los docentes del LICGUA según el nivel de conocimiento, percepción y uso pedagógico de las TIC en los procesos de enseñanza aprendizaje (Master's tesis), Universidad Casa Grande. Departamento de Posgrado. Retrieved from: http://dspace.casagrande.edu.ec:8080/bitstream/ucasagrande/1372/1/Tesis1568TAMc.pdf (11 Feb 2023)
- Thandevaraj, E. J., Gani, N. A. N. & Nasir, M. K. M. (2021b). A Review of Psychological Impact on Students Online Learning during Covid-19 in Malaysia. *Creative Education*, 12(06), 1296-1306. https://doi.org/10.4236/ce.2021.126097
- Valdivieso, T. S. (2016). Modelo de estándares de competencias digitales para los docentes de educación básica del cantón Loja (Ecuador). FRetrieved from: http://e-spacio.uned.es/fez/view/tesisuned:Educacion-Tsvaldivieso (11 Feb 2023)
- Villafuerte, J. (2019). Tecnología de la información y comunicación y el desarrollo de la competencia comunicativa en inglés de los futuros docentes de lengua extranjera de Ecuadorpropuesta de intervención educative. The Basque Counntry University, (Doctor Thesis). Recuperado de https://dialnet.unirioja.es/metricas/documentos/TES/223605 (19 Feb 2023).
- Vinueza, S. F., & Simbaña Gallardo, V. P. (2017). Impacto de las TIC en la Educación Superior en el Ecuador. *Revista Publicando*, 4(1), 355-368. https://revistapublicando.org/revista/index.php/crv/article/view/530 (12 Feb 2023).
- Wang, X. (2021). How Does Digital Competence Preserve University Students' Psychological Well-Being During the Pandemic? An Investigation From Self-Determined Theory. Frontiers. https://www.frontiersin.org/articles/10.3389/fpsyg.2021.652594/full (14 Feb 2023).
- Wang, X., Zhang, R., Wang, Z., & Li, T. (2021). How Does Digital Competence Preserve University Students' Psychological Well-Being During the Pandemic? An Investigation From Self-Determined Theory. Front. Psychol, Sec. Educational Psychology, 12(1) 1-20. https://doi.org/10.3389/fpsyg.2021.652594
- Wang, X., Zhang, R., Wang, Z., & Li, T. (April de 2021). ResearchGate. Obtenido de How Does Digital Competence Preserve University Students' Psychological Well-Being During the Pandemic? An Investigation From Self-Determined Theory: Retrieved from: https://www.researchgate.net/publication/351068272_How_Does_Digital_Competence_Preserve_University_Students'_Psychological_Well-Being_During_the_Pandemic_An_Investigation_From_Self-Determined_Theory (12 Feb 2023).
- Wild, S., & Heuling, L. S. (08 de June de 2020). How do the digital competences of students in vocational schools differ from those of students in cooperative higher education institutions in Germany?. Retrieved from: https://ervet-journal.springeropen.com/articles/10.1186/s40461-020-00091-y (19 Feb 2023)