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EL USO DE LAS TIC POR PARTE DE DOCENTES DE INGLÉS DE PRIMARIAS PÚBLICAS EN MÉXICO: ENSEÑANZA REMOTA DE EMERGENCIA Y RETOS PARA TIEMPOS POSTPANDEMIA

ENGLISH AS FOREIGN LANGUAGE TEACHERS IN MEXICAN PUBLIC PRIMARY SCHOOLS: READINESS FOR EMERGENCY REMOTE TEACHING AND CHALLENGES FOR POST-PANDEMIC TIMES

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Resumen

En este estudio se responde a las preguntas de investigación: ¿Estaban los maestros de Inglés de las escuelas primarias públicas mexicanas listos en términos de uso de las Tecnologías de la Información y la Comunicación (TIC) para la Enseñanza Remota de Emergencia (ERT) frente a la pandemia por COVID-19? ¿Por qué? y ¿Cuáles son los desafíos para tiempos postpandemia? Se recolectaron datos mediante un cuestionario cuyos reactivos fueron adoptados de estudios realizados en países de habla inglesa y traducidos al español. El instrumento fue respondido por una muestra de 279 docentes del noroeste de México, seleccionados por un muestreo no probabilístico. Se analizaron los datos de los cuestionarios mediante un análisis descriptivo. Los resultados sugieren que los profesores no estaban preparados para la Enseñanza Remota de Emergencia frente a la COVID-19, debido a barreras institucionales y personales. El documento concluye con algunos desafíos para tiempos posteriores a la pandemia.

Palabras clave: Inglés como lengua extranjera; escuela primaria; TIC; Enseñanza Remota de Emergencia; COVID-19.

Abstract

This study examines the use of Information and Communication Technologies (ICT) by English as a Foreign Language (EFL) teachers in Mexican public primary schools, assessing their readiness for Emergency Remote Teaching (ERT) during the COVID-19 pandemic and identifying challenges for post-pandemic times. A structured questionnaire was administered to a non-probabilistic sample of 279 EFL teachers from northwest Mexico. The instrument comprised items related to the frequency and purpose of ICT use, as well as institutional and personal factors influencing ICT integration. Descriptive analysis was performed on the data. Results indicate that over half of the teachers used ICT frequently in their teaching practice. However, they relied on a limited variety of general technological tools that were not specifically designed for English language teaching. Teachers primarily used ICT for preparatory activities such as gathering resources and administrative purposes like recording student performance, rather than for direct instructional purposes in the classroom. The most frequently used tools included email for communication, navigation tools for gathering information, and productivity software for class preparation and management. While teachers perceived themselves to be competent in technological, pedagogical and content-related aspects, the actual variety of ICT tools used suggests they were not well-prepared for the sudden transition to ERT during the pandemic. This unreadiness appears mainly attributable to institutional factors, including insufficient resources, inadequate training, and unsupportive teaching conditions. Among personal factors, performance expectancy positively influenced teachers' ICT use, while factors such as

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facilitating conditions had a negative influence. The study concludes that EFL teachers in Mexican public primary schools were generally unprepared in terms of ICT use for ERT during the COVID-19 pandemic, largely due to institutional barriers. To better prepare teachers for post-pandemic education, whether remote, technology-enhanced, or newly emerging formats, several challenges need to be addressed at multiple levels. At the teacher level, it is essential to provide training and support to strengthen their technological, pedagogical, content-related, and socio-emotional skills for emergency teaching contexts. Addressing institutional barriers regarding resources, training, and teaching conditions is also crucial. For students, ensuring equitable access to education, especially for disadvantaged groups, and providing resources and support for socio-emotional wellbeing should be prioritized. Parents also need to be equipped with the necessary tools and knowledge to support their children's learning in emergency situations. Furthermore, leadership and policymakers play a critical role in providing comprehensive training, improving ICT infrastructure, addressing problems of educational inequality, and exploring alternatives to challenges such as the lack of digital devices and connectivity. Collaboration among educational authorities is necessary to develop effective strategies for integrating ICT in ELT and preparing for future emergencies. Proactive leadership is needed to better support teachers and learners in navigating the complex educational demands of the post-pandemic era. The insights from this study on EFL teachers in Mexican public primary schools may have broader relevance to other developing country contexts facing similar challenges in integrating ICT in education and adapting to emergency remote teaching situations. Further research could explore the long-term impact of the pandemic on ICT integration in ELT.

Keywords: English as a Foreign Language; Primary School; ICT; Emergency Remote Teaching; COVID-19.

1. Introducción

As the health crisis caused by the COVID -19 pandemic began to spread in late 2019, most countries closed their schools totally or partially, affecting more than 1,500 million students worldwide, including 160 million from Latin America and the Caribbean (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2020; United Nations International Children's Emergency Fund [UNICEF], 2020a). To address the problems created by the school closures, most countries took various measures to meet the needs of students and ensure the continuity of their learning (Dreesen et al., 2020; UNESCO, 2020; UNICEF, 2020b). However, a common feature was the use of emergency remote teaching (ERT), defined as the temporary shifting of instruction to an alternative mode of delivery due to crisis conditions. This is the use of distance learning solutions for instruction or education that would otherwise take the form of face-to-face, blended, or hybrid courses and will return to that format once the crisis or emergency has subsided. The main objective becomes ensuring the continuation of the learning process despite the crisis. The tools employed can be wide-ranging, including online learning platforms, video conferencing tools, digital learning resources, and more. The instructional strategies also undergo a shift, focusing on remote engagement, self-guided learning materials, and leveraging the digital world's collaborative possibilities (Hodges et al., 2020).

There is broad consensus among experts that various educational stakeholders in general, as well as teachers who teach English in ERT contexts, faced numerous technological, pedagogical, and social challenges and issues (Baptista et al., 2020; Ferri et al., 2020; Marshall et al., 2020; Trust & Whalen, 2020; Wen & Hua, 2020). For teachers, the most commonly cited challenges were those related to the knowledge they must have to better support their students' learning in emergency contexts, to such an extent that teachers in several studies reported feeling unprepared to teach remotely (Ryn & Sandaran, 2020; Wen & Hua, 2020; Zhang, 2020). Teachers' lack of preparation for remote teaching could be due to several factors that hinder teachers' effective use of technology in front of COVID -19, as reported by Ahmed et al. (2020). Other factors related to this phenomenon are those mentioned by Caldwell (2020), such as "leadership support, improved ICT infrastructure, and the teacher's own desire to use ICT" (p. 1). Raygan and Moradkhani (2020) found a significant correlation between teachers' attitudes and their level of competence in using technology based on the Technological Pedagogical Content Knowledge (TPACK) model. Finally, Dewi et al. (2020) cited lack of ICT skills, technical support, teacher training, and poor connectivity as barriers to using various Internet-based applications in their teaching and learning.

As previous studies have shown, the factors that explain English teachers' use of ICT are multiple and varied, both in face-to-face classrooms and in ERT contexts. Therefore, in this study, we analyze the extent to which English teachers in public primary schools in Mexico were using ICT in their teaching at the beginning of the pandemic and the factors that explained such uses, to determine their readiness and the challenges in the post-pandemic period.

To analyze the factors associated with ICT use, the study focused on the two most frequently cited factors in the literature (Ryn & Sandaran, 2020), namely institutional and personal factors (see Table 1). Regarding institutional factors, based on the first-order barriers proposed by Ertmer (1999) and the school-level barriers mentioned by the British Educational Communications and Technology Agency (BECTA, 2004), the most important ones were selected and classified into four groups: Resources, Teaching Conditions, Technical and Administrative Support, and Teacher Training. Regarding teachers' or personal factors, the study relied on the Unified Theory of Acceptance and Use of Technology (UTAUT) proposed by Venkatesh et al. (2003) and the Technological Pedagogical Content Knowledge (TPACK) model proposed by Mishra and Koehler (2006).

Table 1

Factors that influence the use of ICT in EFL

Institutional factors				Teachers' or personal factors	
Resources	**Teaching conditions**	**Technical and administrative**	**Teacher training**	**Acceptance and**	**Level of competence**
Computer equipment & Internet Updated resources	Classroom lighting Classroom size Screen size Range of	Equipment maintenance Follow-up & monitoring	Pedagogical Technical	Performance expectancy Effort expectancy Social influence	Technological Content Pedagogical

Note. Taken from Gómez Domínguez (2018).

2. Research Questions

In this paper, we answer the overarching research questions: Were EFL teachers from public primary schools prepared in terms of ICT use for emergency remote teaching **to face COVID-19**

Pandemic, why, and what are the challenges for post pandemic times? To answer these questions, we will first respond the following sub-questions:

- *How often were EFL teachers in public primary schools using technologies at the onset of the pandemic to support their teaching?*
- For what purposes were EFL teachers in public primary schools using ICT in their classes?
- To what extent do teachers agree or disagree that institutional and personal factors promote the use of ICT in their classes?

3. Materials and methods

3.1. Population and sample

The research took place within a state located in the northwestern region of Mexico. According to the state coordination of the National English Program, 608 English teachers worked for the program in public primary schools in the state. From this population, using a non-probabilistic sample for convenience, a sample of N = 279 teachers was selected from the three major areas of the state (North, Central, and South). 76% of the sample were women and 24% men. The teachers' age ranged from 21 to 66 years, with an average of 37 years and a standard deviation of 10.4. In terms of years of experience teaching English in public primary schools, teachers were registered between 1 month and 25 years, with an average of 7 years and a standard deviation of 4.7. Of the academic degrees, 72.2% had a bachelor's degree, 14.8% a master's degree, 1.5% a doctorate and 11.4% another formal background. In terms of workload, most of the teachers worked in one public primary school and attended eight groups.

3.2. Research instrument

A structured questionnaire was used for data collection. The instrument was divided into five sections according to the variables of the study.

3.2.1. Sociodemographic data

To define the characteristics of the population sample, the questionnaire had seven items. Three nominal questions (gender, profession, and grades currently being taught), two interval questions (age and work experience), and two ordinal questions (the most recent college degree and the total number of group teachers currently teaching) were used.

3.2.2. Use of ICT in EFL

This variable, classified as dependent, comprised 45 items that contained information about the regularity with which the teacher used different technologies. Each item was measured on a five-point Likert scale: 0=never, 1=rarely, 2=sometimes, 3=almost always, 4=always. The first two refer to low frequency of use, the following to medium frequency of use, and the last two to high frequency of use. This variable received a coefficient of .93 in Cronbach's alpha. Furthermore, through an exploratory factor analysis, the instrument demonstrates robust validity metrics (KMO = .85, X^2 = 1224.04; p. <.0001) and among the three factors (interactive technologies, active technologies and equipment or hardware) they explain 71.40% of variance.

3.2.3. Types of uses of ICT in EFL

This dependent variable registered the uses of ICT by teachers in their classrooms. The items were adjusted from the following studies (Andrade-Pulido, 2014; Area-Moreira et al., 2016; Davies & Hewer, 2012; Jung, 2015; Kerckaert et al., 2015; Solís & Solano, 2013; Uluyol & Sahin, 2014; Warschauer & Meskill, 2000). 13 items corresponding to this variable were measured using a five-point Likert scale: 0=never, 1=rarely, 2=sometimes, 3=almost always, 4=always. This variable reached a reliability of .90 in Cronbach's alpha. By exploratory factor analysis, the values suggest evidence of validity per acceptable construct (KMO = .73, X^2 = 591.52; p. <. 0001) and its configuration is one-dimensional, reaching 69.74 of the variances.

3.2.4. Institutional factors

This independent variable related to the institutional factors that, according to the authors and studies examined, had a higher incidence in ICT use, and included four indicators with 40 items. A Likert scale was used to measure four levels: 0=strongly disagree, 1=disagree, 2=agree, 3=strongly agree. The first two showed disagreement (negative frequency) and the last two agreed (positive frequency). the items were constructed based on those used in studies by (BECTA, 2004; European Commission, 2013; Pelgrum, 2001). Since most previous studies were conducted with English speakers, it was necessary to translate the items from English to Spanish and adapt them to English teachers. Upon completion of the process, a reliability analysis was performed, resulting in a measurement of .94 in Cronbach's alpha.

An exploratory factor analysis was performed with principal variables and varimax rotation, and eight dimensions were obtained to explain 64.67% of the variance and a KMO of 0.91 (X^2 = 8556; p <0.001), suggesting that the items are satisfactory for a factorial design. It should be noted that the items related to the available resources are grouped into physical resources and software resources, and the items related to the teaching conditions are grouped into three dimensions, namely: recognition of teachers using ICT, appropriate teaching conditions for the use of ICT and reasonable conditions of equipment.

3.2.5. Teachers' or personal-related factors

This independent variable comprised the personal factors reported in the literature to have a greater impact on teachers' ICT use and comprised 46 items, adapted and translated from English to Spanish, relating to two indicators out of three Obtain Variables. The first two variables, based on those proposed by Madera et al. (2012) and Venkatesh et al. (2003), measure acceptance and intention to use ICT using a four-point Likert scale: 0 = strongly disagree, 1 = disagree, 2 = agree, 3 = strongly agree. The third variable, based on Baser et al. (2015) measured the level of technological, pedagogical, and content competence of teachers using a four-point Likert scale: 0 = no proficiency, 1 = poor proficiency, 2 = good proficiency, 3 = excellent proficiency. This variable received a reliability coefficient of .93 in Cronbach's alpha.

An exploratory factor analysis with principal component analysis and varimax rotation was carried out for the dimension of acceptance and intention to use ICT and it was shown that the items are grouped into four dimensions: Performance expectancy, Facilitating conditions, Effort expectancy and social influence. Together they explain 61.76% of the variance with a KMO of 0.91 ($X^2 = 4083$; $p < 0.001$). It can be assumed that the items form the factorial structure in a stable manner. The same analysis procedure was carried out for the teachers' competence level and a distribution in three dimensions was obtained, consistent with the original scale (Baser et al., 2015), they interactively explain 62.92% of the variance (KMO of 0.91; $X^2 = 4585$; $p < 0.001$).

3.3. Procedures for data collection

In order to use time more efficiently and collect as many responses as possible, the state coordinator of the English Program was asked for permission to administer the questionnaires at training events that were organized at three of the program's headquarters in the same number of regions across the state, in which all English teachers were appointed to compulsory training. At each of the locations where the training workshops took place, the researcher introduced himself to the incoming teachers, explained the aims and importance of the study, and thanked them for their participation. They were also informed that they had the right to refuse to participate in the study without penalty. Finally, the teachers were told that they would have all the time that training day to answer the printed questionnaire. The questionnaires were collected at the end of each training session.

3.4. Procedure for data analysis

Several procedures were followed to analyze the data. For the three questions above, Excel Office 365 was used to capture data and identify and eliminate questionnaires with over 5%

unanswered items. After that, a code book was created that would represent the responses to the variables. Next, the data was exported to the IBM SPSS 22 program for Windows. At this stage, a frequency analysis of each interval variable was performed to obtain a measure of trend (median). With this value each unanswered item was imputed and checked that it does not exceed 5%, a limit in which the different imputation methods behave normally (Cuesta et al., 2013). After the preliminary analyses, a univariate analysis was performed. Univariate statistical treatment was applied to questions 1, 2 and 3. Information on frequencies and percentages was extracted from the first two, and mean values and standard deviations were pooled for the third. For the overarching questions, responses to the previous ones were compared with information about teachers' ICT use and related factors or barriers, as well as results from more recent studies on ERT.

4. Results

In this section, the main results of the study are organized according to the research questions:

4.1. How often were EFL teachers in public primary schools using technologies at the onset of the pandemic to support their teaching?

As shown in Table 2, the results related to interactive technologies show that email was the most used application, as reported by 63.1% of the teachers with a high frequency of use. Regarding active technologies, the results show that navigation tools were used the most, as reported by 66.6% of teachers with a high frequency of use. Finally, the most commonly used equipment or hardware was the printer, chosen by 57.7% of the teachers.

Table 2

Percentages and frequencies of use for each ICT (N=279)

	Low frequency				Medium frequency		High frequency			
	Never		Rarely		Sometimes		Almost always		Always	
	n	%	n	%	N	%	n	%	N	%
Interactive technologies										

	Low frequency				Medium frequency		High frequency			
	Never		Rarely		Sometimes		Almost always		Always	
	n	%	n	%	N	%	n	%	N	%
Email	31	11.1	18	6.5	54	19.4	60	21.5	116	41.6
Chat	59	21.1	39	14	46	16.5	52	18.6	83	29.7
Video	29	10.4	27	9.7	90	32.3	76	27.2	57	20.4
Active technologies										
Navigation tools	21	7.5	12	4.3	60	21.5	83	29.7	103	36.9
Search tools	21	7.5	14	5	75	26.9	76	27.2	93	33.3
Word processors	31	11.1	20	7.2	61	21.9	89	31.9	78	28
Equipment or hardware										
Printer	17	6.1	18	6.5	83	29.7	96	34.4	65	23.3
Mobile devices	25	9	29	10.4	105	37.6	58	20.8	62	22.2
Pen drive	21	7.5	24	8.6	104	37.3	72	25.8	58	20.8

Note. Low frequency= never and rarely, medium frequency= sometimes, high frequency= almost always and always.

4.2. For what purposes were EFL teachers in public primary schools using ICT in their classes?

As seen in Table 3, the results show that ICT was most commonly used to download information and resources, with 76.4% of respondents selecting always or almost always, followed by to motivate students, selected by 75.2% of teachers as always or almost always; and to record student performance and attendance, with 70.6% of teachers reporting that they always or almost always use ICT for this purpose.

Table 3

Percentages and frequencies of ICT purposes (N=279)

	Low frequency				Medium frequency		High frequency			
	Never		Rarely		Sometimes		Almost always		Always	
	n	%	N	%	n	%	N	%	n	%
Record students' performance and attendance	27	9.7	23	8.2	32	11.5	61	21.9	136	48.7
Motivate students	6	2.2	8	2.9	55	19.7	76	27.2	134	48
Download information and resources	13	4.7	5	1.8	48	17.2	109	39.1	104	37.3
Create learning environments	15	5.4	16	5.7	69	24.7	81	29	98	35.1
Provide feedback to students	26	9.3	25	9	51	18.3	81	29	96	34.4

Note. Low frequency= never and rarely, medium frequency= sometimes, high frequency= almost always and always.

4.3. To what extent do teachers agree or disagree that institutional and personal-related factors promote the use of ICT in their classes?

- Institutional level:

As Table 4 shows, at the institutional level, none of the indicators averaged 2.00 points on the Likert scale, meaning that most teachers disagree or totally disagree with the statement that the State Coordination of the English Program and the school where they work provide them with enough resources, training, decent working conditions, and technical and administrative support. In terms of relevance and impact, resource availability was the factor with the greatest negative impact (M = .53; SD = .57). The second factor with the greatest negative impact (M=.70; SD=.72) was the delivery of training programs related to the use of ICT for teaching. Teachers expressed that the training they receive is scarce and of low quality. The third factor with the greatest negative influence (M = .85; SD = .57) was inadequate teaching conditions, such as little or nonexistent incentives to use ICT in ELT, lack of time to plan activities supported by ICT, and the low quality of teaching materials. The final inhibiting factor for teachers' use of ICT was insufficient and inefficient technical and administrative support (M=1.18; SD=.58).

Table 4

Analysis of central tendency and dispersion of factors at the institutional level (N=279)

Indicator	Media	SD	Min.	Max.
Resources	.53	.57	.00	3.00
Teaching conditions	.85	.57	.00	3.00
Technical and administrative support	1.18	.58	.00	3.00
Training	.70	.72	.00	3.00

Note. Totally disagree= 0 to 0.99, disagree= 1 to 1.99, agree= 2 to 2.99, totally agree= 3.

- Personal-related level:

At the personal level, as shown in Table 5, the measure of central tendency exceeds 2.00 points on the Likert scale for the indicator performance and effort expectancy as well as technical, content, and pedagogical knowledge. This result indicates that teachers have good expectations in terms of the performance and commitment that using ICT requires of them; they consider themselves competent to deliver the content and believe they have the pedagogical and technological skills needed to deliver. The results also suggest that teachers disagree with the notion that they have the necessary facilitating conditions to use ICT in the school they work in and that they are socially influenced to use ICT.

Table 5

Analysis of central tendency and dispersion of factors at the teacher level (N=279)

Indicator	Media	SD	Min.	Max.
Performance expectancy	2.31	.50	.00	3.00
Effort expectancy	2.32	.62	.00	3.00
Social influence	1.96	.67	.00	3.00

Facilitating conditions	1.11	.67	.00	3.00
Technological competence	2.18	.62	.00	3.00
Content competence	2.54	.48	.00	3.00
Pedagogical competence	2.30	.53	.00	3.00

Note. Totally disagree= 0 to 0.99, disagree= 1 to 1.99, agree= 2 to 2.99, totally agree= 3.

5. Discussion

In this section, three specific questions from the research are discussed, to subsequently argue about the overarching questions.

5.1. The use of ICT in EFL

The analysis of the results suggests that more than half of the EFL teachers in this study almost always or always use ICT in their teaching, but those who do, use a limited variety of technological tools, as found in other studies such as those of Area-Moreira et al. (2016) and Jung (2015). It is also important to note that the technological tools used by the teachers were not specifically designed for teaching English or any other subject. Therefore, it could be argued that teachers use all available technologies even if they have little or no relation to their lessons.

5.2. Purposes for using ICT in EFL

Data analysis suggests that teachers mainly use ICT for purposes not directly related to teaching, but rather for preparatory activities such as gathering information and resources, or for school administration-related matters such as measuring students' academic performance. Although teachers also claim to use ICT to motivate students, this claim does not seem to be supported as the technologies they use can hardly be utilized for this purpose. Therefore, their responses could be interpreted to reflect what they believe to be the right answer, rather than what they are doing. These results are consistent with those of other studies such as Andrade-Pulido (2014) and Ibieta et al. (2017).

5.3. Institutional and personal factors associated with the use of ICT

- Institutional factors:

Results from this research are consistent with other studies such as Fernández-Rodrigo (2016) and Sierra-Llorente et al. (2016) who reported that teachers viewed the available resources as insufficient, often of low quality, and incompatible with students' educational needs and the curriculum. This opinion seems to be shared by many other teachers at all levels, both national and international, as well as by Fernández-Cruz et al. (2018).

Teachers perceive the lack of training as a factor hindering the use of technology. One explanation for this result could be the dizzying development of ICT, which means that by the time institutions make their diagnoses and design and implement training programs, the content is already out of date, giving teachers the impression that the training and their skills are outdated.

Teachers explained that few resources were allocated for maintenance or acquisition of peripherals or tools and that there was little monitoring of ICT incorporation. These results are consistent with those of other studies such as Andrade-Pulido (2014) and Uluyol and Sahin (2014). This also applies to Fernández-Cruz et al. (2018). In summary, the data analysis suggests that all institutional factors negatively influence teachers' ICT use, as also found in the aforementioned studies.

- Personal-related factors:

Analyzing the above results and considering the theoretical models (UTAUT and TPACK), in relation to the UTAUT model, it was found that the teachers perceived the performance and effort expectancy as positive, indicating that technology is beneficial for their classroom activities and helpful in improving the quality of their teaching, increasing their productivity, and making their classes more interesting, and as a representative of innovation. These results are consistent with those of Barbaran (2014) and Uluyol and Sahin (2014). The results regarding social influence and facilitating conditions were negative. Regarding the former, teachers believe that the state coordination of the National English Program does not recognize their efforts to use ICT in their courses. Regarding the latter, teachers do not feel that their schools have excellent technical infrastructure or that they receive adequate technical support, as reported by Solís and Solano (2013).

Referring to the TPACK model, we found that teachers perceive themselves as competent in terms of technological, pedagogical, and content-based knowledge. In terms of technological knowledge, teachers feel able to use the Internet, digital video, operating systems, hardware, and software productively. In terms of pedagogical knowledge EFL teachers who participated in this study consider themselves competent in theories, practices, methods, and cognitive processes, as well as in their knowledge of the pedagogical goals of the programs and assessment strategies. Finally, in terms of content knowledge, teachers indicated that they

were competent enough to teach children EFL, including mastery and knowledge of concepts, theories, and content. These results are similar to those of He et al. (2015) who learned from 29 interviews that teachers rate themselves as competent in using ICT, especially in using computers.

5.4. EFL teachers' readiness in terms of ICT use for emergency remote teaching to face COVID-19 Pandemic times

According to various experts, EFL teachers should master basic technological knowledge of general and specific technologies for English language teaching in order to teach in ERT contexts. Hodges et al. (2020) and Megawati et al. (2021) recommend a basic expertise in applications for planning and designing remote learning environments; teaching, learning, and curriculum development; assessment and evaluation; content management and delivery modalities; and communication. For the specific case of EFL, Hazaea et al. (2021) and Megawati et al. (2021) also recommend that teachers be aware of specific technological resources, or websites to reinforce the teaching of certain skills or aspects of the language that, although not specifically designed for ERT, can be very useful.

Comparing the results of the first two questions with Hazaea et al. (2021), Li et al. (2017), and Thi and Luy (2022) recommendations, the data suggest that at the onset of the pandemic, EFL teachers from public primary schools had a basic level of mastery of some tools for planning (such as navigation tools to gather information and resources), for teaching and developing the curriculum (such as presentation applications), for communication (such as e-mail), and for school management-related issues (such as recording students' academic achievement), judging by the ICT they actually used in their classes not by what they perceive themselves as competent. However, teachers used a limited variety of technological tools, and most of them were not specifically designed for teaching English. They used ICT as a complement to face-to-face scenarios and had little or no mastery of technologies for working in remote learning environments, such as remote management and content delivery modalities. Although teachers felt that they had the technological, pedagogical, and content knowledge needed to teach English, based on their stated instructional practices, it could be assumed that EFL public primary school teachers were not prepared in terms of ICT use for emergency remote instruction in times of the COVID-19 pandemic. Similar results were reported in a recent study also conducted in Mexico but with regular teachers (see: Baptista et al., 2020).

The reasons or causes that seem to explain teachers' lack of preparedness could be attributed mainly to institutional factors, such as insufficient and low-quality available resources, scarce and low-quality training by institutions, and inadequate teaching conditions.

5.5. Challenges for post pandemic times

There are still many challenges to overcome in order to create the best possible conditions for all students to receive an equitable and quality education in any of the above scenarios or others that may arise. However, in the case of Mexico and other developing countries with similar conditions, the main challenges, grouped by type of problem, seem to be those we describe in the following paragraphs.

Related to teachers: (a) address the causes or reasons identified in this study for teachers' unreadiness for emergency remote teaching or technology-enhanced practices, especially those related to institutional factors, such as inadequate resources, scarce and poor-quality training by institutions, and inadequate teaching conditions; (b) strengthen teachers' expectations of effort and performance, because the higher these are, the more teachers use ICT; and (c) strengthen teachers' training so that they are better able to teach in emergency contexts and in times after COVID, not only in terms of technological, pedagogical, and content knowledge, but also in terms of the knowledge they need to stay in touch with their students "by any means possible" (Okwara et al., 2020, p. 33), and to contribute to students' physical, mental, and emotional development.

Knowledge that prepares them to foster in their students' solidarity and respect for others and their environment, and to help them "build resilience to face various threats, from pandemic diseases to extremist violence to climatic uncertainty and even technological change" (Kaur & Bhatt, 2020, p. 45). In the specific case of EFL, another challenge is to train EFL teachers to use ICT specifically designed for teaching and learning specific language skills. Moreover, in the post-pandemic era, it will become even more important for ESL/EFL teachers to be up to date in eLearning, not only because of the shift to virtual classrooms, but also because "eLearning is an invaluable platform that is user-friendly and effective" (Naim & Sandaran, 2020, p. 100). With this in mind, the following areas of instruction must be considered:

- Related to school management, administrative, and support staff: train them to understand and comprehensively address the educational and socio-emotional needs and issues of students in emergency contexts (Kaur & Bhatt, 2020).

- To parents: to help them support the education of their children in emergency contexts (Ferri et al., 2020).

- To policymakers and education authorities: (a) address the problems of inequality and equity in student access to education (Kaur & Bhatt, 2020); and (b) find alternatives to address the problems of lack of equipment or limited access to ICT,

poor or no connectivity for students (especially those from the neediest and most marginalized social classes), high rates charged by Internet service providers, unreliability of Internet connections and frequent interruptions of live online streaming, and lack of physical spaces for learning in low-income families (Ferri et al., 2020; Naim & Sandaran, 2020; Okwara et al., 2020; Sparrow et al., 2020).

6. Conclusions

In conclusion, the general panorama regarding the use of ICT by EFL teachers who participated in this study is not very encouraging. We found that although these teachers claim to have the necessary knowledge, they use a limited variety of technological tools for purposes not directly related to teaching, and that the few tools they do use are not specifically designed for teaching in general or EFL. Comparing these results with Li (2022) and Thi and Luy (2022) suggestions about the skills teachers should have for emergency remote teaching, it could be concluded that they were not prepared for COVID -19 pandemic times in terms of using ICT for emergency remote teaching. When analyzing the factors that seem to explain the limited variety of ICT these teachers use at the personal level, as mentioned above, they see themselves as having a high level of technological, pedagogical, and content knowledge in using ICT, but are open to improving the quality of their teaching and believe that ICT can facilitate their work. However, participants also indicate that the institutions in which they work do not have or provide the resources needed for teaching, nor do they provide adequate teaching conditions or training.

If these and other root causes and challenges are not addressed, teachers are also unlikely to be prepared for the changes in teaching, whether in the form of remote teaching, technology-enhanced practices, or anything else that emerges in the post-pandemic period. In these times of pandemic and post-pandemic crisis, policymakers, educational authorities, and institutions need to focus more on pre-service and in-service EFL teachers. Education programs should pay attention to these findings and teachers' demands to improve the quality of ELT, teacher education, and children's learning, because even though these results were expressed by teachers from this study, they seem to be similar to those from other regions and countries, considering the similarities of our findings with those of other researchers from different parts of the world.

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