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## Critical Issues in the English Language Classroom: ICT and Online Learning in Language Education

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## Critical Issues in the English Language Classroom: ICT and Online Learning in Language Education

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### Abstract

A critical issue in education since 2020 has been the impact of the COVID-19 pandemic in the teaching and learning process. The pandemic has affected all areas of education and foreign language teaching has not been the exception. The study presents key aspects of teacher experience and training in relation to their use of ICT, which has become ubiquitous for teaching and learning during the last two years. For this study, a mixed methodology approach was used with a semi-structured questionnaire that was administered through social networks as well as WhatsApp and emails. A total of 184 responses were recorded from English teachers from all educational levels, public and private schools as well as language institutions. The results showcase that the main aspects affecting the development of classes are teachers' experience using ICT tools, training received, and technology appropriation. Moreover, the availability of a variety of tools for synchronous and asynchronous instruction, communication, and evaluation allowed teachers to rapidly transition into Emergency Remote Teaching. These results inform education stakeholders of the difficulties and opportunities brought by the COVID-19 pandemic.

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### Introduction

COVID-19 was declared a pandemic on March 13, 2020, pushing the financial, education, and health systems to take extreme measures for the changes that were to come (WHO, 2020). Around the world, confinement measures were implemented which lead education institutions to adopt remote classes as their main mode of instruction. Around 97% of students in Latin America were affected by this new educational measure (Seusan & Maradiegue, 2020). Researchers around the world have questioned the measures taken to protect students and slow the spread of COVID-19 claiming there is not enough evidence of the benefits of school closure and that the negative consequences outweigh the positives (Van Lacker y Parolin, 2020; Cifuentes-Faura, 2020; UNESCO, 2020; Álvarez et al., 2020; Álvarez Marinelli et al., 2020; Armitage & Nellums, 2020; Esposito & Principi, 2020; Li & Lalani, 2020). However, confinement measures are still put into place as schools and universities remain flexible with their instruction system with some of them going completely remote due to the omicron wave and others adopting a hybrid system.

Similar to other countries around the world, Paraguay registered its first COVID-19 case on March 7, 2020,

adopting confinement measures immediately (MSPBS, 2020; Britez, 2020). In order to support the K-12 educational community, the Ministry of Education and Science (MEC) developed an educational platform with resources for teachers, parents, and students called “Tu Escuela en Casa” (Your School at Home) (MEC, 2022); an initiative that was seen around the world in other education systems. Concerning higher education, universities shifted to remote instruction as their main mode for teaching and learning. The National Council for Higher Education (CONES) registered 2,482 academic programs that shifted to a remote modality and implemented the use of technological tools for their classes (CONES, 2022). The measures taken in Paraguay echoed those of regional countries and other places where confinement was the first and most disruptive alternative to stop the spread of the pandemic.

The literature on the use of ICT in the context of the COVID-19 pandemic has increased rapidly in the last two years. Research across the globe has reported similar results concerning opportunities and challenges offered by the mass adoption of remote learning. One thing is clear, the shift to remote teaching and the mass implementation of ICT tools has affected all stakeholders within the educational community: teachers, parents, students, school administrators, and the like. Experts have discussed the importance of looking at remote teaching during the pandemic from a critical standpoint. The strategies put into place were not meant to imitate robust education systems rather provide temporary support and continuity to the teaching and learning process (Alowais, 2021; Álvarez Marinelli et al., 2020; Arias et al., 2020; Bozkurt & Sharma, 2020; Bulut & Kirbas, 2022; Bulut, 2021; Chiraz, 2022; Hadaj, 2022; Mango, 2021; Softa, 2022; Strori, 2022). On this note, and for the purpose of this paper, the terms used to refer to education mediated by technology due to school closure will be emergency remote teaching. Hodges et al. (2020) proposed to refer to emergency remote teaching (ERT) in such a manner considering that “changes in delivery mode are those of a teacher/instructor/professor.” Moreover, although the situation affected all education stakeholders, this paper focuses on analyzing the perspectives presented by Paraguayan teachers of English as they adapt to the changes caused by school closure and ICT usage for remote instruction.

## **Literature Review**

The literature has provided vast information on ICT implementation and what it entails for education professionals. Among the most common topics, we can find the challenges that affect ICT use, both outside and inside educational institutions. On this note, the digital gap has remained the main challenge when adopting ICT for classroom development. What is more, this issue has become key as it relates to the mass adoption of ICT due to the COVID-19 pandemic (Gorski, 2005; Sims et al., 2008; Cruz-Jesus et al., 2016; Lozano & Izquierdo, 2019; Soomro et al., 2020). Gorski (2005) states that we must go beyond the simple standpoint that by providing more computers to people, we will be able to close the digital gap. To tackle the digital divide, we must consider the complexity of technology implementation as well as the dynamics of racism, sexism, classism, linguisticism, and ableism (Gorski, 2005). In terms of education, although Lozano and Izquierdo (2019) state that in the language classroom, teacher education and task planning can help maximize the use of limited resources, barriers to ICT implementation cannot only be approached from the teacher's perspective. Ertmer (1999) has been widely cited

as her research considers various factors affecting ICT integrations reflecting the complexity of the task. Namely, first-order barriers consist of external factors that influence ICT implementation such as access, training, and institutional support. Second-order barriers on the other hand consist of teacher belief in ICT use, learning, and teaching (Ertmer, 1999). Besides access, research has proven that barriers to ICT integration have remained unchanged over the years including but not limited to unstable or lack of internet connection, teacher workload, teacher belief and attitude towards ICT integration, institutional and technical support, teacher competence, and years of experience, lack of training, and stress (Wozney et al., 2006; Lu & Overbaugh, 2009; Bingimlas, 2009; Mulhim, 2014; Francom, 2016; Cahapay & Labrador, 2021; Alcalde et al., 2022).

Barriers to ICT integration also give place for opportunities to emerge. The mass implementation of ICT tools for emergency remote teaching has brought unprecedented opportunities to rethink ICT integration as well as pedagogy in teaching. Before COVID-19, researchers have already highlighted the opportunities provided by technology-mediated instruction. Through planned integration, ICT could help students become active and independent learners, foster critical thinking, and address different learning styles and needs (Foutsitzi & Caridakis, 2019; Azmi, 2017). In their study of emergency remote education amid COVID-19, Cahapay and Labrador (2021) refers to the opportunities as enablers. Factors such as self-learning in using technological tools, instructional accommodations, and school and community support are among the main results. Interestingly, research has highlighted the importance of instructional accommodations such as flexibility in content delivery and evaluation strategies as well as focusing on the learner rather than on the academic content (Sabiri, 2019). In his literature review on the use of ICT in EFL classrooms, Sabiri (2019) highlights the variety of opportunities offered by the use of ICT. Due to the vast amount of content and training opportunities, ICT provides both EFL learners and teachers with a chance to access authentic materials, meaningful and authentic interaction, professional development, personalized instruction and evaluation as well as, access to websites and content that improve language skills (Sabiri, 2019).

The dynamics of ICT and pedagogy have led researchers to investigate how teachers can better integrate ICT into their classrooms. Various models have been proposed based on research on teacher attitude, teacher competence, and levels of ICT integration among others (Rakes et al., 2006; Wozney et al., 2006; Krumsvik, 2012; Prendes & Gutierrez, 2011). Teacher Pedagogical Content Knowledge (TPACK) has gained popularity since it considers the intersection between technology, pedagogy, content, and knowledge (Mishra & Koelher, 2006). TPACK has been widely researched (Niess, 2009; Zekowski et al., 2013; Ioannou & Angeli, 2013; Lai & Lin, 2015; Hill & Uribe-Florez, 2019; Sahin, 2011). Li (2021) has applied TPACK to investigate the use of ICT in English language classrooms in high schools in China. Li (2021) reports that teachers found ICT use useful and easy to use during the COVID-19 pandemic. However, it was noted that teachers in the study were more aligned to technology and knowledge (TK) rather than with TCK, and TPK-TPACK, demonstrating difficulty in “[applying] ICT into pedagogies, classroom interaction, and monitoring” (17).

Moreover, Zou, Kong, and Lee. (2021) have reported in their study that EFL teachers' use of ICT was influenced by their beliefs, digital literacy, and learning and teaching experience. These researchers identified three types of teacher engagement, namely, disturbing, auxiliary, and integral engagement writing assessment (Zoe et al., 2021).

Similarly, Gao and Zhang (2020) state that teachers in EFL environments, consider students' needs, their own practice, and the dynamics of traditional instruction and online teaching when utilizing ICT tools. Moreover, EFL teachers in universities have developed ICT literacy through self-exposure to tutorials and self-studying, considering that different skills in language acquisition might require a different set of technology knowledge (Kanchai, 2021). Due to the surge of COVID-19 variants, emergency remote teaching has remained the best alternative to ensure continuity of education at all levels. Informed by the literature review and based on Wozney, Venkatesh, and Abrami's (2006) questionnaire about teacher attitudes toward the use of ICT in the classroom, the present study seeks to shed some light on the situation of English language teaching and ICT integration amid the COVID-19 pandemic in Paraguay.

## **Methods**

The paper is part of a larger study about class instruction, training received, and students' evaluation in the English language classroom. For this study, researchers used a mixed-methods approach with a semi-structured questionnaire that was administered through social networks, messaging applications, and email, followed up by focus group interviews with English teachers in Paraguay. A total of 184 responses were recorded from English teachers from all educational levels, public and private schools as well as language institutions. The questionnaire contained 37 open and closed-ended questions about class instruction, training received, and students' evaluation. This paper focuses on the quantitative results which comprise the academic level attained by teachers of English and its relation to the identification of, and possible solutions to, problems in ICT mediated classes; other variables included are the training received as well as years of experience, and preferences of types of activities for the development of remote classes.

## **Data Analysis**

Data was analyzed using descriptive as well as inferential statistics with the aid of SPSS v.21. To verify the hypothesis that the maximum academic level reached by teachers is a determining factor in the identification and solution of problems encountered in the development of virtual classes, an Analysis of Variance (ANOVA) was performed with a 95% confidence level. The number of problems identified by the teachers during the development of the virtual classes was considered as a response variable and the maximum academic level reached by the teachers was an explanatory factor.

The analysis was carried out with the Microsoft Excel Data Analysis tool. With the use of IBM SPSS software, we proceeded to the multivariate analysis of the classification tree to distinguish the association of explanatory variables that provide a greater probability that the problems that teachers mentioned having during the development of virtual classes increase. Moreover, a non-parametric test was used due to the arbitrary aspect of the unit of measurement that is affected by the individual perception of each respondent, in addition to the lack of formal quantitative responses, the probability distribution of the response variables cannot be evidenced, and therefore the inference is based exclusively on the sample and for its extension a follow-up study with a probabilistic sampling is necessary. IBM SPSS 21 software was used for the statistical analysis.

## Results

Table 1 shows that on average, the highest number of problems is related to the Bachelor's degree level and the lowest number of problems is related to the Doctorate degree level.

Table 1. One-factor Analysis of Variance

Summary				
Groups	Count	Sum	Average	Variance
Technical Degree (less than a 4-year college)	27	181	6.70	5.37
Bachelor's degree	62	453	7.30	11.56
Specialization	43	259	6.02	7.54
Master's degree	37	213	5.75	11.63
Doctorate degree	9	48	5.33	4

The analysis of the variability of the number of problems reported by the teachers according to the maximum academic level reached by the teachers is not a determinant, the p-value of the ANOVA = 0.0657 is higher than the standard value of 5% considered for this analysis, the sample does not provide sufficient evidence to indicate that the mean number of problems is different by the maximum academic level of the teachers and it is suggested to include more explanatory variables in future analyses of this problem (see Table 2).

Table 2. Analysis of Variability

Variance analysis						
Variance origins	Sum of squares	Degrees of freedom	Mean squares	F	Probability	Critical value for F
Academic level	83.8548342	4	20.9637086	2.24899772	0.06575326	2.4238871
Error	1612.5946	173	9.32135609			
Total	1696.44944	177				

For the analysis, 95% confidence was considered and the following variables were included: maximum level of education attained, years of teaching, level of competence in relation to computer technologies after quarantine, the institutional support you have received during this time to prepare your virtual classes has been adequate, type of training received, training in the use of ICT in pre-quarantine education, training in the use of ICT after quarantine.

Of these reported variables, the multivariate analysis of the classification tree, by the CHAID method, identified that the following are the ones that provide significant differences in terms of the average frequency of problems identified and mentioned by the teachers surveyed: training in the use of ICTs in education prior to the quarantine; understanding that teachers who were already trained in the pedagogical-didactic use of ICTs had fewer problems in the development of their classes. Years of teaching; identifying teaching experience as another determining

variable for the explanation of the number of problems encountered (see Figure 1).

The tree identifies that the starting variable is the number of hours dedicated to ICT training prior to quarantine, where for those with 10 or fewer hours of training there is a significantly higher average in terms of the average frequency of problems encountered during the development of virtual classes compared to those who had more than 10 hours of training. Of the teachers who had less than 10 hours of training, the problems were analyzed by years of teaching experience, where differences can be seen in two groups:

- Teachers with 0 to 5 years (at the beginning of their career) and 21 or more years (at the top of their career) report the least number of problems identified during the development of the pandemic.
- Teachers with 6 to 20 years of experience (full development of their career) report the highest average number of problems in the development of virtual classes.

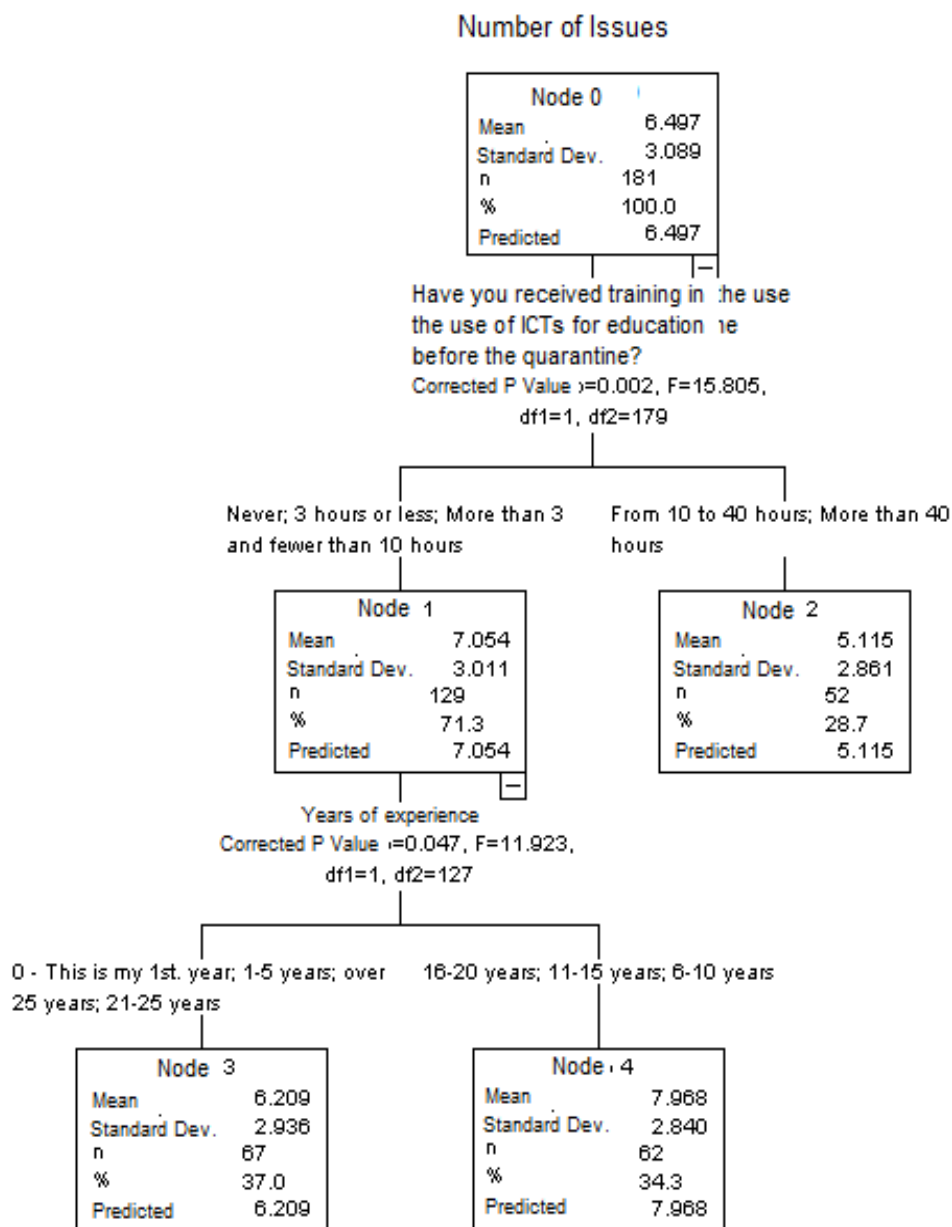


Figure 1. Classification Tree

From this report, the hypothesis arises that at the beginning of the teaching career it may be more complicated to identify the problems in the development of the classes, and at the top of the same, the problems may already be taken into account and solved beforehand. It is recommended to follow a line of research in this aspect. In order to try to reduce the multivariate dimension of the problems mentioned by the teachers, we proceeded to perform an Exploratory Factor Analysis with a confidence level of 95%.

The variables included in the analysis were the following: maximum educational level attained, years of teaching, level of competence in relation to computer technologies after quarantine, Institutional support received during this time to prepare their virtual classes was adequate, type of training received, training in the use of ICT in pre-quarantine education, training in the use of ICT after quarantine. The value of the sample adequacy KMO obtained (0.657) indicates that the Factor Analysis is adequate for the reduction of the explanatory dimension to the variable of the problem of the teaching experience in the development of virtual classes. Bartlett's test also indicates that the homogeneity of the variable allows us to intuit commonalities that will allow us to identify determining factors (see Table 3).

Table 3. KMO and Bartlett test

Kaiser-Meyer-Olkin sample adequacy measure.		0.657
Bartlett's test for Sphericity	Approximate Chi-square	153.630
	Gl	21
	Sig.	.000

The analysis identifies three factors that together explain approximately 63% of the total variability of the set of variables analyzed (see Table 4).

Table 4. Total Variability

Component	Initial eigenvalues			Sum of the saturations squared by rotation		
	Total	% variance	% accumulated	Total	% variance	% accumulated
1	2.151	30.724	30.724	1.818	25.967	25.967
2	1.207	17.242	47.966	1.525	21.792	47.759
3	1.077	15.382	63.348	1.091	15.589	63.348
4	.866	12.377	75.725			
5	.705	10.072	85.797			
6	.535	7.639	93.436			
7	.459	6.564	100.000			

The three factors have variables that are most correlated with them. The following table shows the highest correlations with each of the components (see Table 5).



Table 5. Rotated Component Matrix

	Component		
	1	2	3
Maximum educational level achieved	.129	.733	-.007
Years of teaching	.053	.822	.070
Competence level in relation to information technology after quarantine	.552	-.228	.538
The institutional support she has received during this time to prepare for her virtual classes has been adequate.	-.647	.043	.291
Type of training received	.119	-.117	-.833
Have you received training in the use of ICT in pre-quarantine education?	.679	.443	-.022
Have you received training in the use of ICT after quarantine has been declared?	.775	.220	.137
Extraction Method: Principal component analysis.			
Rotation method: Varimax normalization with Kaiser.			
a. The rotation has converged in 4 iterations.			

The factors are summarized as follows. The first factor focuses on a dimension of continuous ICT training with institutional support. We named this factor Continuous ICT training, including the questions: Have you received training in the use of ICTs once quarantine has been declared? Have you received training in the use of ICT in education prior to quarantine? The institutional support you have received during this time to prepare for your virtual classes has been adequate. The second factor presents a dimension that refers to the academic training of teachers and their years of experience. We named the factor Teaching Experience, including maximum educational level attained, and years of teaching. The third factor takes into account the degree of appropriation of ICTs mentioned by the teachers and the type of training received for distance education. We named this factor the degree of appropriation of technology and it entails the level of competence in relation to computer technologies after quarantine and the type of training received (see Table 6).

Table 6. Type of Learning Activities

	N observed	N expected	Residual
An even combination of synchronous and asynchronous	95	35.4	59.6
Synchronous only	22	35.4	-13.4
Mainly synchronous	37	35.4	1.6
Asynchronous only	8	35.4	-27.4
Mainly asynchronous	15	35.4	-20.4
Total	177		

This multivariate analysis allows us to identify that the variability of the answers given by teachers in relation to the quality, types of problems, and related issues regarding the development of classes in the virtual modality are significantly linked to the following factors: continuous training in ICT, teaching experience, and degree of

appropriation of the technology. To evaluate significant differences between the answers given by teachers regarding the development of classes in the distance modality during the year 2020, we proceeded to compare the proportions obtained in each category analyzed by means of the Non-Parametric Chi-Square Test (see Table 7).

Table 7. Contrast Statistics

	Type of learning activities
Chi-square	138.452 <sup>a</sup>
Gf	4
Sig. asintót.	.000

The test identified a significant difference between the proportion of responses by type of activities developed during the pandemic. With a p-value of less than 5%, it was concluded that this variable can produce differences in the teachers' responses and therefore the aspects indicated in the table were verified for each level of the factor considered. In each case, the difference between the proportions was also verified with the Chi-Square test. The platform most frequently used in the five levels for synchronous activities is Zoom. However, it is noteworthy that those teachers who planned their classes with a combination of synchronous and asynchronous activities and those with a majority of synchronous activities preferred the Google Meet tool. WhatsApp was the most used means of communication by teachers with their students, regardless of the level analyzed. But it stands out that teachers who planned their activities with a higher proportion of asynchronous activities preferred to use the formal communication channel of the platform used (Classroom and Moodle to a greater extent).

Regarding the activities most used to evaluate student progress, the following is evident: Teachers who scheduled classes with a combination of synchronous and asynchronous activities and those who used mostly asynchronous activities preferred Written assignments and Videos as the main elements to evaluate their students' progress. Those respondents who scheduled only synchronous activities used Presentations (ppt, Prezi) and Online discussion/forums far above all other types of work considered. Group work was a tool used in greater proportion by teachers who used exclusively asynchronous activities.

During the development of the classes in the distance modality, the teachers rated their instruction as "Improved" in all levels of the factor considered. In relation to the evaluation and feedback in the distance modality, two groups are evident: teachers who used combined synchronous and asynchronous and preferably synchronous activities have rated the experience as "Improved" while those who used the asynchronous methodology rated the experience as "Remained the same". This difference was verified by the Chi-Square test at 95% confidence.

## Discussion

The study presents the complex dynamic of the sudden shift to emergency remote teaching highlighting the main aspects of ERT such as the influence of teacher experience and training, problems encountered with the integration of ICT into the language classroom, and the pedagogical changes applied within this teaching modality. The

results indicate the relation between teachers' years of experience as well as their training with problems encountered with the use of ICT. Similarly, the study shows that the three main factors that explain most of the variability of results are teacher continuous ICT training, teacher experience, and teacher appropriation of ICT tools. Research results on teacher experience vary. On this note, a study by Judd et al. (2020) reports that teacher experience has not affected teacher use or perception of ICT tools in the classroom. Although Nikolopoulou et al. (2022) show that teachers have been using technology for 1 to 4 years during their teaching career, the results do not reveal if teaching experiences affect technology implementation. However, the teachers report that in the second year of the pandemic, students and parents had an easier time navigating virtual environments due to their familiarity with virtual learning settings (Nikolopoulou et al., 2022).

The present study does not contemplate the type of training received by teachers before or during the pandemic, however, results indicate that the more training teachers received the better they were at identifying ICT-related problems in the classrooms. Research by Li (2021) indicates that teachers faced difficulties not in using ICT tools but in incorporating them into their pedagogy. Li (2021) indicates that training received was focused on ICT use in general, not in its integration within the various subjects. But other studies show that the appropriation of technology was affected by the training received, where teachers with previous training had an easier time using technology compared to their peers with no training (Juárez-Díaz & Perales, 2021). However, Juárez-Díaz, and Perales (2021) state that even those who did not receive training did adapt to ERT and saw this as an opportunity to learn. It is important to mention that one-time professional development training on ICT is insufficient and teachers would benefit from continuous and varied training (Trust & Whalen, 2020). Training is much needed for many teachers as they struggled to shift their face-to-face content to a virtual setting (Henriques et al., 2021). That is, pedagogical use of ICT has remained one of the main issues after the mass migration to ERT during the pandemic. The context in which ERT took place differs greatly from the use of technological tools in a pandemic-free setting, hence, the difficulties faced by professionals relate to the mass and overnight migration to ERT and the lack of knowledge on how to adapt content to virtual settings.

The study showcases discrepancies in teachers' perspectives of the effectiveness of instruction during ERT with answers such as "instruction improved" or "the experience remained the same." However, the results do not reflect the reasons why teachers might hold such a view. It is possible that their attitudes and beliefs affect their perspective on the efficiency of ERT. It is important to note that although teachers might hold positive beliefs about technology use in the classroom, the rapid shift to online learning and the volatility and uncertainty reflected in the situation might have cast a negative light on the use of technology. In other words, the emotional state of professionals and how they see ERT might be influenced by their immediate context and the problems brought by the COVID-19 pandemic (Hadar et al., 2020). Within this context, other studies have linked the effectiveness of ERT with teacher beliefs indicating that student motivation, and teacher and student interaction affect teachers' perception of ERT positively (Zou et al., 2021).

On the same note, the attitudes and beliefs of teachers in relation to the implementation of ICT into the classroom have been widely researched before pandemic times. Most research agrees that teachers' beliefs affect their perception of efficient ICT implementation in the classroom which in turn influences instruction (Ertmer et al.,

2015; Lubega, 2010; Li et al., 2018; Ottenbreit-Leftwich et al., 2010; Lu & Overbaugh, 2009; Wozney et al., 2006). However, when looking at ICT implementation during the pandemic, we must remain critical of the context of all educational stakeholders and how this influences their educational experiences.

The types of activities used by teachers, as presented in the results, showcase the use of a variety of tools adopted for teaching. This coincides with previous research by Mishra et al. (2020) who report the use of a variety of tools among faculty members who participated in their study. Similarly, researchers report the use of different tools for ERT, namely Zoom, Google Classroom, Schoology, WhatsApp, and email (Hassan et al., 2020; Juárez-Díaz & Perales, 2021; Sepulveda-Escobar & Morrison, 2020). Other studies highlight the positive perspective toward ICT integration as it provides a variety of opportunities for the use of different activities which leads teachers to continue using ICT in their classrooms even after the pandemic (van der Spoel et al., 2020).

Concerning evaluation and feedback, teachers opted for online discussion, written assignments, and videos. Other research indicates that similar tools are used to assess students' progress. For example, research by Mishra et al. (2020) indicates the use of WhatsApp for assignment submission and Ramos et al. (2020) for feedback. Similarly, WhatsApp has been widely used as the main tool for communication across education levels and stakeholders (Mishra et al., 2020; Fernandez et al., 2020; Baptista et al., 2020; Juárez-Díaz & Perales, 2021). However, evaluation of students has become problematic as reported by research, since it has become more difficult to ensure academic integrity (Adedoyin & Soykan, 2020; van der Spoel et al., 2020; Hassan et al., 2020). Abduh (2020) states plagiarism and cheating are serious factors when assessing students in virtual settings. Problems with plagiarism were not reported in this study, which indicates that this might be a line of research that could be explored in the future.

## **Recommendations**

The results of the study leave room for some recommendations. Concerning research, it is recommended that future studies focus on exploring the type of training teachers receive. As stated above by the results and the literature, it is vital to know what type of training teachers receive when adopting ICT for their language classes. Knowing how to use technological tools does not equate with knowing how to adapt content to virtual settings. The latter had been done rapidly due to the pandemic which led teachers, parents, and students to struggle with their education and context. In order for the migration to virtual settings to be efficient, teachers should be supported in designing content and adjusting their subject matter using different tools at their disposal and evaluating the efficiency of tools for the delivery of instruction and or assessment. Likewise, using technology critically has become an important skill as teachers and students are constantly exposed to vast amounts of information through different sources. The evaluation of information, as well as the pertinence of certain tools, should be part of professional development programs and the focus on future research. Another aspect that stood out in the literature but was absent in the results is the concern of teachers with plagiarism issues in virtual settings. We recommend addressing the topics of assessment and evaluation across education levels and subject matter to gain a better understanding of specific challenges that certain students' ages and subjects might pose.

## **Conclusion**

The research reflects that ERT entails much more than the simple use of computers or other technological tools in the classroom. The pandemic has helped shift the focus from the use of technology to a more critical view of teaching with these tools. That is, if we consider teachers, the overnight shift to ERT has left many of them struggling in finding the balance between pedagogy and technology amid other contextual factors related to training and institutional support. Although this situation has posed unprecedented educational challenges, it has provided an opportunity to evaluate pedagogical practices at all educational levels as well as for all education stakeholders. It has also given researchers an opportunity to critically examine the use of technology in the classroom in a context of current uncertainty and ambiguity of information. Unprecedented times have helped scholars understand the importance of planning and well-designed educational experiences in virtual settings as well as pedagogical practices and the relationship between content, knowledge, and the use of technological tools. Despite the difficulties faced in times of uncertainty during the COVID-19 pandemic, opportunities in the use of ICT have been reported by several researchers (Sepulveda-Escobar & Morrison, 2020; Mutton, 2020; van der Spoel et al., 2020; Juárez-Díaz & Perales, 2021). The mass move toward ERT has led teachers to gain new experiences that they might not otherwise have access to. Teachers were able to acquire new skills in record time and discover new ways of content delivery as well as in the evaluation of students' progress. Although ERT is a temporary measure to tackle challenging scenarios, understanding and evaluating its strengths and weaknesses can help us be better prepared for future extreme events. Similarly, the literature on the use of ICT during the pandemic can help us gain much insight into the resilience of educational actors to properly address future challenges they might face. Lastly, much emphasis should be placed on student learning during times of crisis in order to better inform teaching practices in an online environment in times of crisis. By addressing these experiences from a holistic approach, we can tackle the challenges from a more efficient and humanistic approach.

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