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Training and Challenges Faced by Foreign Language Teachers During the Use of ICTs

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Abstract: Information and Communication Technologies (ICTs) have significantly transformed the education system in recent decades, providing new opportunities for both teachers and students and improving the quality of education. The purpose of this study is to analyze the opinions of foreign language teachers regarding the impact of ICTs in the classroom, the training acquired and the challenges faced during the teaching-learning experience. A study with a quantitative, non-experimental, cross-sectional, and descriptive approach was carried out using a questionnaire as a data collection instrument. The final sample consisted of 117 foreign language teachers from bilingual schools of Primary and Secondary Education in Andalusia (Spain), both public and subsidized/semi-public. Specifically, 66.6% are female and 33.4% male. The results indicate that teachers believe in the positive impact that ICTs may have on the teaching-learning process, and feel highly motivated in carrying out their work through ICTs. However, teachers continue to express the need for further and continuous training and highlight the importance of technical support and how the lack of resources can undermine the quality of foreign language teaching.

Keywords: Teachers, ICTs, Training, Foreign Language, Challenges.

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Introduction

The use of Information and Communication Technologies (ICTs) in education has gained considerable attention in recent decades. ICTs have become an integral part of education, providing a range of technological tools with the aim of enhancing the learning and teaching process (Coll, 2004; Cheng & Lai, 2019). The field of foreign languages has inevitably been affected by the vertiginous advances in new technologies since ICTs have become an effective tool for teachers and students and can be used to improve the learning experience. ICTs can provide students with access to a wealth of resources, texts, and multimedia content, making language learning more exciting, engaging, and interactive. In this way, the endless opportunities that are presented by the great scope of ICTs in the teaching of foreign languages make them a resource of great value for both teachers and students (Burbat, 2016).

However, the transformation of education does not solely result from the integration of ICTs into teaching processes. It depends on the specific uses made by teachers, making the incorporation of these resources a complex action. This complexity is largely influenced by teacher training in new technologies, emphasizing the need for both initial and continuing professional training (Cabero, 2014). The importance of this training cannot be ignored, as this may affect the proper incorporation of ICT resources in the Foreign Language classroom (Marcelo, 2007; Rodríguez et al., 2014).

On the other hand, it is worth mentioning that the attitudes and opinions of teachers and students about the use and the benefits of the use of ICTs play a fundamental role in the integration of ICTs for the transformation of teaching-learning practices (Tapia, 2018). These attitudes are highly related to satisfactory training since teachers who are adequately trained tend to have more positive attitudes towards the use of ICTs and are more likely to continue training voluntarily (Álvarez, 2020).

Although teacher training and attitudes have been widely studied in recent decades (Artacho et al., 2020; Hernández et al., 2014; Pérez & Delgado, 2019), there is an urgent need to update them as technological advances continue to emerge, creating a series of challenges for teachers on a daily basis (Hodges et al., 2020; Sánchez et al., 2020; Ollero & De Juan Fernández, 2021). Nor can we deny the weaknesses in the education system that were highlighted by the emergency situation we experienced caused by the COVID-19 pandemic and the new challenges generated by the need to put aside the teaching modality in a traditional classroom and become users of technological tools (Palominos et al., 2020; Sánchez et al., 2020). The present study commenced with the following research questions: How do teacher training and the challenges experienced influence the effectiveness of the

integration of new technologies in Foreign Language (FL) pedagogy? What do teachers think about the integration of new technologies in FL pedagogy? Although the literature on teacher training and problems faced during the use of ICTs has advanced over the last decade, there is a scarcity of studies that deal with teachers' opinions, teacher training, and challenges experienced specifically within Foreign Language classes in relation to the use of ICTs. For all these reasons, we set out as the purpose of the study to identify these specific aspects given that they can significantly influence the efficacy of integrating new technologies into FL pedagogy.

Literature Review

There is no doubt that in modern society, ICTs have evolved beyond being mere possibilities; rather, they can be considered a basic tool and of great need for both teachers and students (Fernández, 2017). However, in order to guarantee the appropriate use of technologies as a learning tool, it is essential not only to think about initial teacher training but also to promote ongoing training and its maintenance (Cabero, 2014). Several authors have carried out in-depth research into the ICT training received by teachers and have concluded that the average level reported by them is basic (A2, B1) and that the digital literacy acquired is not adequate for the new era of digitalization (Celaya et al., 2020; Díaz-Arce & Loyola-Illescas, 2021; Fernández-Cruz & Fernández-Díaz, 2016; Fuentes et al., 2019; Gómez et al., 2019; Sánchez-Cruzado et al., 2021). Similarly, other studies have highlighted that adequate and continuous training is a determining factor in guaranteeing the effectiveness of ICT implementation in the classroom (Almerich et al., 2011; Cabero & Marín, 2014; Fernández-Cruz et al., 2018; García Arango et al., 2020).

Furthermore, the attitudes and perceptions that teachers adopt towards ICTs is another area that has been studied, taking into account that these perceptions may be a determining factor in the implementation of new technologies in the classroom by teachers and can be key to improving the teaching-learning process (Muñoz-Pérez & Cubo-Delgado, 2019). As a result of this, we understand that a teacher with a more positive attitude toward ICTs will have greater availability and motivation toward the constant use of new technologies in the classroom (García & González, 2021). According to previous studies, teachers recognize the positive impact that ICTs can have in the FL class and that the frequent use of ICTs is related to higher levels of motivation and autonomy in students and higher academic performance (Huertas & Pantoja, 2016). Leon et al. (2016) point out the integration of information and communication technologies in education as part of a significant innovation for society in

general since students learn in a highly meaningful and didactic way. In the same way, Amar (2006) believes that ICTs applied to teaching favors student learning, increases their motivation, increases their interest and creativity, improves the ability to solve problems, enhances group work, reinforces their self-esteem and allow greater autonomy in learning; besides overcoming the barriers of time and space. The results of the research carried out by Culqui et al. (2022) demonstrate that the use of digital media is of great support for teachers as it stimulates the students to develop not only their communication skills in the English language but also promotes collaborative work and cooperation among peers without limits of time and space.

However, teacher attitudes can be influenced by various dimensions, including the training received in ICTs. This can lead to a sense of frustration and demotivation among teachers who are not adequately trained and do not receive continuous training (Osuna et al., 2019; Huertas & Pantoja, 2016). Even so, it is possible that teachers who are competent in the new technologies may not be able to make successful use of them since other factors such as their beliefs, self-esteem and previous experiences with ICTs may intervene (Alazam et al., 2012).

It can be understood that the lack of training and teachers' negative attitudes and perceptions towards ICTs can be considered key issues and can create challenges in the educational community. Various studies have focused on exploring the difficulties experienced by teachers during ICT use and the reasons causing these challenges. The study carried out by Sánchez et al. (2020) basically exposes that the challenges faced by teachers related to logistics and technology are the most important, followed by the pedagogical and socio-affective ones. It is also highlighted that it is practically impossible to comply with education if it is carried out through technology and even more so if there is a lack of use of ICTs in teacher training. Along with these shortcomings and difficulties, the need for technical support is considered increasingly essential since, according to findings from other studies, the lack of an ICT coordinator can generate more difficulties in the process of applying digital technologies in the classroom (Moreira, 2010; Fernández-Cruz & Fernández-Díaz, 2018).

While the lack of training and a negative attitude can affect the implementation of ICTs in the classroom, the digital gap remains one of the main factors that can cause limitations during the use of new technologies, highlighting the inequality of educational opportunities for the most disadvantaged students (Bonal & González, 2021; Cabrera, 2020). The depth of the digital gap has been emphasized even more in the post-pandemic era when students´

performance depended on the social and economic context of their families and the technological resources they possessed (Bermello, 2020). At the same time, these vulnerable groups also include students with special educational needs, whose training is greatly affected by the training of teachers in special education (Fernández-Batanero et al., 2019; Muñoz-Pérez & Cubo-Delgado, 2019). These groups are forced to face new challenges, particularly in the realm of online teaching. The reduced support and lack of teacher training can increase the risk of their exclusion (Álvarez-Hevia & Figares, 2020; Pérez-Jorge et al., 2020) resulting in numerous disadvantages in the teaching-learning process (Harris, 2020; Schmelkes, 2020; Román & Murillo 2014).

Methodology

Design

A quantitative, non-experimental, cross-sectional, descriptive study was conducted using a single-group measurement (Ato et al., 2013).

Participants

The sample was made up of Foreign Language teachers from bilingual Primary and Secondary Education schools in the Autonomous Community of Andalusia (Spain), both public and semi-public. Sampling was carried out by invitation, resulting in a total of 117 participants, with the majority being female teachers between the ages of 31 and 40 years old. More precisely, 66.6% were female and 33.4% were male. Moreover, 67.5% were teaching in a public school (n=79), while 32.5% did so in a semi-public school (n=38).

Measuring Instruments

In order to obtain the information required, the ad hoc *Questionnaire for FL teachers on the use of ICTs* was designed specifically for this study, with a total of 47 items to measure the use of ICTs in the Foreign Language classroom of FL teachers and their digital skills. This instrument not only aims to verify the current situation in various schools concerning the resources available to teachers and their training but also intends to uncover the opinions and attitudes of teachers towards ICTs. Additionally, it seeks to examine the impact of the state of alarm caused by COVID-19 on these aspects, with the purpose of determining the challenges faced by teachers and the emerging needs.

For this study, only the elements included in the Teacher training and professional support dimensions have been analyzed, as well as the Opinions and attitudes of teachers

towards ICTs before the state of alarm. The validation process yielded a *KMO* = .796 and the Bartlett test a p-value < .000. The exploratory factor analysis showed a 6-factor solution that explained 64.76% of the total variance. The questionnaire has good internal consistency since the reliability analysis gave a Cronbach's Alpha (α) value of .800.

Procedure

The development of the data collection instrument commenced following a review of the literature pertaining to the main topics addressed in this research, as well as an analysis of the existing tools concerning ICTs and teacher training. Following a comprehensive assessment of the available resources, we designed a questionnaire that aligned with the study's objectives. The items were structured into six dimensions plus five items for recording sociodemographic variables and general information about the FL class that was taught before the state of alarm. The dimensions correspond to: The use and frequency of use of ICTs before the state of alarm, digital competencies of teachers; Access to ICT before the state of alarm; Teacher training and professional support; Teachers' opinions and attitudes towards ICTs before the state of alarm and Impact of the state of alarm in the educational field.

To carry out this research, the collaboration of 819 bilingual centers of Primary and Secondary Education of the Autonomous Community of Andalusia, both public and semi-public, provided by the education delegations of this autonomous community, was requested. Due to the pandemic situation, the questionnaire was administered through Google Forms using an email that included a letter detailing the nature of the study to obtain their informed consent. A first email was sent requesting the collaboration of the foreign language teachers, and a second email with a reminder of participation. Out of the total number of schools to which the questionnaire was sent, a response was obtained from 117 Foreign Language teachers. The right to confidentiality of all participants has been respected throughout the whole process. This research was carried out during the academic year 2020-2021.

Data Analysis

The data were analyzed using descriptive, percentage, and comparative statistics. The Statistical Package for the Social Sciences (SPSS-Version 26) software was used.

Results

The general aspects of the Foreign Language classes taught by the participants are described below. Regarding their professional background, most of them have been teaching for more than 20 years (*n*=40; 34.2%) and have used new technologies on a daily basis in the development of their classes (*n*=111; 94.9%). 54.7% of the sample teaches in Secondary Education (*n*=64) and 45.3% in Primary Education (*n*=53), distributed as shown in Table 1.

Table 1. The Teaching Courses of the Study Sample

	Frequency	Percentage
First Cycle of Primary School	9	7.7%
Second Cycle of Primary School	14	12.0%
Third Cycle of Primary School	11	9.4%
ESO (Compulsory Secondary Education)	29	24.8%
Upper Secondary Education	2	1.7%
Compulsory and Upper Secondary Education	34	29.1%
First and second cycle of Primary Education	3	2.6%
Second and third cycles of Primary Education	9	7,7%
First and third cycle of Primary Education	1	0,9%
First, second and third cycle of Primary Education	5	4.3%
Total	117	100.0%

Based on the distribution of students in the Foreign Language class, it can be observed that the majority of teachers work with a ratio of 21 to 30 students per class (*n*=91; 77.8%), and 40.2% of teachers teach 3 hours per week per group. Regarding the use of ICTs, it is evident that the vast majority of teachers use ICTs voluntarily (*n*=108; 92.3%), while only 7.7% use them because the curriculum requires it (*n*=9). Concerning the amount of time that teachers have been using ICTs in their classes, more than half of the sample has been using them for more than 5 years (*n*=82; 70.1%), while only 5.1% have been using them for less than 1 year (*n*=6).

Regarding the initial training presented by the participating teachers, the majority have not received any training on how to correctly apply ICTs in the classroom during their university education (*n*=67; 57.3%). In this case, those who claim to have received training on how to apply ICTs in the classroom have done so through seminars (*n*=24; 20.5%).

Table 2. Types of Training Received to Apply ICTs

	Frequency	Percentage
None	62	53.0%
Through Seminars	24	20.5%
During some classes, lectures by teachers	9	7.7%
It was a subject	22	18.8%
Total	117	100,0

When asked whether the teachers had received any training to implement ICTs in the classroom during their professional development, the majority of the sample reported having received some kind of training (*n*=80; 68.4%).

Moreover, among the participants who claim to have undergone training, the majority of them received it through basic courses (*n*=53; 45.3%).

Table 3. Types of Training on How to Apply ICTs During Their Professional Development

	Frequency	Percentage
None	35	29.9%
Basic courses on the use of some ICTs in the classroom in general.	53	45.3%
Basic courses on the use of some ICTs focused on the foreign language classroom.	15	12.8%
Courses on the correct use of the internet and its possibilities (presentations, videoconferences, etc.).	14	12.0%
Total	117	100.0%

Moreover, the majority of teachers have voluntarily participated in ICT training activities during their professional development (*n*=89; 76.1%). They also report the presence of an ICT coordinator in their school (*n*=107; 91.5%), who facilitates the development of these activities.

Regarding the possible difficulties and problems that may arise from the use of ICTs, most teachers state that they receive help from their school (*n*=104; 88.9%). However, in general, teachers believe that they have received inadequate training during their professional development (*n*=63; 53.8%).

Although most teachers feel encouraged and confident when using ICTs (*n*=89; 76.1%), 60.7% believe that there is an insufficient number of computers and/or laptops,

which can significantly affect their teaching in the Foreign Language classroom. Likewise, it is also reported that the low quality of the internet has a significant impact on the development of FL classes (*n*=95; 81.2%). They even believe that an insufficient number of digital whiteboards greatly affects the development of FL sessions (*n*=57; 48.7%). What´s more, the study provides evidence that malfunctioning equipment has a direct impact on the development of Foreign Language classes (*n*=91; 77.8%), as well as the lack of technical support to solve these incidents (*n*=71; 60.7%). Additionally, the lack of digital skills is another element that directly affects the use of ICTs in Foreign Language classes (*n*=63; 53.8%).

On the contrary, it is observed that teachers consider the difficulty of incorporating ICTs into the curriculum to be low (*n*=47; 40.2%). The aspect that teachers believe mostly affects the incorporation of ICTs in Foreign Language classes is the lack of interest by students (*n*=58; 49.6%). Furthermore, another element that teachers consider to have a significant impact on the incorporation of ICTs in FL classes is that schools do not consider it a fundamental objective (*n*=45; 38.5%) (Table 4). Additionally, according to teachers, ICTs have a significant impact on the organization of the school schedule and school space (*n*=54; 46.2%).

Table 4. The Extent to Which the Incorporation of ICTs is not a Key Objective for the School

	Frequency	Percentage
A lot	45	38.5%
Little	32	27.4%
None	40	34.2%
Total	117	100.0%

Focusing on the opinions and attitudes of teachers towards ICTs, it can be observed that 96% of the teachers believe that ICTs in FL classes have a positive impact on student motivation. Additionally, teachers also consider that ICTs can affect positively learner autonomy levels (*n*=108; 92.3%), as well as fostering cooperative learning and communication in the classroom (*n*=107; 91.5%). Similarly, teachers also believe that ICTs help to improve creativity, innovation, and critical thinking (*n*=106; 90.6%). Moreover, teachers overwhelmingly perceive ICTs as having a positive influence on academic performance in Foreign Language subjects, (*n*=100; 85.5%), while a substantial majority,

accounting for 87.2% of participants, believes that ICTs contribute positively to the overall field of foreign language education (*n*=102). Additionally, a significant number of teachers, recognize ICTs as beneficial in fostering diversity (*n*=109; 93.2%), whereas a slightly smaller proportion, comprising 73.5% of respondents, views them as impacting the teaching of values positively (*n*=86). Furthermore, a robust 93.2% of teachers associate ICTs with a higher quality of instruction in Foreign Language subjects (*n*=109). Finally, in terms of the ideal classroom approach, the prevailing opinion among teachers is the adoption of a balanced approach that integrates both ICTs and traditional teaching resources (*n*=95; 81.2%).

Discussion and Conclusions

In this study, we analyze, from the teachers' perspective, the training acquired in Information and Communication Technologies (ICTs), encompassing both their university education and professional careers. Additionally, their opinions and attitudes towards ICTs are also explored, as well as how these viewpoints may affect the incorporation of ICTs in Foreign Language classrooms. Finally, attention is given to the challenges that arise during the use of ICTs.

Regarding the initial training received by teachers during their university education, the results show that the majority of teachers have not received any training in ICTs during this period. Those who have received some kind of training report that it has been through seminars, which confirms the previous literature that suggests that teachers have a basic level (A2, B1) of ICT knowledge (Celaya et al., 2020; Díaz-Arce & Loyola-Illescas, 2021; Fernández-Cruz & Fernández-Díaz, 2016; Fuentes et al., 2019; Gómez et al., 2019; Sánchez-Cruzado et al., 2021). Similarly, during their professional development, the majority of teachers indicated having received some type of training through basic courses, but they believe that this training has been inadequate, which is consistent with previous studies (Osuna et al., 2019; Huertas & Pantoja, 2016). Focusing on the fact that most teachers do not feel satisfied with their training, our study also coincides with other studies which state that teachers have not acquired the necessary competencies to overcome the obstacles arising from current needs (Celaya et al., 2020; Díaz-Arce & Loyola-Illescas, 2021; Fernández-Cruz & Fernández-Díaz, 2016; Fuentes et al., 2019; Gómez et al., 2019; Sánchez-Cruzado et al., 2021). The discontentment expressed due to the insufficient training received justifies the high percentage of teachers who feel the need to participate in training activities voluntarily and highlights that it is of paramount importance to consider seriously the quantity and quality of training the teachers gain and how it evolves in time and level.

In relation to attitudes and opinions of Foreign Language teachers towards the use of new technologies, almost all participants in the research have admitted to using new technologies voluntarily rather than because the curriculum requires it. This confirms that the use of Information and Communication Technologies has evolved considerably in the last decade in the Spanish education system including more training opportunities for the teachers. The actions taken during the last years with the recommendations of the European Union regarding digital competencies, as well as the initiatives taken by the Spanish government and its programs on digital literacy, have increased the exposure of teachers to digital tools, boosting their confidence and consequently their willingness to use them on their own free will, as stated in the results. Additionally, the participants state that they feel motivated and confident during the use of ICTs, a finding that does not coincide with other studies that report a lack of motivation and self-esteem among teachers during the use of these tools (Huertas & Pantoja, 2016). This discrepancy could be attributed to the increasing availability and emphasis put on ICT training and support over the past few years, which might not have been as prevalent during the periods covered by earlier studies. Moreover, the digital transformation initiatives at the national and European levels could have played a significant role in enhancing teachers' attitudes and self-efficacy towards ICT use, which may not have been adequately captured in older research. Additionally, there is no doubt that in recent years, there has been a shift in the general perception of ICTs in education since the findings of newer studies reflect a more modern and supportive environment for digital integration. Regarding FL teachers' beliefs about the impact of ICTs in the FL classroom, the majority agreed that new technologies have a favorable impact, and almost all affirmed that ICTs positively affect student autonomy levels and their performance in the FL classroom, promote cooperative learning and the teaching of values, and improves the quality of FL teaching, motivation, and creativity, as confirmed by other studies (Amar, 2006; Culqui et al., 2022; Huertas & Pantoja, 2016, León et al., 2016). Nevertheless, there is a call for balanced use of ICTs and digital resources, showing that frequent use of new technologies does not replace teaching with traditional teaching methods (Moreira et al., 2016).

Regarding teachers' responses on the challenges they face during the use of ICTs, it is observed that the majority think that technical aspects such as low internet quality, malfunctioning equipment, and lack of digital resources can hinder the teaching-learning process, especially for disadvantaged students, increasing the digital gap, as has been verified in other studies (Harris, 2020; Schmelkes, 2020; Román & Murillo, 2014). Along with this, the majority admits that the lack of technical support can harm the development of FL

classes, a finding that has come to our attention in other studies that have highlighted the catalytic role of an ICT coordinator (Moreira, 2010; Fernández-Cruz & Fernández-Díaz, 2016). As a final aspect to emphasize, it is observed that another factor affecting the use of ICTs and its effectiveness in the classroom is the lack of digital competencies among teachers, showing once again, as other authors have noted (Almerich et al., 2011; Cabero & Marín, 2014; Fernández-Cruz et al., 2018; García Arango et al., 2020), the need for continuous training that will help teachers develop these competencies and thus ensure quality education.

This work presents certain limitations related to the sampling process, which have led to a restricted number of participants in the study. Current efforts are directed toward expanding the participant pool in a future study. Additionally, it is intended to complement this study with a qualitative approach that delves into the opinions of teachers on the use of ICTs and the training received, using focus groups and interviews.

Finally, after analyzing the results of this study, we can conclude that both the attitudes and opinions of teachers, as well as the challenges they face in their daily teaching work during the use of ICTs, are mainly due to the training they have received during their initial, ongoing and future education. The literature has demonstrated that ICTs are not just a fad, but rather a lasting and integral part of today´s reality. Therefore, it is essential that "educational institutions promote teacher digital competence training by enhancing their ongoing teacher training, as well as improving the initial training of future teachers. Addressing this aspect is fundamental; thus, this is the only way to achieve a real change in teaching and learning" (Artacho et al., 2020, p. 11).

Undoubtedly, within our increasingly evolving digital landscape, the importance of professional ICT training transcends the boundaries of mere skill acquisition and serves its role as a linchpin for both personal and professional growth, enabling individuals to adapt to a constantly changing environment. Embracing these new technologies offers us a chance to seize opportunities and pioneer a future where innovation thrives and enriches the educational panorama. In essence, ICT training becomes the bridge that connects individuals with their fullest potential, towards a brighter and more promising tomorrow.

For future studies, we plan to use qualitative methodologies to deepen the understanding of the phenomenon through interviews and focus groups. Additionally, we intend to extend the study to various contexts across Spain to establish a comparative framework at the national level.

Declaration of Conflicting Interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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