



Study of teachers' digital competence in Official Language Schools in Andalusia (Spain) and its relationships with gender and age variables

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Abstract. Teachers' digital skills is an essential factor in current teaching-learning processes, especially when it comes to the teaching of additional languages. To date, previous research on the digitalization processes the teaching profession has undergone has tended to focus on the contexts of early childhood, primary, secondary and higher education, but few studies have examined Official Language Schools. In the case of Andalusia (Spanish Southern region), these educational centres are participating in the so-called Educational Digital Transformation (TDE) process, a project promoted by the Ministry of Education. In this study, 104 teachers have completed the Spanish version of the DigCompEdu Check-In questionnaire. The main results show a moderate level of Digital Competence. In addition, the results also show a lack of statistically significant differences in terms of gender variable but, on the other hand highly significant differences in terms of age. In light of these findings, possible pathways for competency development are discussed.

Keywords: digital Competences of Teachers (DCT); DigCompEdu; Foreign Language Didactics

Estudio de la competencia digital docente en Escuelas Oficiales de Idiomas de Andalucía y su relación con las variables género y edad

Resumen. Las competencias digitales docentes son un aspecto esencial en los procesos de enseñanza-aprendizaje actuales, especialmente en lo que respecta a la enseñanza de lenguas extranjeras. Hasta la fecha, las investigaciones sobre los procesos de digitalización de la enseñanza han prestado su atención en contextos educativos propios de la enseñanza infantil, primaria, secundaria y la educación superior, pero no en las Escuelas Oficiales de Idiomas, que en el caso de Andalucía están recogidas como centros que forman parte del proceso de Transformación Digital Educativa (TDE) impulsado por la Consejería de Educación. En este sentido, se propone una investigación en la que participan 104 docentes que contestan el cuestionario DigCompEdu Check-In. Así pues, los resultados muestran niveles moderados de Competencia Digital. Además, se muestra la inexistencia de diferencias significativas respecto a la variable género y alta significancia en cuanto a la edad. En este sentido, se discuten las posibles vías para el desarrollo competencial.

Palabras clave: competencia digital docente (CDD); DigCompEdu; didáctica de lenguas extranjeras

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Introduction

Nowadays, it seems obvious that education and digitalization are two closely related concepts. While the number of online students was already constantly increasing, at every educational level, before the pandemic, this figure has skyrocketed as a result of the impact that this event had on society, a development that put the digital skills of both teachers and learners to the test, literally overnight in March 2020, as many were forced to embrace online learning in order to attempt to salvage an academic year marked by the closure of all educational institutions and the lockdown of the population internationally.

This article is the starting point of a larger research project that analyzes the needs, regarding teachers' digital competence, in the educational context of the Official Language Schools of Andalusia (Spain), a context that has been little studied until now.

Many authors have advocated the use of so-called Learning Knowledge Technologies (LKT) in second languages teaching. This term was coined by Sancho Gil (2008) to refer to the evolution of what was already widely known as the use of ICT for Education.

Cabero-Almenara and Palacios-Rodríguez (2020) define teachers' digital competence as all the skills, attitudes and knowledge required of teachers in a digitalized world. In other words, the concept refers to digital competence related to the use of ICT from a didactic-pedagogical perspective in a professional educational context, and it therefore differs in many ways from digital competences used in the domestic sphere.

Kupchyk & Litvinchuk (2021) choose, from among a wide variety of potential terms, the expression "ICT-mediated instruction" to describe the practice of applying technology in the additional language classroom. This term was introduced by Blurton, who specified that such instruction involves providing content through technological means such as television, radio or a computer and network.

Many authors have argued that the education field has been enriched by these tools and have underlined the fact that the additional language teaching-learning process is not an exception. Contreras (2008) points out that the use of ICTs inevitably leads to changes in teaching methodologies, and he also notes that such technology is especially useful for the implementation of a communicative methodology in foreign language teaching, thanks to the interactivity that characterizes the use of ICT in education.

Meanwhile, ICT allows teachers to optimize their teaching strategies and methodologies, as this is the element for educational innovation *par excellence*. For example, the implementation of educational technology makes it easier to analyze student performance data, to classify educational resources, to convert existing resources into optimal tools for the customization of teaching and to adapt to classroom diversity.

It has been widely shown that including technology in the teaching-learning process helps increase

learners' motivation and autonomy, since it allows them to choose how they will use authentic material for their foreign language learning and to adapt materials to their interests and needs. For instance, students can choose between synchronous and asynchronous learning, thus creating a fully customized "personal learning environment" (PLE) (Kupchyk & Litvinchuk, 2021).

Therefore, it is essential to offer training in digital competencies to foreign languages teachers in general, and in particular to the staff of the Official Language Schools of Andalusia (Spain). We agree with Cabero et al. (2021) that, also in this sense, "the DigCompEdu model represents a paradigmatic example of Teachers' Digital Competence (TDC), describing those competence areas that teachers should develop."

DigCompEdu is a European Digital Competence Framework that was published at the end of 2017 by the Joint Research Centre (JRC) of the European Commission. This framework was created with scientific rigor with the aim of guiding the policies in this area and is intended to be adaptable for use in the creation of specific tools and regional and national training programs.

DigCompEdu is aimed at teachers at all educational levels, including those working in non-formal learning contexts. Its main objective is to serve as a general reference framework for developers of digital competence models in all member states. This framework is structured around 22 competencies organized into six areas that will be further developed (Redecker & Punie, 2017).

Cabero-Almenara and Palacios-Rodríguez (2020) summarize the main objectives of this reference framework as follows: to be a model aligned with European policies, to offer guidelines for future educational policies, to form the basis for the creation of a shared tool that can be adapted to meet the specific needs of different educational organizations, to arrive at a common language and shared ideals to facilitate dialogue between different member states when it comes to this framework, and finally, to be a point of reference in Europe and other countries regarding the importance of digital technology.

State of the art

Within the context that is being addressed here, the digitalization of the learning-teaching process especially makes sense in the context of the #PRODIG program. This program was the origin of the implementation of digital competencies in the classrooms of the southern Spanish region of Andalusia, and it was also the very first such program to include Official Language Schools in the process of implementing educational technology (Barragán et al., 2021; Cabero et al., 2020). This Digitalization Program for Educational Centers (known as TDE, by its initials in Spanish) was launched during the 2018/2019 academic year in Andalusia, and it triggered what is known today as the

Digital Educational Transformation process, which includes some improvements with respect to PRODIG in terms of student learning and the educational centers themselves.

After the impact of the national lockdown caused by the Covid19 pandemic, in July 2020 the TDE was expanded to all Andalusian schools. Included in the program was the assessment of Teacher Digital Competence through a questionnaire based on the DigCompEdu framework, as well as a self-diagnosis tool. In this way, the region of Andalusia became a European benchmark for the digitization of education (Romero & Rodríguez, 2021).

The Digitalization Program for Educational Centers includes "the set of actions aimed at improving and modernizing the processes, procedures, habits and behaviors of educational organizations and individuals who, by making use of digital technologies, develop their capacity to face the challenges of today's society" (Consejería de Educación y Deporte de la Junta de Andalucía, 2022).

The relationship between digital competence and gender and age variables has been extensively studied in a number of educational contexts. An example of this is the study carried out by López Belmonte et al. (2020), who state that "age differences among teachers is a variable that often leads to significant differences in methodological areas, especially in relation to changes in teaching-learning systems." These authors show that teachers over 40 years of age generally feel less competent and motivated to use ICTs and, therefore, teacher training for teachers over a certain age should be more specifically promoted.

During the last decade, many studies have been carried out to probe the differences in digital skills as a function of gender and age, generally finding that younger men have better digital skills and knowledge (Almerich et al., 2011; Suárez et al., 2013; Pozo Sánchez et al., 2020). Elsewhere, Rodríguez (2016) further highlighted the influence of age, as older teachers require more advice and monitoring in the implementation of ICT resources and tools for teaching. Finally, some of the conclusions drawn by these authors regarding the relationships that gender and age factors have with teachers' digital competence are the following:

- Women engage in a greater level of digital content creation than men, who stand out in technological problem solving.
- Younger teachers perform better in content creation and problem solving, and there is an inversely proportional relationship between age and competence level.

Guerrero et al. (2020) also mentions that age is an influential element, even if it is not all-determining, when it comes to teachers' digital competence. For their part, Vega et al. (2021) do consider age as a determining factor, stating that teachers of between 20 and 41 years of age have greater digital competence than those over 41 years old.

Another example related to the role of age is the

one provided by the study by Garzón Artacho et al. (2021) with a sample of lifelong learning teachers at public centers of Andalusia. In this study, the researchers found that, although gender was not associated with significant differences in terms of the use of technology in the classroom, there were differences as a function of age. Specifically, the study found that "younger teachers have better skills to navigate, evaluate and store information, as well as to communicate, interact and collaborate with other people through digital media."

For all these reasons, we also wanted to pay special attention to these two sociodemographic variables, which seem to be at least influential, in our study on the digital competencies of teachers at Official Language Schools, an educational context that has not been studied to date at the academic level.

Research objectives

The main objective of this research is to carry out a rigorous scientific research study that will help to improve the teaching processes at the Official Language Schools, especially given the impact that the pandemic may have had on the digitization processes in the aforementioned context.

For this purpose, the first objective is to assess the impact and analyze the needs of a group of teachers from Andalusian Official Language School in terms of their training and use of digital media for teaching.

Specifically, this study is structured around two specific objectives. Firstly, to determine the level of digital competence of the teachers at the Andalusian Official Language Schools participating in the DigCompEdu model, through a descriptive study; and, secondly, to find out if there are significant differences in terms of the sociodemographic variables gender and age through a comparative study.

Method

According to the patterns established by Hernández, Fernández & Baptista (2014), we can consider that the research carried out here has been carried out using a quantitative methodology, with a descriptive and correlational approach.

Participants

The sample for this study, which was recruited using convenience sampling, is made up of a total of 104 respondents from among active teachers at any of the 52 Official Language Schools in the Andalusian region. This represents 13.28% of the total population, since, according to data collected on the website of the regional government, the number of teachers at Official Language Schools for the 2021/2022 academic year was 783.

Out of the total of respondents, 25 were males (24%) and 79 (76%) were females.

Table 1. Respondents' age

4 respondents (3.84%)	–25-29 years old
26 respondents (25%)	–30-39 years old
40 respondents (38.46%)	–40-49 years old
31 respondents (29.8%)	–50-59 years old
3 respondents (2.88%)	–60 years old or older

The largest age group was of teachers of between 40 and 49 years of age (38.46%), as can be observed in Table 1.

Instrument

The instrument used for data collection was the DigCompEdu Check-In questionnaire in a version translated, adapted and validated for use in the Spanish context by Cabero-Almenara and Palacios-Rodríguez (2020). This tool was developed to identify the level of teachers' digital competence, and its main objectives are, according to these authors, "to allow educators to better understand this framework and to provide a way to self-assess their strengths and needs or areas for improvement in digital learning."

This anonymous questionnaire is made up of a total of 67 questions, 22 of which belong to the competency areas of the European Framework for Digital Competence of Teachers (DigCompEdu) that were collected by Cabero-Almenara and Palacios-Rodríguez (2020), mentioned below:

- Professional engagement: the ability to use digital skills for professional interaction and not only to improve the teaching process itself.
- Digital resources: the ability to implement, localize, optimize and make good use of digital resources and contents.
- Teaching and learning: related the competence needed to implement technology within one's teaching methodologies.
- Assessment and feedback: the use of digital tools to evaluate students and improve existing processes for this purpose.
- Empowering learners: the promotion of student participation and learning through digital media, paying special attention to the individualities, interests and needs of each student.
- Facilitating learners' digital competence: helping students to manage their own digital competence as citizens of the world.

The remaining 45 questions gather data on certain sociodemographic variables of the respondents in order to study the research objectives proposed in this project. Among them are the ones that we are examining in this study, gender and age.

In order, among other things, to ensure the reliability of the responses, the questionnaire was launched through digital media (corporate email) to all teachers at Official Language Schools in Andalusia in March 2022. Firstly, this was done through the management teams of each of the 52 centers involved and, in a second round, the recruitment was completed by con-

tacting the different language departments and teachers of each of the schools. Dissemination has also been done through other digital media such as social networks (LinkedIn and Facebook and Whatsapp groups). Throughout, the participants were made aware of the context and objectives of the research, as well as the practical value that the DigCompEdu Check-In instrument has for their teaching work.

Data procedure and analysis

The reliability, discriminant validity and convergent validity of the questionnaire were calculated using the following coefficients: Cronbach's alpha, McDonald's Omega, Composite Reliability (CR), Average Variance Extracted (AVE) and Maximum Shared Variance (MSV). The construct validity of the test was calculated by means of an exploratory factor analysis (EFA). The method used for factor selection was the principal components method. The factors obtained were orthogonally rotated using the Varimax method with Kaiser normalization. Once the number of factors had been determined, a confirmatory factor analysis (CFA) was performed. Confirmatory factor analysis is used to check whether the theoretical measures of the model are consistent through the modeling of diagrams and the use of structural equations. In other words, it tests whether the data fit the hypothesized measurement model yielded by the exploratory factor analysis. The method used to test the theoretical model was weighted least squares (WLS), which provides consistent estimates in samples that do not meet normality criteria. At the same time, it has been verified that the data are not normally distributed through a descriptive study in which skewness and kurtosis have been taken into account. The Kolmogorov-Smirnov goodness-of-fit test confirmed this finding, with significance (p-value) equal to .000 for all items (non-normal distribution). After this, a descriptive analysis was performed, providing statistics of central tendency (mean) and dispersion (standard deviation). Finally, a nonparametric contrast analysis was applied to the variables under study:

- Mann-Whitney U test with mean rank analysis (gender variable).
- Kruskal-Wallis H test with mean rank analysis (age variable).

Results

After the data analysis described above, we proceeded to study the values obtained. First, we assessed, the reliability and validity factors of the sample. Then, a descriptive analysis was carried out to meet one of the specific objectives mentioned above, which was to study the level of digital teaching competence. Finally, a comparative study of the variables gender and age was carried out in this section to meet the second specific objective of this study. Each of these factors is discussed in greater detail below.

Table 2. Reliability statistics

	Cronbach's Alpha	McDonald's Omega
Professional Engagement (A1)	.801	.820
Digital Resources (A2)	.876	.818
Digital Teaching and Learning (A3)	.898	.816
Assessment and Feedback (A4)	.829	.823
Empowering Learners (A5)	.839	.839
Facilitating Learners' Digital Competence (A6)	.901	.912
Total	.979	.987

Reliability

The reliability of the questionnaire was calculated by means of Cronbach's Alpha and McDonald's Omega coefficients, both globally and for each of its areas. Results obtained are shown in Table 2.

According to O'Dwyer & Bernauer (2014), values greater than .7 indicate high levels of reliability of the questionnaire, both in terms of the instrument as a whole and for the various subsections.

Validity

Table 3 shows the obtained and reference values for model fit according to Lévy Mangin et al. (2006): Chi-Square (CMIN), goodness-of-fit index (GFI), parsimonious goodness-of-fit index (PGFI), normalized fit index (NFI) and normalized parsimonious fit index (PNFI).

Table 3. Adjustment Indexes

Index	Result	Adjustment
CMIN	382.128	CMIN <500
GFI	.979	GFI >.7
PGFI	.786	PGFI >.7
NFI	.926	NFI >.7
PNFI	.806	PNFI >.7

Table 4. Convergent and discriminant validity of the model

Area	CR	Adjust.	AVE	Adjust.	MSV	Adjust.
A1. Professional Engagement	.789		.642		.552	
A2. Digital Resources	.746		.673		.523	
A3. Digital Teaching and Learning	.864	CR > .7	.69	AVE > .5	.562	MSV < AVE
A4. Assessment and Feedback	.858		.684		.418	
A5. Empowering Learners	.775		.643		.564	
A6. Facilitating Learners' Digital Competence	.859		.679		.405	

Table 5. Mean and standard deviation of the items and areas of the questionnaire, that was originally disseminated in Spanish

	Mean	SD
Totality of the instrument (digital teaching competence)	2.37	.559
Professional Engagement (A1)	2.66	.680
A1.1. I use different digital channels to improve the communication with learners and colleagues, e.g., email, instant messaging apps such as Whatsapp, blogs, school website...	2.60	.688
A1.2. I use digital technologies to work together with colleagues inside and outside my educational organization	2.22	.930
A1.3. I actively develop my digital competence for teaching	2.68	.956
A1.4. I am aware of and participate in online training opportunities, such as online courses, MOOCs, webinars, virtual conferences...	3.13	.991
Digital Resources (A2)	2.45	.689
A2.1. I use different internet sites and search strategies to find and select a range of different digital resources	2.59	.805
A2.2. I create my own digital resources and modify existing ones to adapt them to my needs.	2.55	1.083
A2.3. I effectively protect sensitive content, e.g., exams, grades, personal data...	2.21	.978

(Continues)

In addition, the Composite Reliability (CR), Average Variance Extracted (AVE) and Maximum Shared Variance (MSV) coefficients are also calculated.

Table 4 shows the results, as well as the reference values taken for the model fitting (Carmines et al., 1979). All the figures obtained are in agreement with the reference values. Therefore, the reliability of the model (CR) as well as its convergent (AVE) and discriminant validity (MSV) are demonstrated.

Descriptive analysis

As shown below, the analysis of central tendency (mean) and dispersion (standard deviation) was performed. Table 5 shows the mean values and standard deviations recorded by the participating teachers for the different questions and the globality of all areas.

In order to correctly interpret these data, it is important to bear in mind that the response interval ranges from 0 to 4, which results in a total of five response options, from the lowest value of 0 to the highest possible score of 4.

The average value registered by the teachers in the totality of the instrument was 2.37, with a standard deviation of .56, a value that indicates that they have positioned themselves in the center of the range of possible scores. Therefore, the perception they have of their mastery of their digital teaching competence is moderate.

Ordered from lowest to highest, the results by areas are as follows:

- Area 6 (A6): Facilitating Learners' Digital Competence (1.87)
- Area 4 (A4): Assessment and Feedback (2.32)
- Area 3 (A3): Digital Teaching and Learning (2.43)
- Area 2 (A2): Digital Resources (2.45)

Table 5. Mean and standard deviation of the items and areas of the questionnaire, that was originally disseminated in Spanish (*continued*)

	Mean	SD
Digital Teaching and Learning (A3)	2.43	.709
A3.1. I carefully consider how, when, and why to use digital technologies in teaching, to ensure that they are used with added value	2.52	1.039
A3.2. I follow learners' activities and interactions in the collaborative online environments we use	2.77	1.002
A3.3. When learners work in groups, they use digital technologies to help them learn and effectively accomplish course tasks	2.17	.965
A3.4. I use digital technologies to allow students to plan, document and monitor their learning themselves, e.g., quizzes for self-assessment, ePortfolios for documentation and showcasing, online diaries/blogs for reflection	2.26	.910
Assessment and Feedback (A4)	2.32	.700
A4.1. I use digital assessment formats to monitor student progress	2.25	.875
A4.2. I analyze all data (information) available to me to timely identify students who need additional support. 'Data' includes Students' engagement, performance, grades, attendance, activities and social interactions in (online) environments. 'Students who need additional support' are: Students who are at risk of dropping out or underperforming; students who have learning disorders or specific learning needs, students who lack transversal skills, e.g. social, verbal or study skills.	2.30	.856
A4.3. I use digital technologies to provide effective feedback	2.40	.894
Empowering Learners (A5)	2.52	.755
A5.1. When I create digital assignments for learners I take into account and address potential practical or technical difficulties e.g., equal access to digital devices and resources interoperability and conversion problems lack of digital skills	2.97	1.105
A5.2. I use digital technologies to offer students personalized learning opportunities e.g., I give different students different digital tasks to address individual learning needs, preferences and interests	2.10	.097
A5.3. I use digital technologies for students to actively participate in classes	2.49	.709
Facilitating Learners' Digital Competence (A6)	1.87	.702
A6.1. I teach students how to assess the reliability of online information and to identify misinformation and bias	1.58	.978
A6.2. I set up course tasks which require learners to use digital means to communicate and collaborate with each other or with an outside audience	1.84	.867
A6.3. I set up course tasks which require students to create digital content e.g., videos, audios, photos, digital presentations, blogs, wikis	2.25	.757
A6.4. I teach students how to behave safely and responsibly online	1.49	1.030
A6.5. I encourage students to use digital technologies creatively to solve concrete problems e.g., to overcome obstacles or challenges emerging in the learning process	2.18	.864

- Area 5 (A5): Empowering Learners (2.52)
- Area 1 (A1): Professional Engagement (2.66)

These values indicate that, in general, teachers present average levels in all areas, without significantly highlighting any of them, which leads us to conclude that there is a need for training among the sample in all of the aforementioned areas.

Contrast of the analyzed sociodemographic variables

Gender contrast

As shown in Table 6, the results obtained from the Mann-Whitney U test led us to affirm that there are no differences as a function of gender in teachers' digital competence in the educational context of the Official Language Schools of Andalusia, neither in overall terms, nor for any of the areas in particular.

Age contrast

In the case of the variable age, there is a significant value in the competency area (D_E Empowering Learners). Closely following this, it is also worth noting the

value of the competency area D_C (Digital Teaching and Learning), where there is also a significant difference in terms of the age of the sample, as shown in Tables 7 and 8.

Conclusions

As a starting point for the conclusions of this study, and considering that the main purpose was, on the one hand, to discover the level of digital competence of the participating teachers of Andalusian Official Language Schools based on the DigCompEdu model, through a descriptive study; and on the other hand, to investigate whether there were significant differences as a function of the sociodemographic variables gender and age through a contrastive study, the results allow us to draw different conclusions in this regard, which are discussed below.

Firstly, the study has a high level of reliability and validity in terms of the results of the sample obtained. These data allow us to compare the results with other ones from related studies (Cabero-Almenara et al., 2021, 2022).

Table 6. Gender contrast and teachers' digital competence

	Mann-Whitney U	Wilcoxon W	Z	Asymptotic significance (bilateral)
Professional Engagement (A1)	853.5	1204.5	-1.298	.194
Digital Resources (A2)	931	4091	-.724	.469
Digital Teaching and Learning (A3)	839	1190	-1.407	.159
Assessment and Feedback (A4)	960	4120	-.504	.614
Empowering Learners (A5)	960	1311	-.503	.615
Facilitating Learners' Digital Competence (A6)	976	4136	-.381	.703
DTC total	968	1319	-.438	.661

Table 7. Significant relationships between age variable and TDC

	Kruskal-Wallis H	gI	Asymptotic significance
Professional Engagement (A1)	4.518	4	.340
Digital Resources (A2)	3.535	4	.473
Digital Teaching and Learning (A3)	9.147	4	.058
Assessment and Feedback (A4)	5.782	4	.216
Empowering Learners (A5)	10.594	4	.032
Facilitating Learners' Digital Competence (A6)	4.157	4	.385
DTC total	6.48	4	.166

Table 8. Detailed data regarding age related to A5 (Empowering Learners)

	Ranges		
	How old are you?	N	Average range
Empowering Learners (A5)	25-29 years old	4	80.13
	30-39 years old	26	55.08
	40-49 years old	40	54.46
	50-59 years old	31	42.68
	60 years old or older	3	85.50
	Total	104	

Regarding the gender variable, it can be considered that, as other similar studies have shown, there are no significant relationships between gender and digital competencies in the Official Language Schools of Andalusia, although it is true that, for the study in question, the high percentage of female participants (76%) is noteworthy.

In relation to age, the present research leads us to conclude that, although there are no significant differences regarding the instrument as a whole, measuring the general teachers' digital competence in the surveyed sample, there were significant differences in some of the individual areas, specifically in D_E (Empowering Learners). To be more specific, the youngest group (aged 25-29) and the oldest group (aged 60 and over) demonstrate the highest level of digital competence for this area. These results coincide with the study by Guillén-Gámez et al. (2021) at the university level.

The limitations of this study are linked to two different factors. The first one is the difficulty involved in reaching the sample. As mentioned above, research regarding contexts belonging to the Special Regime Education system is very rare. However, the obtained sample allows us to draw some general conclusions, since it represents all Andalusian provinces. The second difficulty is the fact that the degree of reliability of the instrument depends on the self-perceptions of the participants. Therefore, for future studies, it is proposed to carry out an analysis of the digital competence of the teaching staff using qualitative instruments that allow a deeper analysis within the analysed context: the Official Language Schools in Andalusia. As other future lines of research, our proposal is, on the one hand, to focus attention on other types of sociodemographic variables such as years of teaching experience, the geographical environment to which educators belong or the impact of lockdown on the implementation of educational technology within their daily

professional practice (García-Prieto et al., 2022). We would also like to extend the study to foreign language teachers both from Official Language Schools in other communities and from other educational contexts such as universities, vocational training, non-formal education, etc.

Finally, and taking into account the need for teacher training in digital competences, in this particular case, of the Official School of Languages in Andalusia, this study provides additional evidence for the recommendations of similar research (Barragán et al., 2021). For example, it is worth considering the creation of a training environment that, using the architecture of t-MOOC, could offer free training for teachers at different levels, linked to the European Framework for Digital Competence in Teaching DigCompEdu. This would offer the possibility of significantly minimizing, as far as possible, the differences and needs found and expressed by this group.

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