

# Teaching with Artificial Intelligence: degree of acceptance of educational AI in the Latin American university context\*<sup>1,2,3</sup>

Carmen Llorente-Cejudo<sup>4</sup>  
Orcid: 0000-0002-4281-928X  
Raquel Barragán-Sánchez<sup>4</sup>  
Orcid: 0000-0001-6336-2728  
Antonio Palacios-Rodríguez<sup>4</sup>  
Orcid: 0000-0002-0689-6317  
Victoria Fernández-Scagliusi<sup>4</sup>  
Orcid: 0000-0002-2054-6874

## Abstract

The remarkable advance of AI, especially after the introduction of ChatGPT3 in the educational field, has stimulated research on attitudes, levels of acceptance, available training and the impact of pedagogical beliefs on the use or rejection of AI by students and teachers. The aim of this study is to analyze the degree of acceptance of Educational Artificial Intelligence (DAI) by teachers, its use and the factors influencing these decisions. This was done through an ex post facto research design with a sample of 425 participating teachers. One of the most relevant findings is a general tendency among teachers to adopt constructivist positions for developing training activities with EdAI. The robustness and consistency of the measuring instrument used are noteworthy. The data indicate that the level of EdAI acceptance among teachers is very high and that those with constructivist beliefs show a greater predisposition to integrate these technologies into their teaching practice, compared to those who maintain more traditional or transmissive orientations.

## Keywords

Educational artificial intelligence – ChatGPT – Level of acceptance – Constructivism.

\* English version by María Victoria Fernández Scagliusi. The authors take full responsibility for the translation of the text, including titles of books/articles and the quotations originally published in Portuguese.

**1-** This article has the ethical guarantees stipulated in the Declaration of Helsinki. All participants have given their consent.

**2-** Research Data Availability: Data availability: The entire dataset supporting the results of this study was made available in ZENODO\* and can be accessed at: <https://doi.org/10.5281/zenodo.15727541>

**3-** Funding: This study has been funded through the State Programme to Promote Scientific and Technological Research and its Transfer, within the framework of the State Plan for Scientific, Technical and Innovation Research 2021-2023. Ministry of Science and Innovation. Reference number: PID2022-1364300B-I00.

**4-** Universidad de Sevilla, Departamento de Didáctica y Organización Educativa, Sevilla, Spain. Contacts: karen@us.es; rbarragan@us.es; aprodriguez@us.es; victoriafs@us.es



<https://doi.org/10.1590/S1678-4634202551290821en>  
This content is licensed under a Creative Commons attribution-type BY 4.0.



## Introduction

Teachers' perceptions regarding Artificial Intelligence in the educational field (EdAI) have become a topic of increasing interest, as addressed in various recent studies. These investigations provide a more comprehensive understanding of teachers' beliefs and attitudes toward EdAI, highlighting the importance of considering multiple factors that influence its acceptance and use in different educational contexts.

In general terms, it can be affirmed that the integration of Information and Communication Technologies (ICT) into the educational process has been a relevant area of analysis within didactic research (Prestridge, 2012), evolving into studies focused on specific aspects such as the influence of the TPACK model on the integration of ICT in teaching (Ifinedo *et al.*, 2020), perceptions of the effectiveness of video in language teaching (Waluyo; Apridayani, 2021), the decision to integrate or not integrate ICT into teaching practices (Li *et al.*, 2019; Hoareau *et al.*, 2021), how perceptions about technological competencies affect their integration (Cheng *et al.*, 2022; Palacios-Rodríguez *et al.*, 2025), the potential of ICT to support learning among students with dyslexia (Bice; Tang, 2022), its effectiveness and applicability at early educational levels (Hoareau *et al.*, 2021), as well as its viability across various disciplines (Garcia *et al.*, 2022).

These studies, in summary, have emphasized the importance of teachers' beliefs in the application of ICT. The conclusions of Tondeur *et al.* (2017), derived from a meta-analysis on this topic, point out: (1) the existence of a reciprocal relationship between pedagogical beliefs and the specific use of ICTs; (2) the identification of certain beliefs as perceived obstacles; (3) the correlation between specific beliefs and specific types of ICT use; (4) the significant role of beliefs in teachers' professional development; and (5) the importance of school context in shaping beliefs about ICT.

The notable advance of AI, particularly after the introduction of ChatGPT-3 in the educational field, has encouraged research into attitudes, acceptance levels, available training, and the impact of teaching beliefs on students' use or rejection of AI in educational practice. It is important to underscore the need for teacher training in AI, both for instructional and research purposes (Alenezi *et al.*, 2023; Tongfei, 2023; González-Mayorga *et al.*, 2024; Temitayo *et al.*, 2024).

These beliefs are influenced by factors such as teachers' age. A study by Yuk & Lee (2023) explored perceptions, experiences, knowledge, concerns, and intentions to use generative AI (GenAI) among Generations Z (Gen Z) students and Generations X (Gen X) and Generations Y (Gen Y) teachers in higher education. The findings revealed that, although teachers from generations X and Y recognize the potential benefits of GenAI, they express concerns about over-reliance and ethical and pedagogical implications, emphasizing the need for guidelines and policies to ensure responsible use of this technology.

Various studies highlight the importance of teachers' beliefs in the context of AI education. According to Adekunle *et al.* (2022), teachers' confidence in their ability to teach AI significantly predicts their intention to integrate AI into their teaching, underscoring the perception of its educational usefulness and relevance. This phenomenon is not homogeneous but varies depending on the discipline taught and the educational level (Delgado *et al.*, 2024).



Uygun (2024) conducted a literature review to examine teachers' beliefs about the use of AI in education. They identified key factors influencing teachers' acceptance of this technology, emphasizing the importance of understanding its prospects for effective adoption in educational settings.

The acceptance of AI by teachers is influenced by a wide range of factors, as several empirical studies have shown. For example, Ma & Lei (2024) conducted a study in China analyzing factors influencing teachers' acceptance of AI. Similarly, Bacci & Caviezel (2011) also investigated how teachers perceive and accept AI in the educational context, using ClarityTutor as a case study.

In addition, several studies have integrated theoretical models of technology acceptance to better understand teachers' attitudes toward AI. Al Darayseh (2023) applied the Technology Acceptance Model to examine teachers' acceptance of AI-based educational systems. Likewise, An *et al.* (2023) proposed an integrative model that considers multiple factors that affect the acceptance of AI in teaching.

Other studies have drawn on psychological theories to examine teachers' acceptance of AI in specific educational contexts. Chocarro *et al.* (2023) integrated the Technology Acceptance Model and Social Cognitive Theory to analyze the acceptance of AI in primary education. Likewise, the acceptance of AI by teachers can vary depending on the educational context and the specific characteristics of the technology, as evidenced in studies by Ayanwale *et al.* (2022) and Crompton & Burke (2023) across different educational levels.

In this context, the intention to continue using AI in education is influenced by the interaction of multiple factors. Zulkarnain *et al.* (2023) investigated the factors influencing teachers' intention for continuity to use AI education systems, integrating the Expectation Confirmation Model and the Task-Technology Fit Model.

Moreover, it has been shown that teachers' beliefs about learning conceptions significantly influence how and how often they use ICT in teaching. Studies have addressed both general ICT usage (Prestridge, 2017; Bahçivan *et al.*, 2018; Li *et al.*, 2019; Arancibia-Herrera *et al.*, 2024), as well as specific technologies such as mixed reality (Marín *et al.*, 2023), Moodle (Arancibia, 2022), or interactive whiteboards (Burke *et al.*, 2018). These studies highlight the complexity of factors affecting technology integration in educational settings and demonstrate that teachers' pedagogical beliefs play a key role in the adoption and effective use of technological innovations in education.

In the psychoeducational field, two predominant paradigms are recognized regarding conceptions of learning and teaching: behaviorism and constructivism. While behaviorism holds that knowledge is directly transmitted to the student, constructivism proposes that knowledge is actively constructed by the learner through personal experience and social interaction (Arancibia *et al.*, 2020). In this context, Choi *et al.* (2023) identified that teachers with a constructivist orientation are more likely to incorporate AI into education compared to those with a more traditional or transmissive approach.

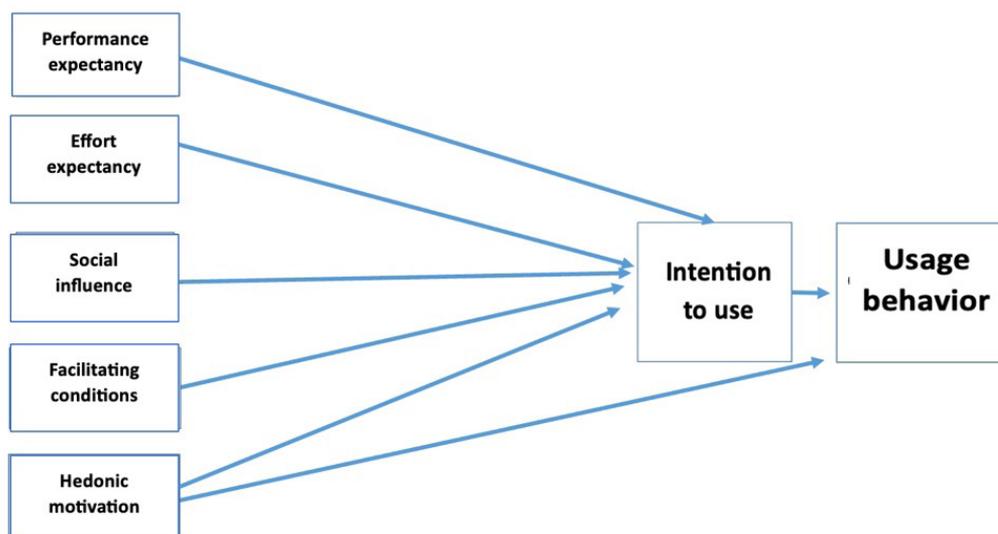
Uygun (2024) conducted a literature review to examine teachers' beliefs about the use of EdAI. The study identified key factors that influence teachers' acceptance of this technology, highlighting the need to understand their perspectives for effective adoption in educational settings.

Closely related to the issue of beliefs are studies focused on the “degree of acceptance of technologies” by teachers. In this regard, different models have been used to analyze the degree of acceptance of a technology by its potential users. The level of acceptance of a technology by its potential users. The first of these was the Technology Acceptance Model (TAM), developed by Davis (1989), which posits that the intention to use a technology is influenced by two main dimensions: perceived usefulness and perceived ease of use. These, in turn, shape attitudes toward ICT, determining both the intention to use and the actual usage. This model has been employed to analyze various technologies, such as online learning (Rodríguez-Sabiote *et al.*, 2023), augmented reality (Barroso *et al.*, 2018) or immersive reality (Cabero *et al.*, 2023).

In contrast to this model, Venkatesh *et al.* (2003), by integrating various acceptance models (including TAM), formulated the Unified Theory of Acceptance and Use of Technology (UTAUT). This model seeks to explain technology acceptance and usage based on four core dimensions: performance expectancy, effort expectancy, social influence, and facilitating conditions. The model was later revised by Venkatesh *et al.* (2012) with the so-called UTAUT2, incorporating three new dimensions: hedonic motivation (the enjoyment derived from using the technology), price value, and habit (the extent to which a person uses the technology automatically). A model that, as suggested by different authors (Tamilmani *et al.*, 2021; García de Blanes *et al.*, 2022) it is increasingly used by researchers compared to previous proposals.

It should be noted that in our study we have only considered the first of the new variables introduced in the UTAUT2. The variables of price value and habit were excluded, as they were not deemed relevant to the study’s objectives. Therefore, the model was structured as presented in Figure 1.

**Figure 1** - UTAUT2 model used in the study



Source: Authors elaboration.



According to various studies (Gansser; Reich, 2021; Al-Adwan; Al-Debei, 2023; Marikyan; Papagiannidis, 2023), “performance expectations” is understood as the degree to which an individual considers that the use of Artificial Intelligence in Education (AIEd) will enhance their performance in the tasks they carry out. “Effort expectations” refers to the extent to which EdAI is perceived as easy to use and not requiring excessive effort. “Social influence” implies the degree of influence exerted by one’s immediate environment (family, friends, colleagues) in the adoption of EdAI. “Enabling conditions” encompass the availability and quality of resources and support that make the adoption and use of EdAI easier. “Hedonic motivation” is related to the pleasure or enjoyment derived from the use of EdAI. “Intention to use” is defined as an individual’s conscious willingness to incorporate EdAI into their educational practice, while “usage behavior” describes the extent to which this technology is employed in their professional teaching activities.

It should be noted that both the UTAUT and UTAUT2 models have been used to examine the degree of acceptance of various technologies. Research based on the UTAUT model has explored the acceptance of the metaverse (Lee; Kim, 2022), mobile devices (Mojarro *et al.*, 2019) and virtual reality (Ustun *et al.*, 2023). On the other hand, UTAUT2 has been applied in the analysis of technologies such as augmented reality (Huang, 2020), the metaverse (Al-Adwan; Al-Debei, 2023), virtual learning platforms (Zacharis; Nikolopoulou, 2022) and the use of artificial intelligence (Gansser; Reich, 2021) including its implementation in educational contexts (Strzelecki, 2023).

The present study aims to understand whether teachers are willing to use Educational Artificial Intelligence (EdAI), whether they are actually using it, and what factors influence these decisions. These factors include opinions from their social environment (friends and colleagues), prior experience with the technology, perceived usefulness and ease of use, as well as the teachers’ own pedagogical beliefs.

## Method

### Research objectives

The research was conducted during the 2023–24 academic year with faculty from the Universidad Tecnológica Particular de Loja (Ecuador), and it aimed to achieve the following general objectives:

- a) To determine the degree of acceptance of Educational Artificial Intelligence (EdAI).
- b) To identify the level of pedagogical beliefs held by faculty members regarding EdAI.
- c) To analyze whether there is a relationship between teachers’ pedagogical beliefs and their “Usage Behavior” in relation to EdAI.

To answer these objectives, an “ex post facto” study was carried out (Hernández-Sampieri; Mendoza, 2018).



## Sample

A total of 425 teachers participated in the research, of whom 233 were men (54.8%) and 192 were women (45.2%). The age distribution is presented in Table 1.

**Table 1** - Age of teachers

Age range	Frequency	Percentage
25-30 years	30	7,1
31-40 years	163	38,4
41-50 years	157	36,9
51-60 years	61	14,4
More than 60 years	13	3,1
Under 25 years old	1	,2
Total	425	100,0

Source: Authors' own elaboration.

Faculty members belonged to different areas of knowledge, as shown in Table 2.

**Table 2** - Area of knowledge where the teaching staff taught

Years	Frequency	Percentage
Arts & Humanities	78	18,4
Sciences	68	16,0
Health Sciences	54	12,7
Social and Legal Sciences	154	36,2
Engineering and Architecture	65	15,3
Total	425	100,0

Source: Authors' own elaboration.

The teaching staff carried out their professional activity in the different modalities in which they taught at the UTPL (Table 3).

**Table 3** - Teaching modality

Modality	Frequency	Percentage
Aloof	201	47,3%
Both	114	26,8%
Face	110	25,9%
Total	425	

Source: Authors' own elaboration.



When asked to rate their own technical and pedagogical proficiency with Information and Communication Technologies (ICT) on a scale from 0 to 10, the faculty reported an average score of 8.04 for technical proficiency (with a standard deviation of 1.41) and 7.96 for pedagogical proficiency (with a standard deviation of 1.48).

### Data collection instrument

The data collection instrument consisted of three main components. First, items were included to gather information about the respondents' characteristics: gender, age, academic affiliation, and self-perceived technical and pedagogical competence in the use of Information and Communication Technologies (ICT). Second, the level of acceptance of Artificial Intelligence in Education (EdAI) was assessed using a scale adapted from the instruments developed by Huang (2020), Al-Adwan and Al-Debei (2023), and Strzelecki (2023). The third component explored teachers' pedagogical beliefs using a scale inspired by the work of Choi *et al.* (2023), which distinguished between transmissive and constructivist teaching approaches.

The second and third parts of the questionnaire presented a Likert-type structure with seven response options, ranging from 1 (extremely unlikely/disagree) to 7 (extremely likely/agree).

The questionnaire used in the study consisted of a total of 30 items, distributed across three sections: the first section included 5 items, the second 25 items, and the third 10 items. The survey was administered electronically through an online platform.

The reliability of the instrument was evaluated using Cronbach's alpha coefficient and McDonald's omega coefficient (1999), reaching the values presented in Table 4.

**Table 4** - Instrument reliability: Cronbach's  $\alpha$  and McDonald's  $\Omega$

	Cronbach's alpha	Omega McDonald
Usage Behavior	0.931	0.898
Intent to use	0.937	0.912
Effort expectancy	0.920	0.899
Facilitating conditions	0.729	0.721
Hedonic motivation	0.936	0.925
Performance expectancy	0.937	0.928
Social influence	0.835	0.800
Total, UTAUT	0.957	0.935
Transmissive pedagogical beliefs	0.935	0.920
Constructivist pedagogical beliefs	0.871	0.829

Source: Authors' own elaboration.



According to Mateo (2004) and O'Dwyer & Bernauer (2014), since all the values obtained exceed 0.7, it can be affirmed that the instrument—both overall and in each of its component dimensions—can be considered reliable.

## Results

Initially, the means and standard deviations for the different dimensions that made up the instrument will be presented (Table 5).

**Table 5** - Means and standard deviations of the acceptance dimensions

	Mean	Standard deviation
Performance expectancy	5,81	1,188
Effort expectancy	5,87	,951
Social influence	5,30	1,328
Facilitating conditions	4,85	1,294
Hedonic motivation	5,64	1,329
Usage Behavior	5,25	1,424
Intent to use	5,75	1,313

Source: Authors' own elaboration.

In all cases, the mean scores exceeded the 3.5 threshold, indicating a significantly high level of acceptance of Educational Artificial Intelligence (EdAI) among teachers. This finding suggests a strong predisposition towards its implementation, as evidenced by the high average score obtained in the "Intention to use" dimension, with a mean value of 5.75. Nonetheless, it should not be forgotten that the high standard deviation values indicate considerable dispersion in the data.

Regarding the average scores obtained in the dimensions related to the analysis of teachers' constructivist and transmissive pedagogical beliefs, the data are presented in Table 6.

**Table 6** - Means and standard deviations of the dimensions related to teachers' pedagogical beliefs

	Mean	Standard deviation
Constructivist pedagogical beliefs	6,49	,733
Transmissive pedagogical beliefs	3,63	1,972

Source: Authors' own elaboration.

As can be seen, there is a predominant tendency among teachers to adopt constructivist positions when developing educational activities, with an average score



of 6.49, in contrast to transmissive positions, which obtained a mean score of 3.63. However, it is also important to highlight the high standard deviation associated with the transmissive dimension, indicating a notable dispersion in the responses provided by the teachers.

Next, the scores obtained in the correlation analysis designed to examine the relationship between teachers' pedagogical beliefs and their "Usage Behavior" regarding EdAI are presented.

Before conducting this analysis, it was verified that the sample did not follow a normal distribution. This verification was carried out through the study of kurtosis and the Kolmogorov-Smirnov test ( $p = 0.000$ ). To ensure the validity of the results, an exhaustive review of the distribution of the data was conducted. In addition to the methods mentioned above, visual analysis of histograms and examination of possible outliers were performed. These additional procedures were implemented to ensure the robustness of the statistical findings. This verification process strengthens the reliability of the interpretation of the statistical results.

Since the data did not follow a normal distribution, Spearman's Rho test was applied to assess the relationship between intention to use, traditional teaching style, and constructivist teaching style. Spearman's test does not rely on a normal data distribution, making it suitable in this case. Moreover, it allows for detecting nonlinear associations between these variables, which is essential given the complexity of interactions between intention to use and teaching styles.

The results obtained are shown in Table 7.

**Table 7** - Spearman's correlation coefficient between pedagogical beliefs and "Usage Behavior"

Pedagogical beliefs	Usage Behavior
	Spearman's Rho
Constructivist	,406**
Transmissive	,178**

Source: Authors' own elaboration.

The data reveal two key points: a) both types of beliefs show a positive and statistically significant correlation with teachers' "Usage Behavior" regarding EdAI, and b) teachers with a constructivist orientation, as identified by the instrument, show a greater tendency to integrate EdAI into their teaching practices compared to those with a more transmissive approach.

## Conclusions and limitations

The conclusions of this research address several aspects, the first being the evaluation of the reliability of the instrument used. The instrument was shown to have a high level of reliability, enabling a rigorous analysis of the dimensions derived from the UTAUT2



model, as well as its relationship with the dimensions used to explore constructivist and transmissive pedagogical perspectives. It should be noted that, in the latter context, the results obtained coincide with the findings reported by Choi *et al.* in their 2023 study.

This finding highlights the strength and consistency of the measurement tool employed in this research, lending validity to the results obtained. The strong reliability of the instrument provides a solid foundation for interpreting the data and, consequently, for drawing meaningful conclusions.

The average scores obtained across the UTAUT2 model dimensions—reflecting teachers' level of acceptance of this technology—were considerably high. In particular, the “Usage Behavior” dimension, which measures the extent to which teachers apply EdAI in their professional practice, yielded results well above the midpoint of the scale. It is worth emphasizing that “Intention to Use” emerged as the most relevant and influential dimension for predicting “Usage Behavior,” with intention proving to be the key factor that guides and determines the implementation of EdAI among teachers.

The average values obtained in the section of the instrument assessing whether teachers lean toward a constructivist or transmissive belief system in teaching clearly reveal a strong constructivist orientation, with scores nearly twice as high as those for transmissive beliefs. This result suggests that methodological changes are being promoted in teaching practices, with innovation and active methodologies gaining greater prominence (Ramírez-Montoya, 2022).

The findings of this study indicate that teachers with constructivist beliefs show a greater willingness to integrate Artificial Intelligence in Education into their teaching practice, compared to those with more transmissive orientations. This aligns with the previous research by Choi *et al.* (2023), who also identified a positive relationship between constructivist beliefs and the adoption of educational technologies by teachers. However, while their study used the Technology Acceptance Model (TAM) as a theoretical framework, this research was based on the UTAUT2 model.

It is important to note that, although the results are consistent, the specific context of EdAI integration in teaching may vary depending on the theoretical model employed to analyze technological acceptance. The constructivist approach emphasizes active learning, collaboration, and the student's role in constructing knowledge—elements that may influence teachers' willingness to adopt technologies that support such principles.

On the other hand, in terms of effort expectancy, teachers with transmissive beliefs reported higher scores, reflecting a greater perceived difficulty in using EdAI. This suggests that such teachers may perceive more barriers or complexities in implementing EdAI, compared to those with constructivist beliefs. This discrepancy may stem from differing conceptions of the roles of teachers and students in the educational process, as well as expectations about how EdAI might reinforce or challenge these traditional roles.

The findings of this study present significant practical and theoretical implications for understanding EdAI. To our knowledge, this is one of the first empirical studies to explore teachers' perceptions of EdAI using the UTAUT2 technology acceptance model. While previous research has used TAM to analyze technology acceptance (Choi *et al.*,



2023) or UTAUT2 in studies focused on university students (Strzelecki, 2023), this study focuses specifically on the teaching perspective.

This study has some limitations that should be taken into account in future research on EdAI integration. First, it did not assess the degree of familiarity the surveyed teachers had with EdAI, which may limit the understanding of how prior experience with the technology influences attitudes and teaching practices.

Moreover, it would be beneficial to incorporate qualitative data in future research to more deeply examine the factors affecting teachers' acceptance of EdAI. The use of qualitative methods—such as focus group interviews or nominal group techniques—could help uncover the underlying mechanisms influencing faculty attitudes and perceptions toward this technology. A mixed-methods approach would offer a more comprehensive and nuanced understanding of the phenomenon under study.

## References

ADEKUNLE, Musa; TEMITAYO, Ismaila; ADELAN, Owolabi; ARULEBA, Kehinde; SUNDAY, Solomon. Teachers' readiness and intention to teach artificial intelligence in schools. **Computers and Education: Artificial Intelligence**, v. 3, p. 100099, 2022. <https://doi.org/10.1016/j.caeai.2022.100099>

AL DARAYSEH, Abdulla. Acceptance of artificial intelligence in teaching science: Science teachers' perspective. **Computers and Education: Artificial Intelligence**, v. 4, p. 100132, 2023. <https://doi.org/10.1016/j.caeai.2023.100132>

AL-ADWAN, Ahmad; AL-DEBEI, Mutaz. The determinants of Gen Z's metaverse adoption decisions in higher education: integrating UTAUT2 with personal innovativeness in IT. **Education and Information Technologies**, 2023. <https://doi.org/10.1007/s10639-023-12080-1>

ALENEZI, Mogbel Aid; MOHAMED, Amr; SHAABAN, Tahany. Revolucionando la educación especial del inglés como lengua extranjera: cómo ChatGPT está transformando la forma en que los profesores abordan el aprendizaje de idiomas. **Innoeduca: International Journal of Technology and Educational Innovation**, v. 9, n. 2, p. 5-23, 2023. <https://doi.org/10.24310/innoeduca.2023.v9i2.16774>

AN, Xin; CHAI, Ching; LI, Yushun; ZHOU, Ying; SHEN, Xi; ZHENG, Chunping; CHEN, Mengyuan. Modeling English teachers' behavioral intention to use artificial intelligence in middle schools. **Education and Information Technologies**, v. 28, n. 5, p. 5187-5208, 2023. <https://doi.org/10.1007/s10639-022-11286-z>

ARANCIBIA-HERRERA, Marcelo; CASTRO-APPELHANZ, María Jesús; SIGERSON, Andrew. Relaciones entre concepciones y competencias TIC: estudio de nueve secuencias didácticas de profesores chilenos. **Educação e Pesquisa**, v. 50, p. e260125, 2024. <https://doi.org/10.1590/S1678-4634202450260125es>

AYANWALE, Musa Adekunle; SANUSI, Ismailia Temitayo; ADELAN, Owolabi Paul; ARULEBA, Kehinde; OYELERE, Solomon Sunday. Teachers' readiness and intention to teach artificial intelligence in schools. **Computers and Education: Artificial Intelligence**, v. 3, p. 100099, 2022. <https://doi.org/10.1016/j.caeai.2022.100099>



BACCI, Silvia; CAVIEZEL, Valeria. Multilevel IRT models for the university teaching evaluation. **Journal of Applied Statistics**, v. 38, n. 12, p. 2775-2791, 2011. <https://doi.org/10.1080/02664763.2011.570316>

BAGOZZI, Richard; YI, Youjae. On the evaluation of structural equation models. **Journal of the Academy of Marketing Science**, v. 16, p. 74-94, 1988. <https://doi.org/10.1007/BF02723327>

BAHÇIVAN, Eralp; GÜNEŞ, Erhan; ÜSTÜNDAĞ, Mutlu. A comprehensive model covering prospective teachers' technology use: the relationships among self, teaching and learning conceptions and attitudes. **Technology, Pedagogy and Education**, v. 27, n. 4, p. 399-416, 2018. <https://doi.org/10.1080/1475939X.2018.1479296>

BARROSO, Julio; CABERO, Julio; GUTIERREZ, Juan Jesús. La producción de objetos de aprendizaje en realidad aumentada por estudiantes universitarios: grado de aceptación de esta tecnología y motivación para su uso. **Revista Mexicana de Investigación Educativa**, v. 23, n. 79, p. 1261-1283, 2018.

BICE, Holli; TANG, Hengtao. Teachers' beliefs and practices of technology integration at a school for students with dyslexia: A mixed methods study. **Education and Information Technologies**, v. 27, p. 10179-10205, 2022. <https://doi.org/10.1007/s10639-022-11044-1>

BURKE, Paul; SCHUCK, Sandy; AUBUSSON, Peter; KEARNEY, Matthew; FRISCHKNECHT, Barte. Exploring teacher pedagogy, stages of concern and accessibility as determinants of technology adoption. **Technology, Pedagogy and Education**, v. 27, n. 2, p. 149-163, 2018. <https://doi.org/10.1080/1475939X.2017.1387602>

CABERO, Julio; LLORENTE, Carmen; PALACIOS, Antonio; GALLEGO, Óscar. Degree of acceptance of virtual reality by health sciences students. **International Journal of Environmental Research and Public Health**, v. 20, n. 8, p. 5571, 2023. <https://doi.org/10.3390/ijerph20085571>

CABERO, Julio; MARÍN, Verónica. Análisis factorial de una escala de creencias sobre la enseñanza y su relación con características personales y profesionales de docentes de educación superior. **Espacios**, v. 41, n. 2, p. 1-25, 2020.

CARMINES, Edwar; ZELLER, Richard. **Reliability and validity assessment**. Thousand Oaks: Sage, 1979.

CHENG, Sheng-Lu; CHANG, Jen-Chia; ROMERO, Kayleigh. Are pedagogical beliefs an internal barrier for technology integration? The interdependent nature of teacher beliefs. **Education and Information Technologies**, [v. 27, p. 5215-5232, 2022. <https://doi.org/10.1007/s10639-021-10835-2>

CHOCARRO, Raquel; CORTINAS, Mónica; MARCOS-MATÁS, Gustavo. Teachers' attitudes towards chatbots in education: A technology acceptance model approach considering the effect of social language, bot proactiveness, and users' characteristics. **Educational Studies**, v. 49, n. 2, p. 295-313, 2023. <https://doi.org/10.1080/03055698.2020.1850426>

CHOI, Seongyune; JANG, Yeonju; KIM, Hyeoncheol. Influence of pedagogical beliefs and perceived trust on teachers' acceptance of educational artificial intelligence tools. **International Journal of Human-Computer Interaction**, v. 39, n. 4, p. 910-922, 2023. <https://doi.org/10.1080/10447318.2022.2049145>



CROMPTON, Helen; BURKE, Diane. Artificial intelligence in higher education: the state of the field. **International Journal of Educational Technology in Higher Education**, v. 20, n. 1, p. 22, 2023. <https://doi.org/10.1186/s41239-023-00392-8>

DAVIS, Fred. Perceived usefulness, perceived ease of use, and user acceptance of information technology. **MIS Quarterly**, v. 13, n. 3, p. 319-340, 1989.

DELGADO, Nahia; CAMPO CARRASCO, Lucía; SAINZ DE LA MAZA, Martín; ETXABE-URBIETA, José María. Aplicación de la inteligencia artificial (IA) en educación: Los beneficios y limitaciones de la IA percibidos por el profesorado de educación primaria, educación secundaria y educación superior. **Revista Electrónica Interuniversitaria de Formación del Profesorado**, v. 27, n. 1, p. 207-224, 2024. <https://doi.org/10.6018/reifop.577211>

GANSSER, Oliver; REICH, Christina. A new acceptance model for artificial intelligence with extensions to UTAUT2: An empirical study in three segments of application. **Technology in Society**, v. 65, p. 101535, 2021. <https://doi.org/10.1016/j.techsoc.2021.101535>

GARCÍA, Antero; KELLY, Mary Rose; STAMATIS, Kristina. When technology goes unnoticed: teacher beliefs and assumptions about technology use in three 9th grade English classrooms. **Pedagogies: An International Journal**, v. 17, n. 1, p. 54-75, 2022. <https://doi.org/10.1080/1554480X.2020.1781638>

GARCÍA DE BLANES, María García; SARMIENTO, José Ramón; ANTONOVICA, Arta. Tam versus UTAUT models: A contrasting study of scholarly production and its bibliometric analysis. Revisión Tecno. **Revista Internacional de Tecnología, Ciencia y Sociedad**, v. 12, n. 3, p. 1-27, 2022.

GONZÁLEZ-MAYORGA, Héctor; RODRÍGUEZ-ESTEBAN, Agustín; VIDAL, Javier. El uso del modelo GPT de OpenAI para el análisis de textos abiertos en investigación educativa. Pixel-Bit. **Revista De Medios Y Educación**, n. 69, p. 227-253, 2024. <https://doi.org/10.12795/pixelbit.102032>

HERNÁNDEZ-SAMPIERI, Roberto; MENDOZA, Christian Paulina. **Metodología de la investigación: las rutas cuantitativa, cualitativa y mixta**. Ciudad de México: McGraw-Hill, 2018.

HOAREAU, Lara; THOMAS, Aude; TAZOUTI, Youssef; DINET, Jerome; LUXEMBOURGER, Christophe; JARLÉGAN, Anette. Beliefs about digital technologies and teachers' acceptance of an educational app for preschoolers. **Computers & Education**, v. 172, p. 104264, 2021. <https://doi.org/10.1016/j.compedu.2021.104264>

HUANG, Fei-Hui. Adapting UTAUT2 to assess user acceptance of an e-scooter virtual reality service. **Virtual Reality**, v. 24, p. 635-643, 2020. <https://doi.org/10.1007/s10055-019-00424-7>

IFINEDO, Eloho; RIKALA, Jenni; HÄMÄLÄINEN, Timo. Factors affecting Nigerian teacher educators' technology integration: Considering characteristics, knowledge constructs, ICT practices and beliefs. **Computers & Education**, v. 146, p. 103760, 2020. <https://doi.org/10.1016/j.compedu.2019.103760>



LEE, Un-Kon; KIM, Hyeakyung. UTAUT in Metaverse: An “Ifland” case. **Journal of Theoretical and Applied Electronic Commerce Research**, v. 17, n. 2, p. 613-635, 2022. <https://doi.org/10.3390/jtaer1702003>

LI, Yaoran; GARZA, Veronica; KEICHER, Anne; POPOV, Vitaliy. Predicting high school teacher use of technology: pedagogical beliefs, technological beliefs and attitudes, and teacher training. **Tech Know Learn**, v. 24, p. 501-518, 2019. <https://doi.org/10.1007/s10758-018-9355-2>

MA, Shuaiyao; LEI, Lei. The factors influencing teacher education students’ willingness to adopt artificial intelligence technology for information-based teaching. **Asia Pacific Journal of Education**, v. 44, n. 1, p. 94-111, 2024. <https://doi.org/10.1080/02188791.2024.2305155>

MARÍN, Verónica; SAMPEDRO, Begoña; VEGA, Esther. Creencias del profesorado de educación secundaria en torno al uso de la realidad mixta en el aula. **Revista Electrónica Interuniversitaria de Formación del Profesorado**, v. 26, n. 1, p. 85-97, 2023. <https://doi.org/10.6018/reifop.543331>

MATEO, Juan Mateo. La investigación ex post-facto. *In*: BISQUERRA, Rafael (coord.). **Metodología de la investigación**. Cidade: La Muralla, 2004. p. 195-230.

McDONALD, Roderick. **Test theory: A unified treatment**. New York: Lawrence Erlbaum, 1999.

MOJARRO, Ángel; DUARTE, Ana María; GUZMÁN, María Dolores; AGUADED, Ignacio. Mobile learning in university contexts based on the unified theory of acceptance and use of technology (UTAUT). **Journal of New Approaches in Educational Research**, v. 8, n. 1, p. 7-17, 2019. <https://doi.org/10.7821/naer.2019.1.317>

MONTANARES, Elisabeth Gloria; JUNOD, Pablo Antonio. Creencias y prácticas de enseñanza de profesores universitarios en Chile. **Revista Electrónica de Investigación Educativa**, v. 20, n. 1, p. 93-103, 2018. <https://doi.org/10.24320/redie.2018.20.1.1383>

O’DWYER, Laura; BERNAUER, James. **Quantitative research for the qualitative researcher**. Thousand Oaks: Sage, 2013.

PALACIOS-RODRÍGUEZ, Antonio; LLORENTE-CEJUDO, Carmen; LUCAS, Margarida; BEM-HAJA, Pedro. Macroevaluación de la competencia digital docente. Estudio DigCompEdu en España y Portugal. **RIED-Revista Iberoamericana de Educación a Distancia**, v. 28, n. 1, 2025. <https://doi.org/10.5944/ried.28.1.41379>

PRESTRIDGE, Sarah. Examining the shaping of teachers’ pedagogical orientation for the use of technology. **Technology, Pedagogy and Education**, v. 26, n. 4, p. 367-381, 2017. <https://doi.org/10.1080/1475939X.2016.1258369>

PRESTRIDGE, Sarah. The beliefs behind the teacher that influences their ICT practices. **Computers & Education**, v. 58, n. 1, p. 449-458, 2012. <https://doi.org/10.1016/j.compedu.2011.08.028>

RAMÍREZ-MONTOYA, María Soledad. **Estrategias de innovación para ambientes de aprendizaje**. Madrid: Síntesis, 2022.



RODRÍGUEZ-SABIOTE, Clemente; VALERIO-PEÑA, Ana Teresa; BATISTA-ALMONTE, Roberto. Validación de una escala del modelo ampliado de aceptación de la tecnología en el contexto dominicano. **Pixel-Bit: Revista De Medios Y Educación**, n. 68, p. 217-244, 2023. <https://doi.org/10.12795/pixelbit.100352>

SAMPEIRO, Víctor Manuel. Ecuaciones estructurales en los modelos educativos: características y fases en su construcción. **Apertura**, v. 11, n. 1, p. 90-103, 2019. <https://doi.org/10.32870/ap.v11n1.1402>

STRZELECKI, Artur. To use or not to use ChatGPT in higher education? A study of students' acceptance and use of technology. **Interactive Learning Environments**, 2023. <https://doi.org/10.1080/10494820.2023.2209881>

TAMILMANI, Kuttimani; RANA, Nripendra; WAMBA, Samuel; DWIVEDI, Rohita. The extended unified theory of acceptance and use of technology (UTAUT2): A systematic literature review and theory evaluation. **International Journal of Information Management**, v. 57, p. 102269, 2021. <https://doi.org/10.1016/j.ijinfomgt.2020.102269>

TEMITAYO, Ismaila; ADEKUNLE, Musa; TOLORUNLEKE, Adebayo. Investigating pre-service teachers' artificial intelligence perception from the perspective of planned behavior theory. **Computers and Education: Artificial Intelligence**, v. 6, p. 100202, 2024. <https://doi.org/10.1016/j.caeai.2024.100202>

TONDEUR, Jo; VAN BRAAK, Johan; ERTMER, Peggy; OTTENBREIT-LEFTWICH, Anne. Understanding the relationship between teachers' pedagogical beliefs and technology use in education: a systematic review of qualitative evidence. **Educational Technology Research and Development**, v. 65, p. 555-575, 2017. <https://doi.org/10.1007/s11423-016-9481-2>

TOURÓN, Javier (ed.) **Análisis de datos y medida en educación**. v. II. Logroño: Unir, 2023.

USTUN, Ahmet; KARA OGLAN-YILMAZ, Fatma; YILMAZ, Ramazan. Educational UTAUT-based virtual reality acceptance scale: a validity and reliability study. **Virtual Reality**, v. 27, p. 1063-1076, 2023. <https://doi.org/10.1007/s10055-022-00717-4>

UYGUN, Derya. Teachers' perspectives on artificial intelligence in education. **Advances in Mobile Learning Educational Research**, v. 4, n. 1, p. 931-939, 2024. <https://doi.org/10.25082/AMLER.2024.01.005>

VENKATESH, Viswanath; MORRIS, M.; DAVIS, Gordon; DAVIS, Fred. User acceptance of information technology: Toward a unified view. **MIS Quarterly**, v. 27, n. 3, p. 425-478, 2003.

VENKATESH, Viswanath; THONG, James; XU, Xin. Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. **MIS Quarterly**, v. 36, n. 1, p. 157-178, 2012. <https://doi.org/10.2307/41410412>

WALUYO, Budi; APRIDAYANI, Aisah. Teachers' beliefs and classroom practices on the use of video in English Language Teaching. **Studies in English Language and Education**, v. 8, n. 2, p. 726-744, 2021. <https://doi.org/10.24815/siele.v8i2.19214>



YUK, Cecilia; LEE, Katherine. The AI generation gap: Are Gen Z students more interested in adopting generative AI such as ChatGPT in teaching and learning than their Gen X and millennial generation teachers? **Smart Learning Environments**, v. 10, n. 60, 2023. <https://doi.org/10.1186/s40561-023-00269-3>

ZACHARIS, Georgios; NIKOLOPOULOU, Kleopatra. Factors predicting University students' behavioral intention to use eLearning platforms in the postpandemic normal: an UTAUT2 approach with 'Learning Value'. **Education and Information Technologies**, v. 27, p. 12065-12082, 2022. <https://doi.org/10.1007/s10639-022-11116-2>

ZULKARNAIN, Nur Sakinah; YUNUS, Melor. Teachers' perceptions and continuance usage intention of artificial intelligence technology in TESL. **International Journal of Multidisciplinary Research and Analysis**, v. 6, n. 5, p. 2101-2109, 2023. <https://doi.org/10.47191/ijmra/v6-i5-34>

*Received on December 02, 2024*

*Reviewed on November 25, 2024*

*Accepted on December 10, 2024*

**Editor:** Prof. Dr. Hugo Heredia Ponce

**Carmen Lorente Cejudo** is a senior lecturer in the Department of Didactics and Educational Organization at the University of Seville. His teaching and research profile is linked to Educational Technology and Teacher Training.

**Raquel Barragán Sánchez** is a senior lecturer in the Department of Didactics and Educational Organization at the University of Seville. His teaching and research profile is linked to educational information and communication technologies.

**Antonio Palacios Rodríguez** is an assistant professor in the Department of Didactics and Educational Organization at the University of Seville. His teaching and research profile is linked to educational technology and teacher training.

**María Victoria Fernández Scagliusi** holds a PhD in education from the University of Seville and the University of Bologna in the academic discipline teaching methodologies and special education.