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SHAPING THE FUTURE OF AI IN EDUCATION: ANALYZING KEY INFLUENCERS ON ROMANIAN TEACHER TRAINEES' WILLINGNESS TO INTEGRATE AI

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Abstract
The rapid advancements in artificial intelligence (AI) have prompted global initiatives, such as UNESCO's 2019 Beijing Consensus, to recommend the integration of AI in educational policies and practices. While existing research often highlights the perspectives of students and teachers on AI in education (AIEd), this study uniquely focuses on the factors influencing the behavioral intention to adopt AI among future primary and secondary school teachers in Romania. Using exploratory quantitative research, data from 270 students at the Faculty of Education, Social Sciences, and Psychology were analyzed through binary logistic regression to examine how their interactions with AI shape their intention to integrate AIEd into their teaching practices. The results reveal that "confidence in personal ability to use AI" and "perception of AI's advantages" significantly increase the willingness to adopt AI in education, surpassing factors like "prior use," "knowledge level," or "student demands." These insights are critical for revising teacher training programs and shaping educational policies that build future teachers' confidence in using AI, addressing any misconceptions or fears surrounding its implementation.

Keywords Artificial intelligence (AI), global initiatives, exploratory quantitative research.

INTRODUCTION

Artificial intelligence (AI) has evolved significantly since the development of the first mathematical model of the biological neuron in 1943 (McCulloch & Pitts, 1943) and the landmark Dartmouth Conference of 1956, considered the birthplace of

AI (McCarthy, 1998). As AI continues to advance, UNESCO's 2019 Beijing Consensus highlighted the need for integrating AI into educational policies and practices, with representatives from over 100 countries offering guidance on how AI can be harnessed for education. Despite these initiatives, research into the factors influencing teachers' willingness to integrate AI remains underexplored, particularly during their training stage (Davis, 1989).

The integration of artificial intelligence (AI) into educational practices is becoming an increasingly significant aspect of modern teaching. Future educators must understand and appropriately incorporate AI to enhance the efficiency and effectiveness of the learning process. Studies by Kim, Soyata, and Behnagh (2018) demonstrate how AI technologies can provide real-time feedback to teachers during presentations by analyzing audio and visual elements, thereby improving the overall quality of delivery and audience engagement. Similarly, Woolf et al. (2013) underscore the long-term potential of AI to personalize learning experiences and improve educational outcomes through the evaluation of datasets on teaching behaviors, student motivation, and social interaction.

Despite the promise AI holds for education, certain challenges remain. Păvăloaia and Necula (2023) highlight concerns regarding the high costs of integrating AI technologies, the risk of job displacement, and the potential increase in energy consumption. Moreover, excessive reliance on virtual environments can lead to dependency, reduced empathy, and communication difficulties. Security concerns also persist, as the vulnerability of AI-generated data raises the possibility of breaches or data theft (Pisica et al., 2023).

Although the benefits of AI are widely recognized, its implementation within educational institutions is far from straightforward. Bonsu and Baffour-Koduah (2023) note that there is significant pressure on educational institutions to establish clear guidelines and standards for AI usage. Additionally, Moorhouse and Kohnke (2023) argue that teacher educators require ongoing support to develop the skills necessary for effectively utilizing AI in their practice. Integrating AI in education is a complex process that demands careful planning to ensure both teachers and students are able to fully grasp and safely utilize the benefits of this technology.

To design effective AI integration strategies, it is essential to first understand the knowledge, skills, and perceptions of both teachers and students. A growing body of literature examines teacher attitudes toward AI and general artificial intelligence (GAI) technologies. Kaplan-Rakowski et al. (2023) found that educators who possess a more favorable view of GAI are more likely to incorporate it into their teaching. Building on this insight, the current research will assess the extent to which Romanian student-teachers perceive the advantages and disadvantages of using AI in their future classrooms.

The benefits of AI for educators extend beyond content generation. Chounta et al. (2022) found that Estonian teachers, despite having limited knowledge of AI, have successfully used AI tools to access and utilize multilingual content. However, there remains no consensus on best practices for using AI in teaching and research. Fahrman et al. (2020) attribute this to the evolving nature of teacher skills and the inherent complexity of understanding and researching these changes.

Generational differences also play a role in perceptions of AI. Chan and Lee (2023) revealed that while Gen Z students are generally optimistic about AI, Gen X and Gen Y teachers express concerns about over-reliance on the technology and its ethical and pedagogical implications. This research will investigate how prospective teachers

perceive their students' expectations regarding AI, as well as the ways in which student appreciation for AI-savvy teachers influences the behavioral intention to use AI in education. Ethical considerations also remain central to the discourse surrounding AI in education. Dalalah and Dalalah (2023) argue that, without proper standards, AI could compromise the authenticity and creativity inherent in human-led teaching and learning.

In addition to examining teacher perceptions, a second body of research explores student interactions with AI. Chao et al. (2021) found that students generally have a positive attitude toward AI, though many share concerns regarding its use in assessment processes. Ravi Kumar and Raman (2022) reported that students value AI for its potential in teaching and administrative tasks but are wary of its application in admissions and examinations. Doumat et al. (2022) further observed that while a majority of students believe AI assessments are more objective, only a small percentage would prefer to be assessed by AI. This ambivalence highlights the need for more refined approaches to AI implementation.

Existing literature points to a gap in understanding the behavioral intention of teachers to adopt AI technologies. Choi, Jang, and Kim (2023) argue that teachers are hesitant to integrate AI educational tools, and there is little knowledge about their perceptions of these technologies. Williamson and Eynon (2020) further emphasize the lack of understanding regarding how AI is used by both students and teachers and how it can be effectively implemented in educational settings. Given the pivotal role that future teachers play in implementing AI tools and influencing generations of students, it is crucial to understand the factors shaping their perceptions and willingness to adopt AI in their teaching practices.

This study aims to fill a gap in the literature by focusing on the perceptions of AI among future teachers during their training stage. Prospective teachers will play a critical role in shaping how AI is used to develop the cognitive, social, and communication skills of the next generation. The research takes place within the context of increasing global efforts to cultivate AI literacy in early education, as demonstrated by initiatives such as AI4ALL at Stanford and the International Society for Technology in Education (ISTE).

Building on the Technology Acceptance Model (TAM) established by Davis (1989), which is widely used to explain the adoption of new technologies, this research examines the factors influencing prospective teachers' intention to use AI. Just as Hasib et al. (2022) applied logistic regression to predict student performance, this study employs binary logistic regression to predict the behavioral intention of future teachers to use AI, based on their attitudes and perceptions of its utility.

This study contributes to the existing body of research by identifying and testing key factors that influence future teachers' intention to use AI in education. Unlike most studies that focus on students' attitudes toward AI in fields like medicine, this research investigates the behavioral intentions of Romanian student-teachers in primary and secondary education. By using a binary logistic regression model, this study explores how different factors—such as AI familiarity, perceptions of the educator's evolving role, and confidence in AI's benefits—influence the willingness of future teachers to integrate AI into their classrooms.

METHODOLOGY

This study aims to examine the intention of prospective teachers to integrate artificial intelligence (AI) into their educational practices and to identify the factors that influence this intention. To achieve this, a quantitative exploratory research design was employed,

utilizing a questionnaire-based survey to assess the perceptions of students currently enrolled in teacher training programs. The participants were drawn from the Faculty of Education, Social Sciences, and Psychology at Pitești University Centre, as well as its regional branch in Râmnicu Vâlcea.

The survey consisted of a series of questions designed to capture various aspects of the participants' perceptions of AI. Specifically, the questionnaire comprised 10 Likert-scale items (ranging from "to a very small extent" to "to a very large extent"), 4 multiple-choice questions, 1 open-ended question, and 4 demographic questions. The Likert-scale items aimed to assess participants' attitudes toward AI integration, their perceived ease of use, and their behavioral intention to incorporate AI in teaching. The demographic questions included age, gender, level of education, and current professional status.

Given the exploratory nature of this study and the challenges associated with obtaining a random representative sample, a purposive sampling method was employed. The selection criterion focused on individuals studying education sciences and teacher training who had some level of awareness about AI technologies (Jurconi et al., 2022). This allowed for the collection of relevant data from those most likely to encounter AI in their future careers.

The rationale for using a quantitative approach lies in the objective to construct a predictive model that identifies the key factors influencing prospective teachers' intention to use AI. Quantitative research facilitates the collection of a large number of responses in a structured format, which can be systematically analyzed and validated using statistical techniques (Bell & Waters, 2018). Furthermore, the objectivity of quantitative research ensures that the results are quantifiable, enabling potential generalization of the findings to a broader population.

The questionnaire was distributed via email to all undergraduate and graduate students enrolled in the Pedagogy of Primary and Pre-school Education program, as well as the Early Childhood Education Master's program, at both Pitești University Centre and Râmnicu Vâlcea Territorial Centre. Most participants were either already employed in, or intending to pursue, careers in primary or pre-school education. The data collection period spanned from May to August 2023, and responses were gathered through Google Forms. Data analysis was conducted using SPSS software, which enabled the use of advanced statistical methods to evaluate the relationships between variables. A total of 270 valid responses were received from a potential pool of 370 students, resulting in a response rate of 73%.

Recognizing that AI integration in education is still in its nascent stages, particularly in primary and secondary education in Romania, the study sought to explore the perceptions of prospective teachers without requiring prior hands-on experience with AI. Participation in the study was voluntary, and the respondents' anonymity was maintained throughout the process. The consent to participate was implied by the completion of the survey, and respondents were informed that the results would be disseminated in aggregate form.

As detailed in Table 1, the sample predominantly comprised female respondents (97.4%), a demographic characteristic typical of primary and pre-school education sectors globally. In terms of age distribution, the study captured responses from a balanced representation of Generation Z (41.48%) and Generation Y (45.18%) participants, with a smaller proportion from Generation X (13.33%). This age distribution suggests a high level of familiarity with new technologies among the respondents. All participants were pursuing either Bachelor's or Master's degrees and were in

the process of preparing for their future careers. Of the total respondents, 21.1% were current teachers in pre-school and primary education, 39.62% were students intending to become teachers, and 39.25% had not yet decided on their future career paths.

Table 1: Gender, age, level of education and current occupation or career plan of the respondents

Gender		Age (years)		Level of education		Current occupation or career plan	
Female	263	18-23	112	undergraduate student	238	Currently a preschool teacher	38
		24-39	122			Currently a primary school teacher	19
Male	7	40-60	36	MA student	32	Future pre-school teacher	66
		> 60	0			Future primary school teacher	41
						Not yet employed and no career plan	106
270		270		270		270	

This study examines the perspectives of two distinct groups of prospective teachers: Group 1—students who have previously used AI, and Group 2—students who have not used AI. Several key factors influencing the relationship between educators and AI were explored, including:

i. Knowledge of AI

ii. Level of interaction and previous exposure to AI tools

iii. Readiness to integrate AI into teaching practices

iv. Desire for further AI-related training

v. Perceived impact of AI on student-teacher interactions

vi. Improvement of the learning experience

vii. Simplification of administrative tasks

viii. Expectations of students regarding AI integration in the learning process

Following this analysis, a binary logistic regression was conducted to predict the intention of future teachers to adopt AI in their teaching practices. The variables used in this predictive model are as follows:

1. Dependent Variable: I17 – Behavioural Intention to Use AI in future teaching careers, as outlined in the Technology Acceptance Model (TAM).

2. Independent Variables:

2.1. I1 – Previous use of AI

2.2. I3 – Sufficient knowledge of AI and ability to explain its concepts

2.3. I4 – Ability to leverage the benefits of AI in educational settings

2.4. I6 – Perception that students appreciate teachers who use AI

2.5. I8 – Perception that AI alters the role of educators

2.6. I10 – Belief that AI will enhance student-teacher interactions

2.7. I14 – Self-assessment of ability to teach

using AI (ease of use, as defined by TAM)

2.8. I15 – Perception that future teachers must master and use AI

2.9. I16 – View that the advantages of AI outweigh its disadvantages (perceived usefulness, as defined by TAM)

The examination of behavioural intention to use AI is critical within the TAM framework, as it serves as a precursor to actual usage (Davis, 1989). Table 2 presents the reliability measures for both constructs: attitude toward AI use and perception of AI usefulness. For each construct, the Cronbach's Alpha (α) exceeded 0.700, the Average Variance Extracted (AVE) was greater than 0.500, and the Composite Reliability (CR) surpassed 0.700, demonstrating strong internal consistency across the study's variables (Henseler & Sarstedt, 2013; Nemţanu et al., 2021).

Table 2: Validation of data

Construct	Variables	Loading	α / AVE / CR
Attitude towards the use of AI	I3 – I have sufficient knowledge and can explain what AI means	0.764	α: 0.737 AVE: 0.504 CR: 0.826
	I4 – I know how to exploit the benefits of AI in school/ kindergarten	0.860	
	I6 – Pupils appreciate more the teachers who use AI	0.764	
	I8 – AI changes the role of the educator	0.332	
	I10 – AI will help to improve pupil-teacher interaction	0.712	
Perception of AI usefulness	I1 – Use of AI up to now	0.179	α: 0.744 AVE: 0.533 CR: 0.833
	I14 – I consider myself able to teach using AI	0.751	
	I15 – A future teacher must master and use AI	0.874	
	I16 – I think there are more advantages to AI than disadvantages	0.850	
	I17 – Willingness to use AI in future teaching career	0.764	

Based on the literature review and existing studies, several hypotheses have been developed to examine the factors influencing the behavioural intention of prospective teachers to integrate AI into their teaching practices. Research by Labrague et al. (2023) demonstrates that prior exposure to AI technologies, coupled with knowledge and competence in AI usage, leads to a more positive perception of AI and a higher likelihood of incorporating it into professional practices. In light of this, the following hypotheses are formulated:

1. H1: Previous use of AI significantly and positively influences the behavioural intention to use AI in future teaching careers.

2. H2: Knowledge of AI significantly and positively influences the behavioural intention to use AI in future teaching careers.

Further, Ali (2017) argues that teachers' willingness to adopt AI is shaped by their students' needs and expectations. Teachers who observe their students' enthusiasm and positive experiences with AI are more inclined to integrate AI into their teaching methods. This finding leads to the third hypothesis:

3. H3: Students' expectations and requirements for new AI technologies significantly and positively influence the behavioural intention to use AI in future teaching careers.

Moreover, teachers' understanding of their role in guiding students' use of technology, as well as their own perception of AI's utility in their work, is critical. Teachers will have a key responsibility in ensuring AI is used ethically and effectively, particularly in evaluating student performance and ensuring the accuracy of data (Owan et al., 2023). This leads to the formulation of the fourth hypothesis:

4. H4: The perception of AI-induced changes in the educator's role significantly and positively influences the behavioural intention to use AI in future teaching careers.

However, the adoption of AI in education can be hindered by external barriers (e.g., limited access to hardware, software, and training) and internal barriers (e.g., lack of trust and negative attitudes toward AI). Rowston, Bower, and Woodcock (2022) argue that teachers' beliefs, confidence, and attitudes play a critical role in determining whether they incorporate AI into their teaching. Based on this, the following hypothesis is proposed:

5. H5: The perception of one's own ability and confidence to use AI in teaching significantly and positively influences the behavioural intention to use AI in future teaching careers.

Finally, Chan and Hu (2023) found that university students in Hong Kong were more willing to adopt General AI (GAI) technology as they recognized its benefits for learning and academic tasks. This insight supports the following hypothesis:

6. H6: The perception of AI's advantages outweighing its disadvantages (perceived usefulness) significantly and positively influences the behavioural intention to use AI in future teaching careers.

RESULT AND DISCUSSION

Extent of familiarity of future teachers with AI

Upon analyzing the data, it was found that 77.41% of students enrolled in teacher education programs were familiar with AI, 27.04% had conducted further research on AI, but only 20% had actually used AI. To better understand how AI usage influences perceptions, the data were divided into two groups: Group 1 – students who had used AI, and Group 2 – those who had only heard or read about AI but had not used it.

Within Group 1, 59.26% had used AI for educational purposes, 48.15% out of curiosity, and 37.04% for work-related or entertainment tasks. The relatively low rate of AI usage can be attributed to the early stage of AI technology development.

Respondents' self-assessed knowledge of AI was rated as average, with Group 1 demonstrating a higher level of understanding, as shown in Table 3. Notably, interest in improving AI usage in teaching was high across both groups, with over 76% of respondents expressing a desire to attend training courses focused on AI integration in education.

Table 3: Extent of knowledge of AI

Category of results	Group 1 – Used AI	Group 2 – Did not use AI
How well can they define/explain what AI entails	3.12	2.85
I know how to take advantage of AI in school/kindergarten	3.12	2.64

Note: arithmetic weighted average on a scale from: 1 – to a very small extent; 5 – to a very large extent

Source: Researcher, 2024

Changes brought by AI in the educator's role

Regarding the changes AI may bring to education,

approximately half of the respondents, irrespective of their group, believe that AI will be used as a teaching tool in the future. A notable example of this is seen in China, where 60,000 schools implemented an AI-driven system for automatic essay grading, achieving a 92% accuracy rate, comparable to human assessment (UNESCO, 2019a). This system utilizes AI neural networks and deep learning algorithms to compare student essays with human evaluations.

According to Table 4, the second most anticipated role for AI is as a virtual teaching assistant, with 30% of Group 1 respondents, those who have used AI, seeing this as a possibility. Meanwhile, 27% of Group 2, who have not used AI, believe AI will help personalize learning experiences more than serving as a virtual assistant. Only a small percentage (6-7%) believe that AI will not change the educational process significantly.

An interesting divergence between the groups emerges regarding the potential for AI to replace teachers. While 5% of Group 2 respondents view AI as a potential threat that could replace educators, none of the Group 1 respondents, those with AI experience, consider this a plausible scenario. This aligns with findings by Edwards and Cheok (2018), who argue that machines lack the social and emotional capabilities necessary for meaningful interaction with students.

Table. 4: Changes brought by AI in education and the role of an educator

Category of results	Group 1 – Used AI	Group 2 – Did not use AI
Changes brought by AI to education		
- Teachers will use AI as a teaching tool	**43%**	46%
- AI will be the virtual assistant of the teacher	**30%**	16%
- AI will be used by learners to customise the learning experience	20%	**27%**
- AI will not change the educational process	7%	6%
- AI will replace the teacher	**0%**	**5%**
Changes brought by AI to the educator's role		
- shift from traditional instruction to facilitation and mentoring	**43%**	**38%**
- shift from general and delayed feedback to instant and personalised feedback	**39%**	22%
- shift from mass learning to personalised learning	**37%**	25%
- instant lesson design at the time of teaching, without pre-planning	**31%**	25%
- extension of learning time outside the classroom	**26%**	19%
- relief from administrative tasks (e.g. parent feedback, centralisation of various situations)	17%	12%

Source: Researcher, 2024

To gain a clearer understanding of how the educator's role may evolve with the integration of AI into education, the respondents' key estimates are presented in Table 4. Both groups—those with and without AI experience—share a common perception that AI will shift the educator's role from traditional instruction and knowledge delivery to that of a facilitator and mentor, guiding students through the learning process. This transformation is especially noted among those

who have previously used AI, who also highlight AI's potential to enhance the speed of feedback to students and facilitate personalized learning experiences.

Additionally, AI is seen as a tool to alleviate some of the routine administrative tasks, such as document centralization and result tracking, enabling teachers to focus more on student engagement. AI could also extend learning time by offering students support and answering questions outside the classroom environment.

As shown in Table 5, there is a consensus between both groups regarding the expectations of students, particularly preschool and schoolchildren, for teachers to integrate AI into their teaching practices. With average ratings of 3.87 and 3.49, respondents acknowledge that these expectations make AI integration a necessity for future teachers to stay relevant and maintain student interest in educational activities. Other anticipated benefits of AI integration include improved student-teacher interaction, enhanced learning experiences for students, and a shift toward more personalized education.

Table 5: Reasons, causes and effects for/of using AI in education

Category of results	Group 1 - Used AI	Group 2 - Did not use AI
Reasons		
Preschoolers or schoolchildren value the teacher who applies AI	3.87	3.49
AI will help to improve pupil-teacher interaction	3.31	3.13
AI will contribute to improving the learning experience of the pre-schooler / schoolchild and transitioning to personalised education.	3.24	3.32
I believe that there are more future advantages generated by AI than there are disadvantages	3.35	3.23
Causes and effects		
I believe that a future teacher should master and use AI in teaching	3.77	3.41
I consider myself capable of teaching using artificial intelligence.	3.00	2.79
I can see myself using AI in my future profession	3.62	3.29

Source: Researcher, 2024

Regardless of their group affiliation, respondents uniformly agree that future teachers should be proficient in and utilize AI within their teaching activities. The data reveals that current ability levels to use AI in teaching (averaging 3.00 and 2.79) are lower compared to the anticipated use of AI in future teaching roles (averaging 3.62 and 3.29). This disparity suggests a positive inclination towards AI technology, indicating confidence in its future application and perceived usefulness in educational settings. Notably, there is a minimal difference in the intention to use AI between the two groups (3.62 for those with AI experience versus 3.29 for those without), reflecting a widespread eagerness among future educators to incorporate AI into the teaching-learning process, regardless of their current exposure to such technology or their generational digital skills.

A comprehensive overview of AI integration into teaching practices is detailed in Table 6. Both groups exhibit a shared understanding of the necessity of using AI for generating educational

content and presenting it interactively for young learners. AI is anticipated to significantly support personalized learning experiences and function as a virtual assistant available around the clock. This expectation aligns with Kim et al.'s (2020) findings that AI is particularly beneficial when face-to-face interaction is not feasible.

Table 6: Ways of using AI in education (% of total respondents)

Category of results	Group 1 – Used AI	Group 2 – Did not use AI
- AI can create intelligent/interactive content and boost student engagement	**69%**	**50%**
- AI can help personalise the learning experience	**52%**	**42%**
- AI can help as a ready-to-use virtual assistant 24/7	**41%**	27%
- AI can automate administrative processes	**37%**	21%
- Based on the collected data, AI can be used to update curriculum and instructional methods	**35%**	11%
- AI can automate the assessment process	20%	13%

Source: Researcher, 2024

Notable differences are evident between the two groups regarding AI's role in updating curriculum and training methods. Specifically, 35% of Group 1 respondents—those with AI experience—support this use of AI, compared to just 11% of Group 2 respondents—those without AI experience. This disparity can be attributed to Group 1's better understanding of AI's capability to process and analyze large datasets.

Another interesting finding is the variation in attitudes towards AI involvement in the evaluation process, with Group 2 showing notable reluctance. This aligns with Doumat et al. (2022), who report that only 26% of students favor AI-based assessments. In contrast, Samarescu (2021) argues that AI could enhance the assessment process by providing detailed and personalized feedback.

Respondents were also invited to suggest additional AI applications through an open-ended question: "What is the most difficult task AI can help with?" Many highlighted AI's potential in "designing teaching activities," followed by reducing "administrative tasks" through automation. This would allow educators to focus more on teaching. Additionally, respondents see value in AI's ability to "capture and maintain students' attention," making the learning experience more engaging and dynamic. Lastly, there is interest in integrating AI for "developing and managing online courses."

Future teachers' behavioural intention to use AI

The study investigates the behavioral intention of future teachers to use AI and identifies key factors influencing this intention through binary logistic regression. The goal was to determine the regression equation that predicts whether future teachers are inclined to incorporate AI into their teaching practices.

In the analysis, the dependent variable, I17 (Behavioral Intention to Use AI in Future Career), was coded as 1 for those intending to use AI and 0 for those not intending to. Compared to the baseline model (Model 0), which had an accuracy rate of 80.7%, the regression model including independent variables (Model 1) improved the prediction accuracy to 89.3%.

Validation tests showed that Model 0, constructed using only the constant, was valid (B=1.433; S.E.=0.154; Wald=86.246; Sig.=0.000; Exp(B)=4.192). The Chi-square test confirmed that Model 1 is significantly better than the baseline

model (Sig.=0.000; Chi-square=120.206; df=6). Model 1's -2 Log likelihood=144.373 and Cox & Snell R Square=0.359 indicate a strong fit. The Nagelkerke R^2 value of 0.575 suggests that 57.5% of the variance in the dependent variable (I17) is explained by the predictors in Model 1. Additionally, the Hosmer and Lemeshow test confirmed Model 1's validity, with a p-value > 0.05 (Chi-square=14.960; Sig.=0.60; df=8).

Results from Model 1, presented in Table 7, reveal that two factors significantly influence the intention to use AI: self-confidence in using AI (I14) and the perceived advantages of AI over its disadvantages (I16). These factors notably increase the likelihood of future teachers adopting AI in their careers. In contrast, other factors such as prior use of AI (I1), knowledge about AI (I3), student demands for AI (I6), and the perception of AI's impact on the educator's role (I8) do not significantly affect the intention to use AI.

Table 7: Variables in equation for Model 1

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. pt EXP(B Inferior	Superior
S	I1. Use of AI	1.421	.769	3.417	1	.065	4.141	.918	18.682
T	I3. Knowledge of AI	-.005	.220	.001	1	.980	.995	.646	1.530
E	I6. Required by students	.321	.208	2.379	1	.123	1.378	.917	2.073
P	I8. Change of	.141	.217	.420	1	.517	1.151	.753	1.760
1	educator's role								
	I14. Able to teach using AI	.716	.249	8.285	1	.004	2.046	1.257	3.331
	I16. More advantages than disadvantages	1.684	.291	33.537	1	.000	5.387	3.047	9.526
	Constant	-6.526	1.149	32.288	1	.000	.001		

a. Variable(s) introduced for step 1: I1, I3, I6, I8, I14, I16.

Source: Researcher, 2024

The results for variable I14 (B=0.716; Exp(B)=2.046; Sig.=0.004) support the validation of Hypothesis H5: The perception of one's own ability and confidence in using AI positively influences the intention to use AI in a future teaching career. Specifically, individuals who believe they are capable of using AI in teaching are twice as likely to integrate AI into their educational practices.

Similarly, the results for variable I16 (B=1.684; Exp(B)=5.387; Sig.=0.000) validate Hypothesis H6: Perceived advantages of AI over its disadvantages significantly and positively impact the intention to use AI in future teaching. This finding underscores the importance of presenting AI in a positive light from the outset, as it significantly increases the likelihood of future teachers adopting AI in their work.

These results align with Al Darayseh's (2023) research, which highlights that behavioral intentions are shaped by factors such as "expected benefits" and "ease of use." However, the values for variables I1 (Use of AI) (B=1.421; Exp(B)=4.141; Sig.=0.065), I6 (Student Requirements) (B=0.321; Exp(B)=1.378; Sig.=0.123), and I8 (Changes in Educator's Role) (B=0.141; Exp(B)=1.151; Sig.=0.517) indicate a positive relationship with the behavioral intention to use AI (I17), but these relationships are not statistically significant (Sig. > 0.05). Thus, Hypotheses H1, H3, and H4 are partially validated, suggesting that while these factors may influence the intention to use AI, their effects are not strong enough to be deemed significant.

On the other hand, the value for variable I3 (Knowledge of AI) (B=-0.005; Exp(B)=0.995; Sig.=0.980) reveals that mere knowledge of AI does not significantly affect the intention to use AI in a future teaching career. This result invalidates Hypothesis H2: Knowledge of AI significantly and positively influences the behavioral intention to use AI in the future teaching career. Despite varying levels of knowledge or digital skills, there remains a strong interest in improving and utilizing AI in education due to its potential benefits.

CONCLUSION

AI has the potential to significantly complement and enhance the role of educators, leading to more effective and personalized learning experiences. The findings from this study, involving 270 future teachers, highlight that while 77% have heard of AI, only 20% have used it, primarily for personal educational purposes. However, there is considerable interest in further training, with 76% expressing a desire to learn more about AI, indicating an awareness of its potential in educational development.

Interestingly, a small percentage (5%) of those who have not used AI perceive it as a threat, fearing it may replace teachers. In contrast, most respondents value AI's potential as a teaching tool or virtual assistant to enhance the student learning experience. Although only 62.96% currently feel capable of using AI in their future teaching roles, 81.48% acknowledge the need to master and incorporate AI technology. Key benefits identified by respondents include AI's role in creating educational content, enhancing interactivity, extending learning time, and automating administrative tasks. These applications are expected to shift the teacher's role from traditional instruction to that of a facilitator and mentor, providing personalized and instantaneous feedback. The regression analysis reveals that the intention to use AI in future teaching careers is significantly influenced by confidence in using AI (perceived ease of use) and recognizing its advantages (perceived usefulness). Surprisingly, these factors outweigh the impact of previous AI use, student expectations, and awareness of AI's impact on the educator's role.

The study reinforces the belief that AI will fundamentally enhance education, with the transition influenced by teachers' confidence and positive examples of AI use. This research integrates and evaluates several predictors of the behavioral intention to use AI in education within a single regression model. It underscores the relevance of these predictors, particularly confidence in AI and perceived benefits, which are crucial for fostering AI adoption.

The findings stress the importance of building confidence in AI use and highlighting its benefits to encourage future adoption. This insight can inform the development of training programs and educational policies aimed at accelerating AI integration into teaching practices. Future research should include qualitative approaches to explore motivations and behavioral intentions in greater depth. Expanding studies to active AI users and evolving educational contexts will be crucial for updating perceptions and factors influencing AI adoption in education.

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