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REIMAGINING TEACHER EDUCATION IN THE AGE OF ARTIFICIAL INTELLIGENCE: A QUALITATIVE INQUIRY INTO TEACHER EDUCATORS' PERSPECTIVES

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Abstract
The rapid development of Artificial Intelligence (AI) has created new possibilities and challenges for teacher education. This study explored teacher educators' perspectives regarding the role of artificial intelligence in transforming teacher education and examined the opportunities, challenges, and ethical concerns associated with its integration. A qualitative research approach with a phenomenological design was employed to understand teacher educators' experiences and interpretations of AI-supported teaching and learning. Six teacher educators were selected through purposive sampling from public teacher education institutions. Data were collected through semi-structured interviews and analyzed using thematic analysis. The analysis generated three major themes: AI as a catalyst for pedagogical transformation; uneven preparedness and institutional support; and ethical concerns and the need to preserve human-centred teaching. The findings revealed that participants considered AI useful for lesson planning, developing instructional materials, assessment, feedback, differentiated instruction, and preparing prospective teachers. However, they emphasized that AI-generated content should be critically reviewed for accuracy, relevance, and cultural appropriateness. Participants also reported differences in their confidence and readiness to use AI and highlighted the need for continuous professional development, improved technological infrastructure, and clear institutional policies. Major ethical concerns included academic dishonesty, inaccurate information, bias, privacy, unequal access, and excessive dependence on technology. The study concludes that AI can contribute positively to teacher education when it is integrated in a critical, ethical, and purposeful manner. Artificial intelligence should support rather than replace teachers' professional judgment, creativity, empathy, and relationships with learners. The study recommends integrating AI literacy into teacher education curricula, redesigning assessment practices, and providing sustained professional development for teacher educators.
Keywords: *Artificial intelligence, teacher education, generative AI, phenomenological research, AI literacy, human-centred teaching*

Introduction

Artificial intelligence has moved rapidly from a specialized technological concept to an everyday part of educational practice. The emergence of generative artificial intelligence tools capable of producing text, images, lesson plans, assessment questions, feedback, and other educational materials has created new possibilities for teaching and learning. These developments are not simply about introducing another digital tool into classrooms; they raise fundamental questions about what should be taught, how learning should be assessed, and what

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professional responsibilities teachers will hold in an AI-influenced education system (Zawacki-Richter et al., 2019). The pace of generative AI development has outpaced many education systems' and regulatory frameworks' ability to respond effectively. Consequently, educational institutions are under increasing pressure to reconsider their curricula, policies, and approaches to teacher preparation.

Teacher education occupies a particularly important position within this changing landscape. The teachers currently being prepared in universities and teacher-training institutions will work in classrooms where learners may routinely use AI to search for information, generate content, solve problems, and complete academic tasks. Preparing future teachers for such environments requires more than teaching them how to operate AI applications. They need to understand how AI-generated information is produced, recognize its limitations, verify its accuracy, identify possible bias, and make informed decisions about when its use is educationally appropriate. They must also be able to guide learners in using AI responsibly, without allowing technology to replace independent thinking, creativity, interpersonal interaction, or intellectual effort (Trust et al., 2023). A teacher educator who views AI mainly as a threat to academic integrity may approach it differently from one who considers it a useful partner in lesson planning, reflective practice, or differentiated instruction. Similarly, teacher educators who lack confidence in using AI may find it difficult to prepare future teachers for classrooms in which these technologies are already becoming common (Khan et al., 2025).

Recent international frameworks recognize that teachers require a combination of technical, pedagogical, and ethical competencies to work effectively with AI. UNESCO's *AI Competency Framework for Teachers* identifies 15 competencies organized around five dimensions: a human-centred mindset, the ethics of AI, AI foundations and applications, AI pedagogy, and AI for professional learning. The framework emphasizes that AI integration should preserve human agency, protect teachers' rights, and contribute to inclusive and sustainable educational futures. It also highlights a significant preparedness gap: as of 2022, only 7 countries had established an AI competency framework or a professional development program specifically intended for teachers.

Artificial intelligence offers several potential benefits for teacher education. It may assist teacher educators and pre-service teachers in generating teaching ideas, designing lesson plans, creating classroom scenarios, adapting materials for learners with different needs, and receiving rapid feedback on written work (Tlili et al., 2023). AI-supported simulations may also provide future teachers with opportunities to practice classroom decision-making in relatively safe environments. Moreover, automating routine tasks could allow teacher educators to devote more attention to mentoring, professional dialogue, pedagogical modelling, and the development of reflective practice (Majeed et al., 2025).

AI has value in education, but it cannot be taken for granted simply because it exists. AI may generate erroneous or misinterpreted information, perpetuate social and cultural stereotypes, manipulate personal data, and produce results that seem convincing even when they are not. Overreliance on AI can weaken the development of critical thinking skills, professional judgment, and original research in academia, as critical thinking and twenty-first-century skills have been focused on in recent literature (Jamil et al., 2019; Jamil et al., 2024; Naseer et al., 2022). Issues regarding authorship, plagiarism, privacy, equal access, and accountability become especially urgent in teacher education because one day, the teachers will have to make decisions that will impact children, their parents, and society. UNESCO thus

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encourages the application of AI in line with the principles of human-centeredness, ethics, safety, equality, and pedagogical sensibility (Miao & Holmes, 2023).

Research indicates that educators do not hold a single, uniform view of the educational impact of generative AI. The study involved 318 educators from different teaching levels, disciplines, and regions, and found that most participants expected generative AI to have a major or profound influence on teaching and assessment (Tan et al., 2025). However, a sizeable minority believed that its impact would be limited. Educators' perceptions varied according to their awareness of AI, teaching experience, educational level, disciplinary background, and regional context. Participants generally believed that curricula should place greater emphasis on AI literacy, ethical values, creativity, collaboration, higher-order thinking, and learning processes rather than merely focusing on finished products. These findings confirm that responses to AI are shaped not only by the technology itself but also by educators' knowledge, including professional experience, and working environments (Ahmed, 2024; Jamil et al., 2024b; Jamil et al., 2025).

Since teacher educators' reactions to AI depend on their experiences, beliefs, fears, and professional identity, a qualitative method would be better suited to addressing the research problem. Quantitative tools might help identify the level of awareness or usage of AI, but they will hardly explain the reasons behind such acceptance or resistance towards AI technology. The participants could provide insight into their understanding of AI technology and its influence on their work, as well as opportunities and problems associated with that.

The purpose of this study thus becomes an attempt to explore teacher educators' perceptions of the changing nature of teacher education in an era of AI. The study aims to examine how teacher educators perceive the role of AI in teacher preparation, how they use AI tools, and the potential and challenges associated with their use. Giving voice to teacher educators in the study can help develop contextually appropriate curriculum, professional development activities, and institutional policies. Most important of all, it can ensure that the future of teacher education will be determined by more than just technological capacity.

Research Objectives

1. To explore teacher educators' perspectives regarding the role of artificial intelligence in transforming teacher education.
2. To identify the perceived opportunities, challenges, and ethical concerns associated with integrating artificial intelligence into teacher education programs.

Research Questions

1. How do teacher educators perceive the role of artificial intelligence in transforming teacher education?
2. What opportunities, challenges, and ethical concerns do teacher educators associate with the integration of artificial intelligence into teacher education programs?

Literature Review

Artificial intelligence has become an increasingly important part of educational discussion and practice. Although AI has been used in education for several years through intelligent tutoring systems, automated assessment, learning analytics, and adaptive learning platforms, the emergence of generative artificial intelligence has significantly expanded its educational influence. Generative AI applications can produce written explanations, images, lesson plans, assessment questions, feedback, simulations, and other forms of content in response to user-

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provided instructions. Their accessibility has enabled teachers and students to use AI without requiring advanced technical knowledge. Consequently, teacher education institutions are being compelled to reconsider how future teachers should be prepared for classrooms in which both educators and learners may regularly use AI (Ghamrawi et al., 2026).

The changing educational environment also requires a reconsideration of the knowledge and competencies expected of teachers. Teachers must understand the basic capabilities and limitations of AI, formulate effective instructions, critically evaluate AI-generated information, and decide when AI use is pedagogically appropriate. They also need to recognize inaccurate, fabricated, or biased content and teach learners how to use AI responsibly. In its *AI Competency Framework for Teachers*, UNESCO identifies 15 competencies across five dimensions: a human-centred mindset, the ethics of AI, AI foundations and applications, AI pedagogy, and AI for professional learning. These dimensions indicate that effective AI integration involves values, professional judgment, and pedagogical knowledge in addition to technical competence (Miao & Cukurova, 2024).

According to a study conducted by Miao & Cukurova (2024), the views of 318 educators from different educational levels, disciplines, and regions were considered. Most of the participants believed that generative AI would have a major or profound effect on teaching and assessment, although some expected little or no impact. The study found that educators believed curricula should place greater emphasis on AI literacy, ethical values, critical thinking, creativity, collaboration, and the learning process. Participants also suggested that assessment should become more authentic, personalized, and focused on higher-order thinking. These findings suggest that AI may act as a catalyst for broader changes in teacher education by encouraging institutions to reconsider what knowledge is valuable and how learning should be demonstrated (Miao & Cukurova, 2024).

The literature identifies several possible benefits of AI for teacher education. AI can help teacher educators and pre-service teachers generate initial ideas for lesson plans, classroom activities, questions, examples, and teaching materials. It may help simplify difficult concepts, adapt texts for different levels of learners, and create alternative explanations. Such support can be particularly useful during the early stages of planning, when pre-service teachers are still learning how to convert curricular objectives into appropriate classroom activities (Prilop et al., 2025).

Generative AI can additionally support reflective learning. Pre-service teachers may use AI to examine alternative ways of responding to classroom situations, rehearse possible teacher–student interactions, or receive preliminary feedback on lesson plans. Teacher educators may use AI-generated classroom scenarios for discussion and critique. Instead of accepting the AI response as correct, students can analyze its strengths, weaknesses, and hidden assumptions. This approach can turn AI into an object of critical inquiry rather than merely a source of ready-made answers (Rasheed et al., 2025).

The successful implementation of artificial intelligence depends heavily on teacher educators' readiness. One’s personal interest alone will not suffice when one lacks the necessary training, policies, safety measures, tools, and opportunities for collaboration. Professional development has to move away from short presentations on the applications of AI, given the rapid development of those applications. Competencies required for using AI tools must include critical thinking, ethical application, instructional design, assessment innovation, privacy and security issues, and the acknowledgement that AI was used to help (Sarwar et al., 2026).

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Research Methodology

The current study used a qualitative research methodology to gain insights into teacher educators' perspectives on changes in teacher education resulting from the emergence of artificial intelligence. Qualitative methodology was deemed necessary, as the study aimed to understand participants' experiences, interpretations, concerns, and professional viewpoints rather than quantifying variables (Creswell & Poth, 2018). Particularly, the study used a phenomenological research design to explore how teacher educators experience and interpret the application of AI technology in teacher education programs. The focus of phenomenology is on how people make sense of a common phenomenon, and it permits researchers to study participants' experiences in depth. The phenomenon in the present case was the increasing role of artificial intelligence in teaching, learning, testing, and teacher training.

A total of six participants were selected from public sector universities using purposive sampling. The purposive sampling seemed ideal for the research because the researcher needed participants engaged in teacher training. They are familiar with the application of AI in education. The selection criteria for participants were employment as teachers in teacher training institutions and a minimum of 2 years of teaching experience. Efforts were made to recruit participants with diverse academic qualifications, teaching experience, subjects, and institutions to obtain varied perspectives (Patton, 2015). Each participant was assigned a letter from P1 to P9 to ensure data anonymity. The demographic information of the participants is shown in Table 1 below.

Table 1: Demographic Profile of Participants

Participant Code	Academic Qualification	Teaching Experience	Area of Specialization
P1	PhD in Education	15 years	Teacher Education
P2	PhD in Education	12 years	Educational Technology
P3	MPhil in Education	8 years	Curriculum and Instruction
P4	PhD in Education	10 years	Educational Psychology
P5	MPhil in Education	6 years	Inclusive Education
P6	PhD in Education	18 years	Educational Leadership and Management

For data collection, semi-structured interviews were used. A self-developed interview guide was used based on the purpose of the study and relevant literature. The interview questions were framed to address the research objectives, including teachers' knowledge of artificial intelligence, including potential benefits and drawbacks, obstacles to its use, and ethical aspects of the phenomenon (Kallio et al., 2016). The interviews were conducted one-to-one at an agreed-upon date and location. They took approximately 35-50 minutes. At the participants' request, the interviews were recorded to preserve their answers. Facial expressions and emerging ideas were also noticed. Transcription of the recordings took place later. Participants were informed of the study's purpose and the voluntary nature of their participation. Informed consent was obtained from participants in written form.

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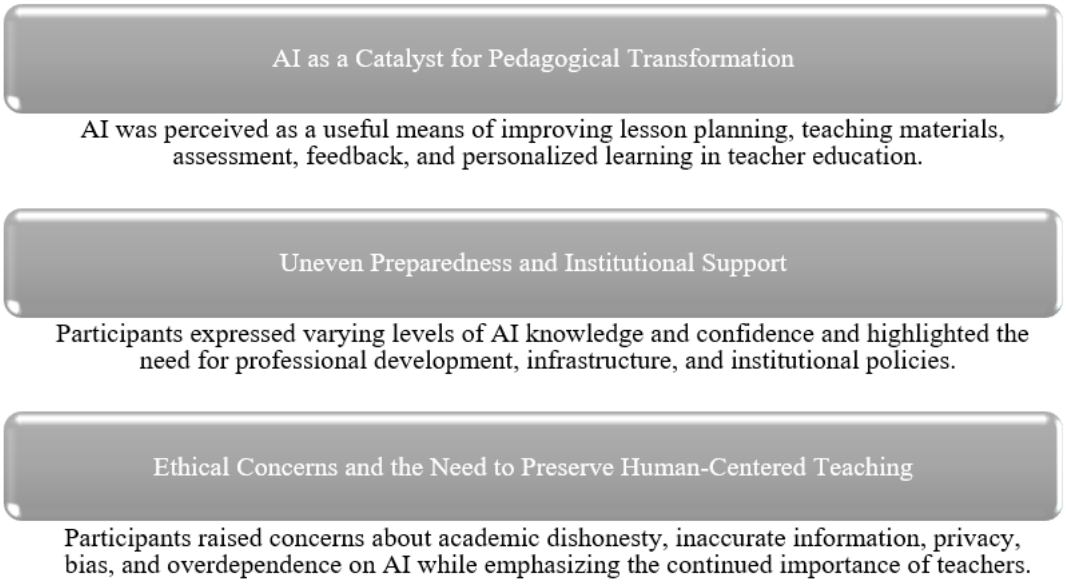
Analysis of the collected interview data was conducted using reflexive thematic analysis, following the six steps outlined by Braun and Clarke (2006). It began with a careful reading of the data to become familiar with participants' answers. Important statements, repetitions, and meanings were identified at the first stage. Codes were created for selected fragments of the data next. Similar codes were compared and grouped into categories, and possible themes and subthemes were generated. Then, the themes were checked against the entire dataset to ensure they were adequately represented. Finally, themes were clearly defined, named, and supported with citations from participants. To increase the credibility of the results, the researchers maintained an audit trail of code selection, compared codes frequently, and consulted an expert in qualitative research on emerging themes. Member checking was also carried out, including reviewing participants' perspectives on the summary of the interviews and major interpretations. Confidentiality was maintained throughout the research process by using participant codes and deleting any personal data. Interview recordings and transcripts were stored safely. In this way, the study tried to generate reliable knowledge about teacher educators' views.

Data Analysis and Findings

The data collected through nine semi-structured interviews were analyzed using thematic analysis. Interview transcripts were repeatedly reviewed to become familiar with the participants' responses. Important statements were identified and coded. Codes with similar characteristics were grouped into larger categories, yielding three broad themes. These themes included teacher educators' perceptions of the transformative potential of artificial intelligence technology, their readiness levels, and the ethical considerations associated with its incorporation into teacher education. The three themes can be presented as follows:

Themes Emerging from the Interview Data



Theme 1: AI as a Catalyst for Pedagogical Transformation

Theme One focused on the use of artificial intelligence in changing teaching and learning processes in teacher education programs. All participants viewed AI technology as an important

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teaching tool that can assist teacher educators and future teachers in preparing lessons, developing content, assessing student performance, and providing feedback. AI, in their opinion, will make teaching more flexible, creative, and efficient by offering multiple explanations, illustrations, and teaching approaches. Participants noted that AI can assist future teachers in adapting classroom content to learners' abilities and educational needs.

Some teacher educators shared that AI technology had helped them prepare lessons and teaching plans in different ways. They utilized AI applications to generate ideas, illustrate ideas, prepare presentation outlines, and conduct classroom activities. However, AI-generated content cannot be used without professional examination and verification. The role of the teacher educator is to ensure that AI-generated content is accurate, relevant, and culturally acceptable.

Participant P2 stated:

> With artificial intelligence, my lesson planning has become more flexible. I can come up with several activity ideas in just a few minutes. However, I never implement the material as is. I check whether it is consistent with the learning goals and the students' level. The examples may not be appropriate for our culture. So, artificial intelligence offers a starting point, while the choice is always mine.

Participant P5 similarly explained:

> AI could be very useful for those preparing for a teaching profession because it will offer ideas about the objectives, activities, and questions for assessing knowledge. Students can compare their ideas from AI with those discussed in classes. Such a comparison will help them to think critically and reflectively. The participants must avoid reproducing the lesson plan from the app. Instead, they need to give reasons for accepting or rejecting the ideas suggested by the app.

The participants viewed AI as a tool for fostering differentiation and inclusion in teaching. In their view, AI could assist future teachers in creating simplified texts, alternative activities, and other ways of explanation for students with different skills.

Participant P6 observed:

> A classroom is made up of people who have different capabilities and different backgrounds. Some individuals learn more effectively through example, while others through images. AI will be able to offer various methods for representing the same idea. It may help a teacher simplify a text for a learner who finds reading difficult. All of these would constitute inclusive practice as long as they are used prudently. In any case, the teacher will understand the learner and not leave everything to technology.

The above answers showed that, in the minds of teacher educators, AI's role was as an assistant to teachers rather than a replacement for them. This depended on how AI was used.

Theme 2: Uneven Preparedness and Institutional Support

Theme two concerned the different knowledge and readiness of the participants to incorporate AI in teacher education programs. All participants had heard of AI to some extent, but their practical experience varied widely. Some teacher educators used AI tools in their daily teaching, while others had no practical experience with AI. Those who lacked AI knowledge expressed doubt about choosing appropriate AI tools and writing prompts to achieve the desired AI output.

The participants argued that unless teacher educators are well-trained in AI, they would fail to prepare teachers to use AI in classrooms. It is essential to include training in technical knowledge and pedagogical uses of AI.

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Participant P3 explained:

> We are supposed to be mentoring new teachers on artificial intelligence. There are very few teacher educators who have ever had proper training in that. Most of what we know comes from our own experience. Some are willing to use these resources. Moreover, those who are frightened are not. A one-day workshop will not make us competent. We require constant professional development.

Participant P5 added:

> Now my knowledge about AI is still growing. Moreover, there are some moments when I feel confused. There are many different uses for AI. However, we do not know which we can trust. Teachers must also be taught to evaluate the accuracy of the generated material. Without appropriate preparation, AI may confuse rather than enhance the teaching process. The institutions should prepare practical training programs. That meet teachers' requirements. Otherwise, the only ones who would get any benefits would be tech-savvy teachers.

Institutional support was also considered an important factor. Influencing the integration of AI. Participants stated that institutions lacked guidelines for the appropriate use of AI. They were unsure whether students should use AI in their assignments. Moreover, there is a question of how to cite AI's assistance, or what measures to take in case of academic misconduct.

Participant P6 stated:

> The burden of responsibility cannot fall on individual teacher educators. Institutions need clear policies for the use of AI. Teachers and learners create their own policies. They should be authorized for guidelines on assignments, disclosure, privacy, and academic integrity. They should have access to AI technology, but this is not equal due to varying technological and internet access among learners. Planning within institutions is therefore crucial if the use of AI is going to be efficient.

It was found that having positive perceptions of AI did not necessarily indicate that the teacher educators were well-prepared to use it effectively. There was a dire need for training to successfully implement AI technology.

Theme 3: Ethical Concerns and the Need to Preserve Human-Centered Teaching

The third theme explored ethical questions arising from the application of AI. The possible problems included the unreliability of information provided by AI, cheating, privacy concerns, bias, and reliance on technology. At the same time, the participants understood the benefits of AI use. They believed that unchecked use may lead to the underdevelopment of critical thinking, including creativity, and independent learning among future teachers.

Academic integrity was a particular concern for the participants. They believed that generative AI would allow students to submit assignments. It is also used for reflections and lesson plans without even studying. It was stressed that prohibiting AI use would not help. Instead, the assessment system within educational institutions should be revised.

Participant P1 said:

> The biggest problem I see is that students will try to present AI-generated content as their own Content. Good writing does not always indicate that any learning has taken place. Sometimes the student may not understand the concepts. We must conduct assessments. Involving discussions, reflections, and demonstrations. The student must

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> also reveal any uses of artificial intelligence. This needs to be done responsibly, not by imposing total prohibition.

Participants also noted the problems associated with incorrect and biased information. It had been observed that AI tools provided information with great confidence, even when it was wrong or incomplete. Future teachers could pass on such misinformation to schoolchildren if they lacked sufficient knowledge of the subject matter.

Participant P4 explained:

> Though AI-based answers look professional, sometimes they may also have errors of fact or non-existent sources of information. A student who knows very little about the subject cannot realize the mistakes. In the future, teachers will need to know how to verify information from trusted sources. The teachers must also understand if the provided information shows any cultural or social prejudice. So, AI literacy should involve critical thinking and an ethical perspective as well.

The second main issue raised by the participants was the possible reduction in the human element of teaching. Participants noted that teaching included empathy, moral instruction, human interaction, and an understanding of learners' emotional and social needs. Participant P6 stated:

> Teaching is more than passing knowledge from one individual to another. A teacher is aware of learners' emotions, context, and problems. Artificial intelligence will not be able to understand each learner's real-life situation fully. AI can help prepare resources, provide feedback, and plan. However, it should never be used to replace human connection and professionalism. Education of teachers should always be relationship-oriented, values-based, and humanistic.

The results showed that teacher educators favoured a balanced, human-centred approach to AI. They did not reject AI. However, believed that ethical considerations, openness, and professionalism should guide its application. The AI tool should be seen as an auxiliary tool for providing recommendations, not for making decisions.

Results

As a result of the thematic analysis of nine semi-structured interviews, three main themes emerged: AI as an agent of change in pedagogy; the lack of readiness and institutional support; and the ethics and necessity of maintaining a human-centred approach to teaching. In general, the identified themes proved that teacher educators perceived the use of artificial intelligence neither positively nor negatively. On the contrary, they were aware of the technology's complexity and its potential influence on teacher education, which was highly dependent on knowledge, intentions, and institutional context.

Theme one indicated that teacher educators acknowledged the possibility of using AI to enhance various aspects of teaching and learning. They pointed out the usefulness of using AI in planning lessons, creating classroom activities, creating test questions, generating illustrations, and adapting educational resources for students with different needs. AI was perceived as especially useful for generating initial ideas and suggesting different approaches to explaining certain concepts. Nevertheless, participants constantly reiterated that any AI-generated material must be carefully evaluated. According to them, AI does not have the

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capacity to assess the accuracy, cultural appropriateness, and suitability of educational material for a specific set of learners.

The second theme revealed the differences in the readiness and confidence of the teacher educators to use AI. While some participants had prior experience with generative AI applications, others had only a basic understanding of how AI can be used for educational purposes. It was pointed out that personal interest is not enough for the use of AI in education. Participants emphasized the lack of professional development, adequate technical resources, and institution-based support. Participants appeared unsure about the appropriate use of AI in assignments, recognizing AI-generated products, and handling academic dishonesty.

The third theme was the ethical and professional hazards of using AI. The participants expressed worries about inaccurate information, fraudulent citations, cultural bias, privacy, academic dishonesty, and overreliance on AI-generated materials.

Discussion

The study's findings indicate that AI is changing teacher educators' perceptions. Moreover, discuss how future teachers are trained. Participants acknowledged the potential for pedagogical innovation. Through AI technologies, technological efficiency was not considered sufficient evidence of educational significance. It represents a balanced view, in which AI was perceived as an aid that produced useful products. It still needed human evaluation. Thus, this finding provides a direct answer to the first research question, as participants viewed AI as a technology capable of transforming teacher education through lesson planning, resource creation, differentiated teaching, and assessment.

The first theme – AI as a catalyst of pedagogical transformation – aligns well with the research by Bower et al. (2024), which found that educators expected the impact of generative AI on curriculum, pedagogy, and assessment. Educators in that study emphasized the need to develop the ability to work with AI in ways that maintain higher-order thinking, ethics, and attention to the learning process. As in the current study, educators expected prospective teachers to be able to evaluate AI products rather than use them unthinkingly.

The participants' cautious optimism aligns with Prilop et al. (2025), who reported mixed perspectives ranging from enthusiasm for pedagogical innovation. There are concerns about ethics, assessment, and the protection of basic academic skills. Their participants identified AI literacy, AI didactics, and AI assessment as important areas of teacher preparation. The present findings support this broader understanding of AI literacy. Teacher educators require more than the ability to operate a tool; they need to understand how AI can function as teaching content, a teaching resource, and a learning aid within ethical, cultural, and professional boundaries.

The second theme, unpreparedness and institutional support, indicates that even when participants were aware of AI, this did not guarantee their readiness to utilize it. Participants acknowledged that AI was gaining greater significance, yet several believed they were not well-prepared to assist future teachers in this area. Such a finding is like that of Moorhouse & Kohnke (2024), who found that while teacher educators expected AI to have a significant influence on the curriculum, teaching, and assessment, they often lacked the confidence and skills to address this change.

This evidence suggests that standalone or one-off training sessions will not lead to any changes either. Teacher educators require repeated opportunities to work with AI, explore its limitations, examine discipline-specific cases, and share their experiences with other educators. Professional development must encompass AI practice alongside pedagogical skills, ethical

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concerns, assessment, and critical reflection. The AI Competency Framework for Teachers, developed by UNESCO, supports this argument by defining five areas of competence associated with the subject: human-centred approach, AI ethics, AI fundamentals and applications, AI pedagogy, and professional learning with AI.

While one educator might allow students to use AI for task preparation, another might consider any use of AI academic misconduct. Thus, institutions need to establish which types of AI assistance are acceptable, how it is declared, and which responsibilities rest with the student or the teacher.

The relevance of institutional planning is further corroborated by the international experience as well. According to the OECD, education systems tend to pay more attention to the application of AI in teaching students than to its professional use in teacher training. The OECD claims that continuous professional development is crucial for the appropriate implementation of AI technology guided by appropriate pedagogy. The findings of the current research confirm the relevance of this statement, as educators cannot prepare future teachers without proper training and infrastructure.

The 3rd theme, ethical considerations and the importance of maintaining a human-based form of instruction, is related to the second research question, as it examines the difficulties and ethical implications of integrating AI. Academic integrity was a major concern, as generative AI could easily generate an entire assignment, lesson plan, and reflective writing piece. The participants seemed to feel the need to revise the assessment system to require oral explanation, practical demonstration, performance in class, reflective commentaries, and successive drafts. Future teachers could be asked to justify the ideas from the AI that they have incorporated, those that they have left out, and why they considered their final output educationally sound.

Issues surrounding the spread of misinformation, biases, and privacy protection also resonate with the broader literature. UNESCO highlights that the rapid growth of generative AI technologies has outpaced regulatory and institutional efforts. As a result, many educational organizations are not prepared to verify these technologies or ensure the protection of users' data. This organization proposes a human-centred framework in which ethical, safe, equitable, and educationally valuable use takes priority. Participants' issues should thus not be seen as a reluctance to innovate.

Participants' view of AI as a tool for human-centred teaching emerged as a key result. They stated that AI can imitate the process of explanation or feedback. Still, it would never be able to assume all the responsibilities and take on the moral and relational roles of a teacher. Teachers care about students, encourage them, empathize, behave ethically, and understand students' context. UNESCO also underlines that AI technologies should not be considered a replacement for teachers' key role and responsibility. Therefore, the result implies that the future of teacher education should be built on the idea of using AI to enhance practice rather than to substitute for humans.

Generally, the results prove that teacher educators observed AI implementation as a process that involves a great deal of balance. They were aware of AI's potential for creativity, preparation, and differentiation of instruction, but at the same time, they mentioned serious problems related to preparedness, equity, integrity, and professionalism. The results answered both research questions: participants perceived AI as a transformative, supportive technology and connected. Its integration has pedagogical benefits and institutional issues.

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Conclusion

This study found that teacher educators' readiness to work with AI is uneven. Even though all the participants in the study knew about AI and its increasing role in education, not everyone felt ready to use this tool or to educate future teachers in this way. Lack of professional development, technological inequalities, and absence of institutional policies are among the significant obstacles. This means that AI use cannot be based solely on individual effort. Ethics were crucial in how participants viewed AI. Cheating, misinformation, bias, over-reliance, and invasion of privacy were all considered to pose grave threats. However, the participants did not advocate an outright ban on AI. Instead, they preferred an approach in which AI would be used openly, critically, and educationally. The findings show that while AI has the capacity to make positive contributions to teacher education, this will depend greatly on how it is regulated and used.

Recommendations

The following are some recommendations based on the findings of the study.

1. AI literacy should be integrated into teacher education curricula. Prospective teachers should be taught the basic capabilities and limitations of AI, effective prompting, information verification, bias identification, data privacy, and responsible acknowledgement of AI assistance.
2. AI literacy should be incorporated into teacher education programs recognizing the role of AI in enhancing pedagogy and its misuse due to inaccurate information, fabrication, bias, and privacy concerns.
3. Prospective teachers should know how to use AI, including its capabilities and limitations, prompts, verification of information, identification of bias, data privacy, disclosure of the use of AI in their academic work, and professional responsibilities.
4. Teacher education institutions should formulate policies for AI use, as participants mentioned some uncertainties regarding the use of AI in assignments, including disclosure, integrity, and privacy.
5. Assessment practices should be adjusted to provide evidence of students' understanding. As there are some concerns related to the submission of AI-generated work without proper
6. Continuous professional development should be provided to teacher educators. Training should extend beyond introductory workshops and include practical, discipline-specific activities related to lesson planning, assessment, feedback, inclusive teaching, and ethical decision-making.
7. AI should assist teachers in their tasks without eroding aspects such as empathy, creativity, social relations, and accountability to the learner.

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