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Digital Challenges for the Teaching Profession: An Analysis of English Education Students' Perceptions of AI's Potential as a Competitor to Teachers

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ABSTRACT

The rapid advancement of artificial intelligence (AI) has created new opportunities and challenges in education, especially for future English teachers. While AI has been widely applied in language learning through adaptive platforms, chatbots, and mobile applications, concerns remain about its potential to compete with or even replace teachers. This study seeks to analyze the perceptions of English education students regarding AI's role in English language learning and its implications for the teaching profession. The research employed a qualitative approach using semi-structured interviews with senior students of the English Education Department at Klabat University, who are preparing to graduate and enter the teaching field. Data were analyzed using content analysis to identify key themes. The results indicate that students generally view AI as a supportive tool that makes learning more accessible, flexible, and engaging. They recognize AI's strengths in providing practice opportunities, quick feedback, and personalized learning experiences. However, participants unanimously stressed that AI cannot replace teachers due to its lack of human qualities such as empathy, motivation, and emotional understanding. They emphasized the importance of teachers in guiding, inspiring, and addressing students' personal and affective needs, which remain beyond the capacity of AI to fulfill. The findings also reveal two major challenges: the need for teachers to continually adapt to technological changes and the risk of students becoming overly dependent on AI. This study contributes to the growing discussion on digital challenges in teacher education, offering insights into how prospective teachers envision striking a balance between AI and human educators in the digital era.

Keywords: Artificial Intelligence; AI as Teachers' Competitor; Digital Challenges

INTRODUCTION

The rapid growth of digital technology and artificial intelligence (AI) has transformed education in unprecedented ways. Once considered merely a supporting tool, AI is now widely embedded in various aspects of learning,

including English language education. Adaptive platforms, chatbots, automated feedback systems, and mobile applications provide students with new opportunities for independent study, immediate feedback, and flexible access to resources. While these innovations have been praised for making learning more effective and personalized, they have also raised concerns about the potential of AI to compete with or even replace teachers. This tension raises a pressing question for the teaching profession, particularly for prospective English teachers preparing to enter classrooms where learners are already interacting with AI-driven tools.

The problem lies in the shifting role of teachers in the digital age. Teachers are not only transmitters of knowledge but also facilitators, motivators, and role models who shape students' cognitive, emotional, and social development. However, as students increasingly turn to applications like Duolingo or Grammarly for language practice and feedback, the unique contributions of teachers risk being overlooked. For English education students, who represent the next generation of teachers, it is critical to consider how they perceive this dynamic. Their views will influence how they integrate AI into their future classrooms, whether as a helpful tool or as a competitor that challenges their professional identity. Without adequate preparation, there is a danger that future teachers may feel displaced or unprepared to maintain their relevance in the face of technological progress.

This issue is urgent because AI is advancing at a pace that demands immediate responses from teacher education. Studies have shown that AI-powered learning environments can significantly enhance learner engagement and outcomes. For instance, Fauziddin et al. (2025) highlighted how AI systems adjust learning materials to students' individual needs, making the process more personalized and meaningful. Ghafar et al. (2023) similarly argued that AI can facilitate practical skills, such as speaking, by providing effective simulations that accelerate language acquisition. These benefits suggest that students are likely to welcome AI as an alternative source of instruction, especially when it provides quick feedback and a stress-free environment for practice and learning. However, these strengths also highlight a pressing challenge. If prospective teachers do not develop the ability to integrate and balance these tools, they may risk losing their central role in the education system.

A growing body of research has addressed teachers' perceptions of AI, yet the focus has largely been on in-service teachers rather than students still in training. Ghafar et al. (2023) reviewed the literature on AI's influence in language learning, emphasizing its contributions to improving classroom effectiveness; however, they paid little attention to how pre-service teachers perceive these tools. Konecki et al. (2024) explored the attitudes of practicing teachers toward AI, showing that while some teachers appreciate the opportunities AI offers, others worry about losing authority or their professional identity. State (2025), in a large-scale study involving Nigerian teachers, found that the main barriers to AI adoption were poor infrastructure and limited training. Napitupulu et al. (2025) extended this conversation by emphasizing the importance of professional development in

enhancing teachers' self-efficacy in integrating AI-driven chatbots. Similarly, Susanti et al. (2025) identified AI's role in improving educational quality but also noted the resistance and role changes it forces upon teachers. These studies contribute important insights, but they share two limitations: first, they examine teachers already in the field rather than those preparing to become teachers; and second, they address systemic or institutional challenges more than the personal readiness of prospective educators.

The novelty of the present study lies in its focus on English education students, who are still in the process of forming their professional identity and pedagogical philosophy. Unlike practicing teachers, pre-service teachers represent a group whose perceptions can shape not only their own readiness but also the future of English language teaching in the digital era. While earlier studies have emphasized infrastructure, policy, and general attitudes, this study captures the lived experiences and expectations of future teachers. By adopting a qualitative approach through semi-structured interviews, it reveals nuanced insights into how students envision AI's role, including both its benefits and its limitations. This qualitative lens is especially valuable because it allows the voices of participants to emerge in detail, offering perspectives that quantitative surveys may overlook.

This contribution is significant because it frames AI not simply as a threat but as an opportunity for synergy between technology and human educators. The students in this study are not passive observers of AI developments; they are active participants who recognize the need to adapt and prepare themselves for a future in which AI will be an integral part of their professional environment. By presenting their views, this research not only identifies concerns but also highlights proactive strategies for balancing AI with traditional teaching methods. Such findings can inform teacher education curricula, ensuring that future teachers are equipped with both technological competence and the humanistic skills that AI cannot replace, such as empathy, motivation, and emotional understanding.

The visibility and feasibility of this study are evident in its design. The participants, senior English education students at Klabat University, represent a group whose readiness is both observable and critical as they transition into the profession. Using semi-structured interviews ensures that their perspectives are captured in depth, while content analysis provides a rigorous means of identifying recurring themes. Although the study involves a small number of participants, its focused scope allows for meaningful insights that can contribute to the broader discussion of AI in education. Furthermore, the manageable design underscores its practicality, making it a valuable model for similar studies in other contexts.

When compared with earlier research, the contribution of this study becomes more distinct. Whereas Ghafar et al. (2023) and Fauziddin et al. (2025) concentrated on the benefits of AI in language learning, this study emphasizes how prospective teachers interpret those benefits in relation to their future roles. In contrast to Konecki et al. (2024), which documented mixed attitudes among practicing

teachers, this study reveals how concerns about AI are already present in the thinking of students who have yet to enter the profession. Unlike State (2025), which highlighted infrastructural challenges, this research situates the issue in a context where students are digital natives but still recognize the risks of overreliance on technology. Finally, while Napitupulu et al. (2025) and Susanti et al. (2025) stressed professional development for current teachers, this study shifts attention to the preparatory stage, providing a forward-looking perspective on readiness.

The integration of AI in education presents a double-edged challenge for the teaching profession. On the one hand, it enhances the learning process by making it more personalized, flexible, and efficient. On the other hand, it threatens to overshadow the human dimensions of teaching that remain vital for students' emotional and motivational growth. For English education students, AI represents both a valuable tool and a potential competitor. Investigating their perceptions is therefore timely and necessary, offering insights into how they envision balancing the promise of AI with the irreplaceable human qualities of teachers. By situating itself within ongoing debates and addressing a clear gap, this study makes a novel and practical contribution to teacher education, reinforcing the need for adaptive strategies that preserve the central role of teachers in the digital era.

LITERATURE REVIEW

AI and the Promise of Personalized Language Learning

A growing body of scholarship highlights the potential of AI to provide personalized and adaptive learning experiences. Fauziddin et al. (2025) explained that AI-powered systems can tailor learning materials to students' individual needs, enabling a more meaningful and efficient engagement with language tasks. In contrast to traditional classrooms, where teachers often struggle to balance diverse learning abilities, AI can adjust pace, difficulty, and content automatically. Ghafar et al. (2023) added that AI enhances practical language skills through simulations that replicate authentic communication, such as speaking practice in stress-free environments. These tools not only increase learner confidence but also allow for repeated practice with instant feedback, which would be difficult to achieve consistently in face-to-face teaching. These findings confirm that AI offers distinct advantages in enhancing learning outcomes, particularly in English language education.

Teachers' Perceptions and Concerns about AI Integration

While AI demonstrates strong potential as a learning tool, studies also reveal unease among teachers about its growing presence in education. Konecki et al. (2024) explored teachers' perceptions and found that attitudes were mixed: some teachers embraced the benefits of AI, while others expressed concerns about losing professional authority. The study suggested that this ambivalence arises from

uncertainty about whether AI will remain a supportive tool or evolve into a competitor for teachers. Similarly, Napitupulu et al. (2025) examined teachers' self-efficacy in using AI-driven chatbots and discovered that confidence depended largely on prior experience and institutional support. Without structured training and pedagogical guidance, teachers often perceive AI as a challenge rather than an ally. These studies demonstrate that while teachers recognize the benefits of AI, they remain concerned about the erosion of their professional identity and the potential devaluation of human interaction in the learning process.

Structural and Systemic Barriers to AI Adoption

Beyond individual attitudes, external conditions also play a decisive role in AI integration. State (2025) conducted a large-scale study involving 600 secondary school teachers in Nigeria, which showed that limited infrastructure, inadequate training, and a lack of institutional support were major obstacles to the adoption of AI in classrooms. Even when teachers expressed enthusiasm for digital tools, these structural challenges prevented effective use. Susanti et al. (2025) supported this observation by noting that resource limitations and teacher resistance often delay the integration of AI despite its promise to improve learning quality. These findings underscore that successful AI adoption requires not only teacher readiness but also investment in infrastructure, equitable access, and supportive policies. Without these conditions, AI remains an underutilized innovation.

The Perspective of Pre-Service Teachers

Although research on AI in education is expanding, most studies focus on in-service teachers and systemic factors, leaving a gap in understanding the perspectives of pre-service teachers. Ghafar et al. (2023) highlighted AI's contributions to language learning, but focused on its applications rather than on how future teachers might perceive it. Konecki et al. (2024) captured teachers' concerns about authority but did not examine whether these worries are already present among students preparing to enter the profession. State (2025) and Susanti et al. (2025) emphasized infrastructural and institutional barriers, while Napitupulu et al. (2025) focused on professional development. What these studies share is a tendency to overlook how English education students digital natives and will soon become teachers, perceive AI as both an opportunity and a challenge. This represents a significant gap because pre-service teachers are still shaping their professional identity, and their readiness to integrate AI will influence the future of education.

METHOD

Design and Sample

This study employed a qualitative research design to explore the perceptions of English education students regarding the use of AI in English language learning. A qualitative approach was chosen because it allows for in-depth exploration of

participants' views and experiences. The participants were three final-year English education students at Klabat University, selected through purposive sampling based on their readiness to graduate and enter the teaching profession. Although the sample size was small, it was sufficient for generating rich and detailed insights into their perspectives as prospective teachers.

Instruments and Procedures

Semi-structured interviews served as the main data collection instrument, providing both consistency and flexibility in addressing the research questions. Interviews were conducted in Indonesian to ensure clarity and comfort, each lasting approximately 30–45 minutes. The questions focused on students' perceptions of AI's role in English learning, its potential to replace teachers, the challenges it poses, and their preparation for future educator roles. All interviews were recorded with the participants' consent, transcribed verbatim, and translated into English as needed. To protect confidentiality, only participants' initials were used.

Data Analysis

The collected data were analyzed using content analysis, allowing the researcher to identify recurring patterns and themes. The process involved open coding of the transcripts, grouping similar responses into categories, and refining them into broader themes that aligned with the study's objectives. To enhance credibility, peer debriefing and member checking were employed, ensuring that the interpretations accurately represented participants' perspectives. The analysis emphasized not only the opportunities and benefits of AI in education but also the concerns and challenges identified by the students.

RESULT AND DISCUSSIONS

Students' Perceptions of AI in English Language Learning

The interviews revealed that students view AI as a highly supportive tool in the process of English language learning. They emphasized that AI provides accessible resources, practice opportunities, and explanations that help learners better understand difficult concepts. Applications such as grammar checkers and language learning platforms were seen as reducing pressure and allowing flexible practice. By enabling immediate feedback and independent exploration, AI was described as making learning both easier and more engaging. These finding highlights students' belief that AI has an important role as an assistant in modern classrooms, particularly in enhancing accessibility and learner autonomy. The following responses illustrate this perspective:

> *"AI is very helpful because it makes it easier for us to explore or find out more about lessons we do not understand."*
> (IN, Q.1)

"AI makes it easier for students to learn English without pressure, and provides quick feedback through applications."
(MY, Q.1)
"AI gives students exercises and explanations that support learning."
(RU, Q.1)

Students' Views on AI Replacing Teachers

All participants expressed that AI cannot replace teachers, although they acknowledged its usefulness in the learning process. Students stressed that teaching goes beyond delivering knowledge and requires human qualities such as empathy, guidance, motivation, and emotional understanding. They pointed out that teachers can adapt instruction to student needs and manage classroom interactions, which AI cannot replicate. While AI is useful for practice and feedback, participants strongly believed that teachers remain irreplaceable in fostering character, attitudes, and emotional growth.

"AI does not have human traits or attitudes, so it cannot replace teachers."
(IN, Q.2)
"AI cannot fully replace teachers because it cannot guide, motivate, or understand students' emotional needs."
(MY, Q.2)
"Teachers are the most important in class because they can control emotions, motivate, and adjust teaching methods."
(RU, Q.2)

Challenges Teachers Face with AI

The students identified three main challenges for teachers in the era of AI integration. First, many older or rural teachers may lack the skills to utilize AI, creating a digital gap effectively. Second, teachers need to continuously adapt and improve their digital literacy to use applications such as Duolingo or Grammarly to support student learning. Third, teachers must prevent overreliance on AI by ensuring that students continue to value guidance and motivation from human instructors. These challenges highlight the need for ongoing professional development and the balanced use of technology in classrooms.

"Many older teachers, especially in small towns, still do not understand how to use AI well."
(IN, Q.3)
"Teachers must keep learning to use applications that support students."
(MY, Q.3)
"Teachers must ensure students do not become fully dependent on AI."
(RU, Q.3)

Preparation as Future Teachers

As prospective teachers, the participants expressed their readiness to integrate AI with traditional teaching methods. They emphasized the importance of learning how to use AI applications while still prioritizing interactive and motivating classroom practices. IN intended to keep up with AI developments, MY planned to integrate AI tools with conventional strategies to make learning effective and creative, while RU positioned AI as only a supplementary tool, focusing instead on building engaging lessons and motivating students.

"I will study and follow the development of AI in the future."
(IN, Q.4)
"*I will combine AI with traditional methods so learning is more effective and creative."*
(MY, Q.4)
"I will use AI only as a tool while practicing interesting teaching methods and motivating students."
(RU, Q.4)

Expectations for the Future Relationship between Teachers and AI

Finally, students expressed optimism for a collaborative relationship between teachers and AI in the future. They agreed that AI should serve as a complementary tool to enrich learning materials and provide exercises, while teachers remain at the center of the learning process. The participants envisioned a future where AI supports teachers in handling technical aspects, allowing educators to focus on guiding, motivating, and understanding students. This perspective reinforces the belief that AI should strengthen, not replace, human teaching.

"AI should only be used as a tool to assist learning, not replace traditional methods."
(IN, Q.5)
"AI can make lessons more engaging, but teachers must remain the center of learning."
(MY, Q.5)
"Teachers and AI should complement each other: AI provides materials, while teachers focus on guiding and motivating students."
(RU, Q.5)

The findings of this study provide new insights into the perceptions of English education students regarding the integration of AI in language learning. Overall, students viewed AI as a supportive and empowering tool that simplifies learning, provides accessible exercises, and delivers quick feedback. This confirms earlier research, which has shown that AI enhances language practice, autonomy, and engagement (Chen et al., 2020; Huda & Sari, 2022; Zawacki-Richter et al., 2019). The participants particularly appreciated AI's ability to allow practice without pressure, which resonates with recent findings by Lucas et al. (2025), who noted that pre-service teachers recognized AI as helpful in creating stress-free learning

environments. The novelty of this study lies in capturing these perspectives from pre-service teachers, who are still in the process of shaping their professional identities, a group often overlooked in prior research (Ofem et al., 2025; Ogbu, 2024).

A major new finding is the unanimous rejection of AI as a substitute for teachers. While prior studies have documented teachers' fears of replacement (Ouyang & Jiao, 2021; Yehya, 2025), the students in this study framed their rejection not in terms of job security but through the lens of humanistic education. They emphasized that teaching is inseparable from emotional understanding, motivation, and guidance—qualities AI cannot replicate. This adds depth to earlier arguments that AI should be viewed as complementary to, rather than competitive with, teachers (Holmes et al., 2019; Luckin, 2017). In contrast to in-service teachers, who often highlight workload reduction or institutional barriers (Ogbu, 2024), these pre-service teachers focused on preserving the human aspects of teaching, a dimension that enriches the discourse on teacher–AI collaboration.

Another notable contribution is the students' articulation of two challenges: the digital divide between older and rural teachers, and the risk of students' overreliance on AI. While previous research has often concentrated on infrastructure and access issues (Alenezi, 2021; Zawacki-Richter et al., 2019), the present study highlights overreliance on AI as a pedagogical risk. This echoes the findings of Chen et al. (2020) and Warschauer and Grimes (2021), who cautioned against the passive consumption of technology in education. The students' concern underscores the need to design AI use in ways that encourage critical thinking and sustained learner engagement.

The students also demonstrated proactive readiness to integrate AI responsibly. They envisioned AI as a tool to supplement traditional teaching methods, thereby creating a more creative and effective classroom environment. This finding aligns with Alghamdi (2023) and Lin and Warschauer (2020), who reported that combining digital tools with human-led pedagogy yields the most effective outcomes. However, unlike those studies, which were based on in-service teachers or system-level analyses, this research captures the perspective of future teachers who are preparing themselves to both adapt to technology and uphold the centrality of human guidance in learning.

Despite its contributions, this study has several limitations. First, the small sample size of three students limits the generalizability of the findings. While qualitative research prioritizes depth over breadth, future studies should involve a larger and more diverse pool of participants to strengthen validity. Second, the study was conducted in a single institutional context, which may not reflect the perspectives of students from different regions or universities with varied technological infrastructures. Third, data collection relied solely on self-reported perceptions through interviews; triangulation with classroom observations or student–teacher interactions would have provided a richer dataset. Finally, as the participants

approached graduation, their views may differ from those of younger students who are still developing their understanding of educational practice.

The findings carry several implications for teacher education and policy. First, teacher preparation programs should include explicit training on integrating AI tools into pedagogical practice, ensuring that future teachers are confident in using technology while maintaining a human-centered approach to learning (Holmes et al., 2019; Luckin, 2017). Second, professional development programs must address the digital gap, particularly for older or rural teachers, by providing accessible and ongoing support (Ogbu, 2024; Ofem et al., 2025). Third, policymakers and curriculum designers should promote balanced AI use, encouraging its role in enhancing practice and feedback while preventing overdependence. Finally, the study suggests that fostering reflective awareness among pre-service teachers about the ethical and pedagogical dimensions of AI is essential for shaping sustainable educational futures (Alenezi, 2021; Lucas et al., 2025).

CONCLUSIONS

This study concludes that the integration of artificial intelligence in English language learning provides significant benefits, particularly as a supportive tool that simplifies the learning process, enhances effectiveness, and fosters creativity. However, the findings also make it clear that AI cannot replace the role of teachers. The essential human dimensions of education, such as empathy, motivation, guidance, and emotional support, remain the unique domain of teachers. For this reason, the future of education should be envisioned as a collaborative relationship in which AI enriches learning resources and practices. At the same time, teachers continue to serve as the central figures who inspire, guide, and connect with students on a personal level. The results provide valuable insights into research on pre-service teachers' perceptions of AI, particularly by highlighting the balance between opportunities and risks associated with its adoption. These findings may serve as a basis for further exploration into strategies for integrating AI in ways that support both academic development and the psychological and social well-being of students. For teachers, the study emphasizes the importance of enhancing digital competence and adapting pedagogical practices to integrate AI with traditional methods effectively. Such integration allows teachers to maintain their roles as motivators and facilitators while harnessing AI to support efficiency and creativity. For students, AI offers opportunities for independent and flexible learning; however, guidance from teachers remains essential to prevent overdependence on technology and to foster authentic human interaction in the classroom. This study emphasizes the need for synergy between teachers and AI in building a holistic English language learning process that develops both academic competence and character. At the same time, it highlights the challenges and readiness required of future teachers in navigating the digital era, offering a timely perspective for education in the age of AI.

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