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Research Article

Exploring the perceptions of Chinese pre-service teachers on the integration of generative AI in English language teaching: Benefits, challenges, and educational implications

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ABSTRACT

This study investigates the perceptions of English pre-service teachers (PSTs) in China regarding integrating generative AI, specifically ChatGPT, into English language teaching. Utilizing a quantitative approach with a sample of 134 PSTs, the research explores their familiarity with AI technologies, its perceived impact on language acquisition, and the acceptance of AI as a pedagogical tool. The findings reveal that while PSTs generally recognize the potential of AI to enhance teaching efficiency, particularly in grammar and writing, there are concerns about over-reliance on AI, its impact on critical thinking, and the authenticity of AI-facilitated interactions. Additionally, ethical considerations, including data privacy and academic integrity, are highlighted as critical areas requiring attention. The study underscores the need for targeted professional development to equip educators with the necessary skills to integrate AI effectively, ensuring a balanced approach that leverages AI's benefits while maintaining essential human interaction and cultural sensitivity in language education.

Keywords: English pre-service teachers, generative AI, ChatGPT, artificial intelligence in education (AIEd)

INTRODUCTION

The emergence of the information age and the rapid development of computer science have significantly impacted various aspects of life, including education. In particular, language education has traditionally relied heavily on human teachers' expertise and guidance to support effective learning experiences. However, the rapid advancement of artificial intelligence (AI) technology has substantially changed conventional teaching patterns (Park & Kwon, 2024). One such generative AI platform that has gained significant attention and adoption in various domains is ChatGPT. ChatGPT is a large language model (LLM) that utilizes deep learning techniques to generate human-like responses to text-based inputs (Law, 2024). Developed by Open AI, the platform has undergone extensive training on vast amounts of text data, demonstrating impressive proficiency in understanding and generating coherent responses. Its purpose extends beyond simple information retrieval, aiming to engage users in interactive conversations that mimic human-like dialogue (Kim & Su, 2024). As a result, ChatGPT has found applications in customer service, virtual assistants, creative writing, and even language teaching and learning.

Language teachers and educational institutions have begun exploring the integration of generative AI into their teaching practices. For instance, ChatGPT can be used as a conversational partner to provide learners

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additional practice and personalized feedback (Lee et al., 2024a). Some educators have employed generative AI to create interactive language learning applications or chatbots to engage students outside the classroom and establish learning motivations (Liu et al., 2024). This integration offers a unique opportunity to enhance language learning by providing students with constant, on-demand access to practice and support, which can complement traditional classroom instruction.

Despite generative AI's potential benefits, not all teachers exhibit uniform enthusiasm for these initial endeavors, giving rise to various reactions and perceptions of its impacts on language education (Duong & Suppasetseree, 2024). Some English language teaching (ELT) educators express concerns about the quality and reliability of the AI-generated responses, fearing that over-reliance on technology might lead to a decline in critical thinking and interpersonal communication skills. Additionally, there are concerns regarding data privacy and the ethical implications of using AI in educational settings. These mixed perceptions highlight the need for a balanced, informed approach to integrating generative AI into language teaching.

This study explores and analyzes the perceptions of English pre-service teachers (PSTs) in China regarding using generative AI, particularly ChatGPT, in ELT. By examining PSTs' familiarity with generative AI, its impact on language acquisition, and their acceptance of AI as a teaching tool, the study aims to identify both the potential benefits and challenges of integrating AI into educational practices. Ultimately, this research seeks to provide insights that can guide AI's responsible and effective use in language education, ensuring that it enhances teaching and learning while addressing ethical and pedagogical concerns.

LITERATURE REVIEW

The field of language education has traditionally relied upon the expertise of skilled language instructors who personalize educational strategies to meet the unique needs of individual learners (Jayapal, 2024). These instructors play a fundamental role in nurturing language acquisition by providing guidance and feedback, creating meaningful student interactions, and adapting their approaches to cater to diverse linguistic requirements (Choukaier, 2024). However, the digital age has presented new challenges to language educators, requiring them to quickly adapt, innovate, and implement new teaching and learning methods to keep up with the rapidly changing landscape and reduce their workload (Sharifuddin & Hashim, 2024). Furthermore, the integration of technology in classrooms and the increasing availability of online resources have transformed the dynamics of language learning, prompting educators to question conventional teaching methods and rethink their roles (Shin et al., 2024).

With the emergence of generative AI, such as ChatGPT, language educators have a potential solution to their challenges. ChatGPT can be utilized as a conversational partner to provide learners with additional practice and feedback personalization (Xu et al., 2024). Some educators have also employed generative AI to create interactive language learning applications or chatbots to engage students outside the classroom and establish learning motivations (Al-khresheh, 2024). For instance, ChatGPT can simulate real-life conversations, allowing students to practice language skills in a controlled yet dynamic environment. This can be particularly beneficial for practicing conversational skills, pronunciation, and even cultural nuances, critical components of language proficiency.

The integration of generative AI in language education offers several potential benefits. Generative AI can provide learners immediate feedback, allowing for more efficient and personalized learning experiences. This immediate feedback can help ELLs correct mistakes in real time and reinforce correct language usage, leading to more effective learning outcomes (Xu et al., 2024). Additionally, AI-driven applications can support differentiated instruction by tailoring learning experiences to individual student's needs and learning paces, accommodating diverse learning styles and abilities (Al-khresheh, 2024). Moreover, AI can alleviate some teachers' workloads by automating repetitive tasks such as grading and providing standard feedback. This allows educators to focus more on creative and interactive teaching, thus enhancing the overall educational experience (Sharifuddin & Hashim, 2024). AI tools can also facilitate access to educational resources and support for students who may not have regular access to native speakers or language experts, democratizing the availability of high-quality language education.

For example, Al-khresheh (2024) explored how English language teachers perceive ChatGPT in terms of its benefits and challenges when used in ELT, as well as to identify potential opportunities for digital innovations

in this context. The results indicated that while teachers acknowledge the potential of ChatGPT to support personalized and interactive learning, they also expressed concerns about its linguistic accuracy, the risk of excessive reliance on the tool, and the potential for stifling creativity. Additionally, participants highlighted ChatGPT's perceived limitations in developing key language skills such as listening and speaking. The data underscored the importance of targeted professional development and adaptable curriculum design to leverage the potential of ChatGPT and other AI tools fully.

Duong and Suppasetseree (2024) conducted an 8-week quasi-experiment involving 30 undergraduate students from Vietnam. They engaged in English speaking practice with an AI-powered voice chatbot during two class sessions per week, completed pre- and post-experiment speaking tests, filled out a questionnaire, and participated in a semi-structured interview at the study's conclusion. The results indicated a significant improvement in the student's English speaking skills after using an AI voice chatbot for practice, with a significance level of $p < 0.05$. The students also expressed agreement that their English speaking abilities had improved due to the intervention, attributing their progress to their enhanced ability to use appropriate hedging words, grammatical structures, and vocabulary. The study's findings suggest promising opportunities for educators to incorporate AI voice chatbots into their teaching and learning activities.

Kim et al. (2023) developed a Korean ESL learner at an intermediate level and instructed ChatGPT to develop a curriculum for business English writing. Next, the authors tasked ChatGPT with teaching business English writing using the TBLT method. While some areas could be improved, the outcomes were encouraging, demonstrating ChatGPT's ability to respond to given prompts and function as a language-learning tool. By addressing the opportunities and challenges of using ChatGPT in language learning, this study suggested its potential to enhance the learning experience by creating a supportive learning environment.

Lee et al. (2024b) investigated how Korean college students perceive AI-powered writing tools, including those using machine learning like Google Translate and Naver Papago and generative AI tools like Grammarly. The researchers used a combination of quantitative and qualitative methods for their study. 80 Korean university students who had taken English writing courses participated in an online survey. Following the survey, the research team selected five volunteers for a focus group interview. The findings suggest that these AI-based writing tools can potentially enhance the writing skills of English language learners (ELLs). ELLs identified the advantages and drawbacks of each AI-based tool, such as the accessibility of translation through machine learning and the error-checking capabilities of generative AI. However, the analysis of the interview data revealed that an excessive reliance on AI-based writing tools could disrupt the English writing process for ELLs. This study underscores the importance of effectively incorporating AI-based tools into the English language education of adult ELLs globally.

However, integrating generative AI in language education presents potential benefits, concerns, and criticisms. Ethical, copyright, transparency, legal issues, risks of bias, plagiarism, limited knowledge, inaccurate information, incorrect citations, and cybersecurity issues are all valid concerns regarding generative AI (Zhai & Wibowo, 2023). The misuse of ChatGPT could unintentionally lead to serious violations of scientific research ethics, including damage to the institutions involved (Lee et al., 2023). Another issue to consider is the authenticity of language interaction. Generative AI may struggle to replicate human communication's nuances and cultural contexts. As a result, reliance on generative AI could hinder students' ability to use authentic language and impede their understanding of cultural subtleties (Tobing et al., 2023). Ethical considerations arise regarding the appropriate balance between AI-mediated language learning and the indispensability of human interaction in language acquisition (Ji et al., 2023).

This study explores English PSTs' perceptions regarding the potential benefits and drawbacks of generative AI in the context of artificial intelligence in education (AIEd). The purpose of this study is to gain a better understanding of generative AI's various language teaching applications, enabling more informed educational decisions and strategies. By examining teachers' views, this study hopes to reconcile the advantages of AI tools with the essential value of human connection and cultural sensitivity in language education.

In conclusion, the literature highlights the promising opportunities, and the significant challenges associated with integrating AI tools in language education. While AI offers the potential to enhance personalized learning, provide immediate feedback, and alleviate teacher workload, it also raises important ethical, cultural, and pedagogical concerns. As language educators navigate this evolving landscape, it is

Table 1. Item structure and reliability of the research tool

Main themes	Item structure	Number of items	Reliability (Cronbach's alpha)
Familiarity with ChatGPT in the academic context	1-6	6	.786
ChatGPT and its relation to language acquisition	7-14	8	.888
Acceptance of ChatGPT in an academic context	15-18	4	.816
Totality	1-18	18	.913

Table 2. Study participants

Category		Frequency (n = 134)	Percentage (%)
Gender	Male	18	13.4
	Female	116	86.6
Generative AI usage experience	Yes	115	85.8
	No	19	14.2

crucial to strike a balance that leverages the benefits of AI while preserving the irreplaceable value of human interaction and cultural sensitivity in language learning. By understanding and addressing the diverse perspectives of language educators, this study aims to inform more effective and ethical integration strategies for AI in education. The goal is to support the development of AI tools that advance language proficiency and foster deeper cultural understanding and human connection.

RESEARCH METHOD

This research used a quantitative approach to examine how English PSTs in a Chinese university view the use of ChatGPT in their classes. The questionnaire was adopted by the previous study by Liu et al. (2024), containing 18 Likert statements and three open-ended questions focused on three main themes: familiarity with ChatGPT in the academic context, ChatGPT and its relation to language acquisition and acceptance of ChatGPT in an academic context. Among them, familiarity with ChatGPT within an academic context may influence PSTs' confidence and willingness to engage with the technology, affecting their overall perception. The relationship between ChatGPT and language acquisition highlights its practical application and relevance in educational settings, which directly ties to PSTs' perceived utility of the tool. The acceptance of ChatGPT in academic contexts pertains to PSTs' attitudes toward adopting it as a legitimate learning tool, a crucial factor in shaping their perception. By integrating these three dimensions, this study aims to provide a more nuanced understanding of English PSTs' perspectives on using ChatGPT in the classroom (Liu et al., 2024). These three components are evaluated using a 5-point Likert scale, where a higher score indicates a more positive perception of ChatGPT for academic use among English PSTs. In this study, the scale's reliability ranged from 0.786 to 0.888, with an overall reliability of 0.913, indicating good reliability (**Table 1**).

This study employed a random sampling method to ensure independent and equal variation within the population. Questionnaires were distributed to all students majoring in English education at a national university in China, resulting in 134 English PSTs completing the survey. The sample consisted of 18 males and 116 females. Most PSTs had prior experience using generative AI tools like ChatGPT (n = 115, 85.8%). This study uses descriptive statistics to examine prospective English teachers' perceptions of generative AI (**Table 2**).

STUDY RESULTS

The authors surveyed to gather the perceptions of 134 English PSTs regarding the use of generative AI in ELT. The survey results were categorized into three sections to analyze the respondents' views on various aspects of ChatGPT. These categories were familiarity with ChatGPT in the academic context, ChatGPT and its relation to language acquisition, and acceptance of ChatGPT in an academic context. To explore the familiarity of language teachers with ChatGPT, the survey results were analyzed and presented in **Table 3**.

According to the data in **Table 3**, most English PSTs have a very positive view of generative AI in an academic context. Most PSTs were highly familiar with generative AI tools that can be used in educational settings, such as ChatGPT and Wenxinyiyan (4.04 ± .774). However, they reported some reservations about the concepts related to generative AI in teaching and learning (3.53 ± .947), particularly concerning how

Table 3. Familiarity with generative AI in the academic context

No	Question	M	SD
1	I am familiar with generative AI applications that can be used in an academic context, such as ChatGPT, Perplexity AI, Otter.ai, and others.	4.04	.774
2	I understand the basic concept of generative AI ChatGPT in the context of teaching and learning.	3.53	.947
3	I understand how generative AI works in responding to its users.	3.40	.935
4	I use generative AI for teaching purposes, such as creating Lesson Plans, practice questions, or giving feedback on student work.	3.67	.964
5	I need to improve my knowledge and understanding of generative AI academically.	4.25	.712
6	I strongly recognize the importance of integrating generative AI into the current education curriculum, and I am eager to learn more about how to do so effectively.	4.08	.823

Table 4. Generative AI and its relation to language acquisition

No	Question	M	SD
7	Generative AI expands the vocabulary and language skills of its users.	3.53	1.092
8	Generative AI helps its users improve their speaking skills in the target language.	3.28	1.120
9	Generative AI helps its users improve their writing skills in the target language.	3.52	1.031
10	The use of generative AI reduces the interest of its users in learning languages conventionally, such as through private courses or tutoring.	3.19	1.027
11	Generative AI helps users better understand grammar by confirming and explaining grammatical errors.	3.69	.929
12	As it can be used privately, generative AI helps facilitate personalized language learning according to the needs of its users.	3.89	.864
13	Generative AI helps improve language accuracy as it can provide suggestions for writing (such as essays).	3.93	.787
14	Generative AI creates a motivating language learning environment where the learner feels comfortable that no one else knows when he or she makes a mistake in the learning process.	3.53	1.009

Table 5. Acceptance of use of generative AI in a language teaching context

No	Question	M	SD
15	I believe that generative AI can help improve the efficiency and effectiveness of the language teaching process.	3.90	.768
16	Generative AI saves my time making lesson plans, looking for teaching materials, and reviewing student work.	3.88	.776
17	I feel that generative AI can help increase students' understanding of language learning material.	3.93	.762
18	I accept the use of generative AI as a teaching aid and feel that it is a positive step toward improving the quality of language learning.	4.06	.658

generative AI functions in responding to users (3.40 ± .953) and its application for teaching purposes, such as creating lesson plans, practice questions, or providing feedback on student work (3.67 ± .964). Despite these reservations, most PSTs recognized the importance of integrating generative AI into current educational courses (4.25 ± .712) and strongly desired to improve their related knowledge and skills (4.08 ± .823).

According to the data presented in **Table 4**, most English PSTs agree that generative AI positively impacts students' language acquisition, particularly in grammar and writing (3.52 ± 1.031). PSTs reported that generative AI could help them better understand English grammar and identify grammatical errors (3.69 ± .929) and that it enhances language readiness, especially in English writing (3.93 ± .787). However, due to the limited use of generative AI in academic settings by Chinese PSTs, their response to its effectiveness in aiding English vocabulary (3.53 ± 1.092) and speaking (3.28 ± 1.120) was moderate. PSTs noted that generative AI significantly facilitated personalized English learning (3.89 ± .864) due to its adaptability to individual needs. Fortunately, the advantages provided by generative AI did not diminish PSTs' interest in traditional English learning methods, such as private lessons or tutoring (3.19 ± 1.027).

Based on results from teachers in **Table 5**, the vast majority of PSTs have a very positive view of using generative AI in English teaching. They believe that generative AI can help improve the efficiency and effectiveness of English teaching (3.90 ± .768), particularly by saving time in making teaching plans and marking homework (3.88 ± .776). PSTs believe generative AI can help students better understand English learning materials (3.93 ± .762). Consequently, PSTs expressed their willingness to accept generative AI as a

teaching aid and considered it an important step towards improving the quality of their English teaching (4.06 ± .658).

DISCUSSION

This study explores and analyzes the perceptions of English PSTs in China regarding using generative AI, particularly ChatGPT, in ELT. By examining PSTs' familiarity with generative AI, its impact on language acquisition, and their acceptance of AI as a teaching tool, the study aims to identify both the potential benefits and challenges of integrating AI into educational practices. Ultimately, this research seeks to provide insights that can guide AI's responsible and effective use in language education, ensuring that it enhances teaching and learning while addressing ethical and pedagogical concerns.

Familiarity with Generative AI

The data indicates that most PSTs are familiar with generative AI technologies, including tools like ChatGPT, which are increasingly prevalent in academic settings. The high mean scores in the familiarity section suggest that PSTs recognize the relevance of these tools in enhancing teaching and learning outcomes. However, despite this general familiarity, there needs to be a deeper understanding of how generative AI responds to users and its practical applications in teaching. This suggests that while PSTs are aware of the potential of AI, they may still need to possess the detailed knowledge required to implement these tools in their teaching practices effectively.

This gap between awareness and in-depth understanding is significant because it highlights the need for targeted professional development. As AI evolves, educators must be familiar with and proficient in using these technologies. Enhancing PSTs' knowledge and skills in this area will be essential for maximizing the benefits of AI in education and ensuring that these tools are used effectively to support student learning.

Generative AI and Language Acquisition

PSTs generally perceive generative AI as beneficial for language acquisition, particularly in grammar and writing. The survey results show that PSTs believe AI tools can help students better understand grammatical rules, correct errors, and improve their writing skills. These findings align with previous research suggesting that AI can provide personalized and immediate feedback, crucial for effective language learning.

However, the moderate scores related to AI's impact on vocabulary and speaking skills indicate some reservations about the effectiveness of AI in these areas. This could be due to the limitations of current AI technologies in replicating the nuances of human conversation and providing contextual language learning experiences. While AI can simulate dialogue, it may still need to be capable of offering the depth and richness of real-life language interactions, which are essential for developing advanced speaking and listening skills.

Moreover, the survey results suggest that while AI facilitates personalized learning, it still needs to diminish interest in traditional learning methods like private lessons or tutoring. This is an encouraging finding, implying that AI can complement rather than replace conventional teaching methods. The ability of AI to adapt to individual learning needs is particularly valuable, offering students additional resources and support that can enhance their overall language proficiency.

Our findings align with previous research, reinforcing the consensus among PSTs and researchers about the significant potential of AI tools in language learning. In line with the studies by Sharifuddin and Hashim (2024) and Liu et al. (2024), our research shows that PSTs recognize the role of AI in improving teaching efficiency, particularly in lesson planning, grammar correction, and personalized feedback. The high mean scores in our study for the perceived benefits of AI in these areas further support the broader consensus in the literature about AI's capacity to streamline repetitive tasks, allowing teachers to focus on more creative and interactive teaching methods.

For example, Lee et al. (2024a) and Duong and Suppasetseree (2024) identified that AI tools could significantly enhance students' writing skills by providing immediate, tailored feedback that adapts to individual needs. This study reinforces these findings, as PSTs also believe that AI tools like ChatGPT can play a critical role in improving students' understanding of grammatical rules and enhancing writing proficiency. The alignment of these results with prior research suggests that AI's integration into ELT is broadly perceived

as beneficial, particularly when supporting skill development in areas that traditionally require substantial instructor time and effort.

Acceptance of Generative AI in Teaching

The survey also reveals a generally positive attitude among PSTs toward integrating generative AI in English teaching. PSTs appreciate AI's time-saving benefits, particularly in lesson planning and student assessment tasks. The high acceptance scores indicate that PSTs view AI as a valuable tool that can enhance the efficiency and effectiveness of the teaching process. However, despite this enthusiasm, PSTs also express concerns about potential overreliance on AI. They worry that excessive use of AI tools could lead to a decline in students' critical thinking skills and creativity. These concerns are valid, as overreliance on AI could result in students becoming passive learners, dependent on technology for answers rather than actively engaging with the material.

Additionally, the authenticity of AI-facilitated language interactions remains a significant issue. PSTs know that while AI can simulate human-like conversations, it struggles to replicate the cultural and contextual nuances crucial for true language proficiency. This limitation underscores the importance of balancing AI use with traditional, human-mediated teaching methods emphasizing authentic communication and cultural understanding.

Ethical Considerations

Another critical concern highlighted by PSTs is the ethical implications of using AI in education. Issues such as data privacy, intellectual property, and the potential for generating biased or inaccurate information are significant challenges that must be addressed. PSTs express unease about the possibility of students using AI to produce work that is not their own, raising questions about academic integrity and the role of AI in assessments.

These concerns point to the need for clear guidelines and robust ethical standards for using AI in education. As AI tools become more integrated into teaching practices, it will be essential to establish policies that protect students and educators while ensuring that AI is used responsibly and ethically.

Ethical concerns about AI's integration into education, which have been discussed extensively in the literature, are strongly echoed by the findings of this study. Research by Ji et al. (2023) and Zhai and Wibowo (2023) has pointed out several ethical dilemmas associated with AI, including data privacy, intellectual property, and the potential for generating biased or inaccurate information. These concerns are mirrored in the responses of PSTs in this study, who express unease about the potential misuse of AI, particularly in ways that could compromise academic integrity. For instance, the possibility that students might use AI to produce work that is not theirs raises significant questions about the authenticity of learning outcomes. This concern has been increasingly highlighted in discussions about the role of AI in education (Ji et al., 2023).

Moreover, discussing ethical standards and guidelines for AI use in education is particularly pertinent. This study emphasizes the need for clear policies to govern the use of AI in the classroom, echoing calls from previous research to develop robust frameworks to ensure that AI is used responsibly. Educators and AI developers must work together to address these concerns and develop solutions. The potential for AI to generate biased content, as noted by Zhai and Wibowo (2023), underscores the importance of transparency and accountability in AI design and deployment, particularly in educational settings where the stakes for accuracy and fairness are high.

Implications for Future Practice

The findings of this study have significant implications for the future integration of AI in ELT. The positive perceptions of AI's potential benefits and concerns about its limitations and ethical implications suggest that AI should be integrated with caution and critical awareness. As Sharifuddin and Hashim (2024) noted, while AI can greatly enhance language teaching efficiency, its use must be balanced with traditional pedagogical approaches emphasizing human interaction and cultural sensitivity.

The need for targeted professional development is particularly critical. This study highlights a gap in PSTs' understanding of how to effectively implement AI tools in teaching, suggesting that professional development

programs should focus on equipping teachers with the skills and knowledge necessary to use AI in ways that complement and enhance traditional teaching methods. Such training should also address the ethical challenges associated with AI use, ensuring that educators are prepared to navigate the complexities of AI in the classroom.

CONCLUSIONS

Integrating generative AI, particularly tools like ChatGPT, into ELT represents a significant shift in educational practices. As AI technology rapidly advances, its potential to revolutionize education is becoming increasingly apparent. This study has thoroughly examined the perceptions of English pre-service teachers in China regarding using generative AI in their teaching practices. It offers valuable insights into this technology's opportunities and challenges.

The findings reveal that PSTs generally recognize the considerable potential of generative AI to enhance various aspects of language teaching. These teachers acknowledge that AI can provide personalized feedback, facilitate more efficient lesson planning, and offer students opportunities for self-paced learning. The ability of AI to automate repetitive tasks allows teachers to focus on more creative and interactive teaching activities, which can lead to improved educational outcomes. Moreover, the immediate feedback provided by AI tools like ChatGPT can help students quickly identify and correct errors, reinforcing their learning in real-time.

However, the study also uncovers concerns among PSTs that must be addressed to ensure AI's responsible and effective integration into ELT. One of the primary concerns is the potential over-reliance on AI, which could lead to a decline in students' critical thinking skills and creativity. PSTs worry that excessive dependence on AI-generated content might make students passive learners, relying on AI for answers rather than engaging in deep, critical thought. Additionally, the authenticity of AI-facilitated language interactions remains a significant issue. While AI can simulate human-like conversations, it struggles to replicate the nuanced and culturally contextualized communication essential for true language proficiency.

Ethical considerations also loom large in the discussion of AI in education. The potential for AI tools to generate biased or inaccurate information poses risks to the integrity of educational content. Moreover, concerns about data privacy, intellectual property rights, and the potential misuse of AI-generated content highlight the need for clear guidelines and robust ethical standards. PSTs expressed particular unease about the possibility of students using AI to produce work that is not their own, raising questions about academic integrity and the role of AI in assessments.

The study further emphasizes the importance of professional development for teachers to ensure they are adequately prepared to integrate AI into their classrooms. While PSTs are generally open to embracing AI, there is a clear need for targeted training programs that deepen their understanding of how to effectively utilize AI tools in ways that complement traditional teaching methods. This includes developing strategies to balance the use of AI with pedagogical approaches that prioritize student engagement, human interaction, and cultural sensitivity.

In conclusion, while generative AI offers exciting possibilities for enhancing English language teaching, its integration must be approached cautiously and critically. The enthusiasm for AI's potential should be tempered by a careful consideration of its limitations and the challenges it presents. Educators must strive to create a balanced approach that leverages the benefits of AI while preserving the irreplaceable value of human interaction in education. This study contributes to the broader discourse on AI in education by providing empirical evidence that can inform the development of more effective, ethical, and culturally sensitive AI integration strategies.

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Data availability: Data generated or analyzed during this study are available from the authors on request.

REFERENCES

Al-khresheh, M. H. (2024). Bridging technology and pedagogy from a global lens: Teachers' perspectives on integrating ChatGPT in English language teaching. *Computers and Education: Artificial Intelligence*, *6*, Article 100218. https://doi.org/10.1016/j.caeai.2024.100218

Choukaier, D. (2024). Integrating AI In English language pedagogy: Innovations and outcomes in teaching English as second/foreign language. *Educational Administration: Theory and Practice, 30*(5), 3311–3822.

Duong, T., & Suppasetseree, S. (2024). The effects of an artificial intelligence voice chatbot on improving Vietnamese undergraduate students' English speaking skills. *International Journal of Learning, Teaching and Educational Research, 23*(3), 293–321. https://doi.org/10.26803/ijlter.23.3.15

Jayapal, J. (2024). Artificial intelligence in education: A critic on English language teaching. In H. K, R. V. Rodriguez, U. Subramaniam, & V. E. Balas (Eds.), *Artificial intelligence and knowledge processing* (pp. 348–357). CRC Press. https://doi.org/10.1201/9781003328414-30

Ji, H., Han, I., & Ko, Y. (2023). A systematic review of conversational AI in language education: Focusing on the collaboration with human teachers. *Journal of Research on Technology in Education, 55*(1), 48–63. https://doi.org/10.1080/15391523.2022.2142873

Kim, A., & Su, Y. (2024). How implementing an AI chatbot impacts Korean as a foreign language learners' willingness to communicate in Korean. *System, 122*, Article 103256. https://doi.org/10.1016/j.system.2024.103256

Kim, S., Shim, J., & Shim, J. (2023). A study on the utilization of OpenAI ChatGPT as a second language learning tool. *Journal of Multimedia Information System, 10*(1), 79–88. https://doi.org/10.33851/JMIS.2023.10.1.79

Law, L. (2024). Application of generative artificial intelligence (GenAI) in language teaching and learning: A scoping literature review. *Computers and Education Open, 6*, Article 100174. https://doi.org/10.1016/j.caeo.2024.100174

Lee, D., Kim, H. H., & Sung, S. H. (2023). Development research on an AI English learning support system to facilitate learner-generated-context-based learning. *Educational Technology Research and Development, 71*(2), 629–666. https://doi.org/10.1007/s11423-022-10172-2

Lee, Y.-J., Davis, R. O., & Lee, S. O. (2024b). University students' perceptions of artificial intelligence-based tools for English writing courses. *Online Journal of Communication and Media Technologies, 14*(1), Article e202412. https://doi.org/10.30935/ojcmt/14195

Lee, Y.-J., Davis, R. O., & Ryu, J. (2024a). Korean in-service teachers' perceptions of implementing artificial intelligence (AI) education for teaching in schools and their AI teacher training programs. *International Journal of Information and Education Technology, 14*(2), 214–219. https://doi.org/10.18178/ijiet.2024.14.2.2042

Liu, H., Li, Y., & Luo, W. (2024). Artificial intelligence in English language teaching. In *Proceedings of the 3rd International Conference on Education, Language and Art* (pp. 120–131). Atlantis Press. https://doi.org/10.2991/978-2-38476-214-9_16

Liu, Y., Park, J., & McMinn, S. (2024). Using generative artificial intelligence/ChatGPT for academic communication: Students' perspectives. *International Journal of Applied Linguistics*, 1–25. https://doi.org/10.1111/ijal.12574

Park, W., & Kwon, H. (2024). Implementing artificial intelligence education for middle school technology education in the Republic of Korea. *International Journal of Technology and Design Education, 34*(1), 109–135. https://doi.org/10.1007/s10798-023-09812-2

Sharifuddin, N. S., & Hashim, H. (2024). Benefits and challenges in implementing artificial intelligence in education (AIED) in ESL classroom: A systematic review (2019–2022). *International Journal of Academic Research in Business and Social Sciences, 14*(1), 146–164. https://doi.org/10.6007/IJARBSS/v14-i1/20422

Shin, D., Lee, J. H., & Noh, W. I. (2024). Realizing corrective feedback in task-based chatbots engineered for second language learning. *RELC Journal*. https://doi.org/10.1177/00336882231221902

Tobing, M. B., SNA, F. I., Hayrunnisa, N. R., Haswuri, N. I. T., Sutarsyah, C., & Munifatullah, F. (2023). An exploration of artificial intelligence in English language teaching as a foreign language. *International Journal of Social Science and Human Research, 6*(6), 3837–3843. https://doi.org/10.47191/ijsshr/v6-i6-78

Xu, X., Chen, Y., & Miao, J. (2024). Opportunities, challenges, and future directions of large language models, including ChatGPT in medical education: A systematic scoping review. *Journal of Educational Evaluation for Health Professions, 21*, Article 6. https://doi.org/10.3352/jeehp.2024.21.6

Zhai, C., & Wibowo, S. (2023). A systematic review on artificial intelligence dialogue systems for enhancing English as foreign language students' interactional competence in the university. *Computers and Education: Artificial Intelligence, 4*, Article 100134. https://doi.org/10.1016/j.caeai.2023.100134