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Exploring Pre-Service English Teachers' Prior Knowledge and Technology Acceptance through AI-Powered Digital Storytelling Training

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Abstrak *– Pesatnya perkembangan Artificial Intelligence (AI) menimbulkan kekhawatiran terkait kesiapan calon guru dalam memanfaatkannya di kelas. Meskipun teknologi AI semakin banyak dibahas dalam konteks pendidikan, banyak calon guru masih memiliki kesempatan terbatas untuk memperoleh pengalaman praktis dalam mengintegrasikan alat berbasis AI dalam pembelajaran. Artikel ini merupakan bagian dari proyek penelitian yang lebih besar pada tahun 2024 yang mengkaji pengetahuan awal calon guru bahasa Inggris tentang alat AI serta persepsi mereka sebelum dan sesudah mengikuti pelatihan digital storytelling berbasis AI. Penelitian ini menggunakan desain action research dengan pendekatan mixed methods dan intervensi pre–post yang melibatkan 90 mahasiswa calon guru bahasa Inggris semester enam di sebuah universitas di Indonesia. Intervensi berupa pelatihan terstruktur dalam membuat materi digital storytelling berbasis AI menggunakan ChatGPT, Canva, dan AI Audio Maker. Data dikumpulkan melalui kuesioner yang diadaptasi dari penelitian TAM sebelumnya yang mengukur Perceived Usefulness, Perceived Ease of Use, Behavioral Intention, Attitude, Trust, dan Actual System Use. Hasil menunjukkan peningkatan konsisten pada seluruh konstruk TAM, termasuk perceived usefulness (3.79→4.10), perceived ease of use (3.65→3.99), behavioural intention (3.74→4.10), actual system use (3.47→3.95), attitude (3.86→4.03), dan trust (3.73→4.14). Temuan ini menunjukkan bahwa proyek digital storytelling berbasis AI dapat meningkatkan kepercayaan diri dan kesiapan calon guru dalam mengintegrasikan AI dalam pembelajaran bahasa Inggris. Penelitian ini menegaskan pentingnya pelatihan AI yang terstruktur dalam program pendidikan guru serta memberikan bukti empiris tentang potensi digital storytelling berbantuan AI sebagai strategi pedagogis dalam konteks EFL di Indonesia.*

Kata Kunci: Artificial Intelligence (AI), Calon Guru, Pelatihan Guru, Technology Acceptance Model, Pembelajaran Bahasa Inggris

Abstract *– There is a concern with the rapid rise of Artificial Intelligence (AI) and the actual readiness of future teachers to use it in their classrooms. Although AI technologies are increasingly discussed in educational contexts, many pre-service teachers still have limited opportunities to gain practical experience in integrating AI-supported tools into classroom teaching. The research-focused report from a larger 2024 research project examines pre-service English teachers' prior knowledge of AI tools and their perceptions before and after participating in AI-powered digital storytelling training. Using a mixed-methods action research design with a pre–post intervention, the study involved 90 sixth-semester pre-service English teachers enrolled at an Indonesian university. The intervention involved structured training in creating AI-powered digital storytelling materials using tools such as ChatGPT, Canva, and AI Audio Maker. Data were collected using a questionnaire adapted from previous TAM studies that measured key constructs, including Perceived Usefulness, Perceived Ease of Use, Behavioral Intention, Attitude, Trust, and Actual System Use. By comparing mean scores from pre-test and post-test responses, the results show a consistent upward trend in participants' perceptions of AI tools. The results indicate consistent increases across all TAM constructs, including perceived usefulness (3.79→4.10), perceived ease of use (3.65→3.99), behavioral intention (3.74→4.10), actual system use (3.47→3.95), attitude (3.86→4.03), and trust (3.73→4.14). The findings suggest that hands-on AI-powered digital storytelling projects can effectively enhance pre-service teachers' confidence and readiness to integrate AI technologies into English language teaching. This study highlights the importance of structured AI training in teacher education programs and provides empirical evidence supporting the integration of AI-assisted digital storytelling as a pedagogical strategy in Indonesian EFL contexts.*

Keywords: Artificial Intelligence (AI), Pre-Service Teachers, Teacher Training, Technology Acceptance Model, English Language Teaching

INTRODUCTION

In contemporary education, integrating technology is crucial for fostering effective learning environments (Cloete, 2017; Rajarshi et al, 2023; Savov et al., 2017). One of the popular technology integrations, such as Artificial Intelligence (AI), has also transformed language teaching, resulting in personalised learning experiences, automated assessment, and intelligent tutoring systems (Chen et al., 2021; Son et al., 2023). AI's capacity to adapt content to individual needs, improve assessment processes, and provide adaptive instruction has transformed the language-learning experience for students and teachers. This innovative role emphasises AI's ability to improve efficiency, personalise training, and create a more engaging language-learning environment. Moreover, AI has also demonstrated itself as a dynamic and transformational factor in education, affecting the context of learning experiences for teachers and students in varied settings (Goksel & Bozkurt, 2019; Harry, 2023). Three significant points contribute to its importance: personalised learning experiences, automated assessment, and intelligent tutoring systems (Kamalov et al., 2023).

In the field of language education, the need to integrate AI into teacher education has become increasingly urgent as universities attempt to keep up with rapidly evolving global digital standards. However, studies indicate that pre-service English teachers often experience difficulties in creating engaging instructional materials (Demirkan, 2019). As educational demands continue to evolve, pre-service teachers must be equipped with the knowledge and skills required to integrate digital technologies effectively into their teaching practices. Furthermore, incorporating artificial intelligence (AI) into teacher education emerges as a transformational response to pre-service English teachers' digital literacy and instructional design needs (Celik, 2023; Pedro et al., 2019). By introducing AI technologies into their training, pre-service teachers will gain significant practical experience and a better understanding of how to use technology effectively in their future classrooms.

According to the study by Celik (2023) and Pedro et al. (2019) Pre-service teachers who engage with AI-powered tools during their training will be better prepared to join the classroom with the knowledge and confidence to easily integrate technology into their teaching methods. This improves the quality of their teaching materials and prepares them to create a digitally enhanced educational setting that accommodates the various needs of today's students. Integrating AI into pre-service teacher training emphasises its potential as an instrument for improving the capabilities of future educators and transforming the future of education. The integration of AI in education has been extensively explored, showing its transformative role in personalised learning, automated assessment, and intelligent tutoring systems (Kamalov et al., 2023). However, the specific application of AI tools such as ChatGPT, Canva, and AI Audio Maker in pre-service teacher training for digital storytelling development remains relatively underexplored. Research on pre-service teacher training by Celik (2023), Demirkan (2019), and Pedro et al. (2019) showed the challenges faced by future educators in developing engaging materials. While previous studies have examined AI integration in education more broadly, fewer studies have focused on how AI-powered digital storytelling training influences pre-service teachers' technological attitudes and perceptions of AI adoption in teaching

Referring to previous findings from this research project, which showed that structured AI training can enhance the digital competencies of EFL pre-service teachers(Nikmah et al., 2025) there is a need for deeper analysis of the psychological and attitudinal aspects of AI adoption. While earlier work from this project focused on developing AI-assisted digital storytelling materials, further investigation is needed to examine how such training influences pre-service teachers' perceptions of AI technologies. This study forms part of a broader research project entitled "Exploring Pre-Service English Teachers' Learning Material Development through AI-Powered Digital Storytelling (2024)." While the larger project investigates the development of AI-assisted instructional materials, the present paper specifically focuses on two aspects: participants' prior knowledge of AI tools and the changes in their technological perceptions before and after the training intervention.

Therefore, this study investigates how AI-powered digital storytelling training shapes pre-service English teachers' perceptions and acceptance of AI, using the Technology Acceptance Model (TAM). The study addresses the following research questions:

1. What is the level of prior knowledge of AI tools and digital storytelling among pre-service English teachers?
2. How does AI-powered digital storytelling training influence pre-service teachers' technological attitudes based on TAM constructs?
3. How do pre-service teachers perceive the usefulness and ease of use of AI tools after participating in the training?

RESEARCH METHODOLOGY

This study utilized a mixed-methods action research design to explore how AI-powered training influences the professional development of pre-service English teachers. Action research was selected because it allows researchers to implement pedagogical interventions directly within a classroom context while simultaneously evaluating their impact on participants' learning experiences (Gunbayi, 2022). This approach is particularly suitable for technology integration studies, where practical experimentation and reflection are essential to understanding instructional innovation. Moreover, by engaging in a cycle of planning, action, and reflection, this study aimed to uncover practical problems in digital material creation and provide immediate pedagogical solutions Cabaroglu (2023).

This study was structured into five distinct stages: introduction, training, production, presentation, and discussion. This organizational framework, as well as the training intervention itself, was specifically adapted from the model developed by Belda-Medina and Goddard (2024). Through this process, participants were guided from theoretical understanding toward the practical development of AI-powered digital storytelling materials. The study was conducted at UIN Sayyid Ali Rahmatullah Tulungagung, with 90 third-year college students (semester 6) majoring in English Language Education as participants. These pre-service teachers were enrolled in the "English Language Trends" course, which required them to develop collaborative digital projects, including digital storytelling videos, lesson plans, and assessment rubrics. The participant group consisted of 77 female and 13 male students, aged 20-23. To ensure a diverse range of collaborative experiences, students were organized into 23 teams across two classes (TBI 6A and TBI 6B), with English proficiency levels ranging from B2 to C1 according to the CEFR.

This study employed a mixed-methods data collection strategy to gain a comprehensive view of participants' experiences. The primary quantitative instrument was a structured questionnaire adapted from (Belda-Medina & Goddard (2024) based on the Technology Acceptance Model (TAM). The instrument served two main purposes in this study. First, several items were designed to assess participants' prior knowledge of AI tools and digital storytelling prior to the training. Second, the questionnaire was administered as both a pre- and post-test to assess changes in participants' perceptions of technology following the AI-powered digital storytelling training. Lastly, the data analysis combined descriptive quantitative analysis with qualitative reflections within the action research framework. For the quantitative findings, the analysis compared the Mean (M) and Standard Deviation (SD) of pre-test and post-test responses. Since the primary objective of this study was to examine attitudinal trends within an action research framework rather than to generalize findings to a broader population, descriptive statistics were considered sufficient to illustrate changes in participants' perceptions. The analysis, therefore, focused on two components: (1) describing participants' prior knowledge levels regarding AI tools and digital storytelling, and (2) comparing pre-test and post-test perception scores to examine changes in participants' attitudes toward AI after the training intervention.

RESULTS AND DISCUSSION

1. Participants' Prior Knowledge of AI Tools

Before the training was conducted, participants were asked to report their level of familiarity with several AI-powered tools commonly used for digital content creation. These tools included ChatGPT, Canva AI, and AI Audio Maker. The results provide an overview of participants' initial exposure to AI technologies prior to the instructional intervention.

Table 1. Distribution of Participants' Responses Regarding their Prior Knowledge of AI tools.

No.	Statements	Response (%) (N=90)					Mean	St. Dev
		SD	D	N	A	SA		
AI Tools								
1.	I am familiar with AI tools, especially for English language teaching.	0	7.8	25.6	46.77	20	3.79	.855
2.	I understand how AI can be used in creating teaching materials.	0	8.9	23.3	52.2	15.6	3.74	.829

3.	I have participated in training sessions on AI tools for education to English language teaching.	8.9	17.8	27.8	37.8	7.8	3.18	1.097
4.	I have used AI tools in some of my pre-service teaching activities.	1.1	11.1	37.8	42.2	7.8	3.44	.836
5.	I have created content with AI tools for English language teaching.	3.3	14.4	27.8	46.7	7.8	3.41	.947
6.	I have used AI for assessment or feedback in my learning & teaching practice.	0	8.9	42.2	40	8.9	3.49	.782
7.	I feel confident in using AI tools to create English teaching materials.	0	6.7	36.7	46.7	10	3.60	.761
8.	I believe that AI tools can enhance the teaching of English.	1.1	6.7	22.2	53.3	16.7	3.78	.845
9.	I am aware of some challenges and benefits of using AI-powered tools in teaching English.	1.1	6.7	22.2	54.4	15.6	3.77	.835
10.	I am interested in learning more about AI tools for English language teaching.	1.1	6.7	18.9	43.3	30	3.94	.928
Average Mean Score 3.61								
Digital Storytelling								
1.	I know what digital storytelling is.	3.3	11.1	40	37.8	7.8	3.36	.903
2.	I have learned about digital storytelling methods during my study.	3.3	14.4	43.3	33.3	5.6	3.23	.887
3.	I have integrated digital storytelling into my pre-service teaching practices.	3.3	16.7	46.7	27.8	5.6	3.16	.886
4.	I think digital storytelling can enhance language learning experiences.	1.1	7.8	34.4	44.4	12.2	3.59	.849
5.	I am willing to further explore digital storytelling techniques for language education.	2.2	7.8	33.3	41.1	15.6	3.60	.922
Average Mean Score 3.38								
Overall Mean Score 3.54								

Based on Table 1, most participants had limited practical experience with AI tools for creating educational content. Although several participants reported familiarity with widely used platforms such as ChatGPT and Canva, their understanding of how to effectively integrate these tools into instructional material development remained relatively limited. The data nevertheless suggests that participants generally held positive attitudes toward AI tools. For instance, the mean score of 3.74 indicates that participants recognised the potential of AI for creating teaching materials. They also reported moderate confidence in using these tools **(**3.60**)** and demonstrated strong interest in learning more about AI applications, reflected in the highest mean score of 3.94**.** However, the relatively lower mean score for prior training experience with AI tools **(**3.18**)** suggests that opportunities for formal instruction and hands-on training remain limited.

Similarly, participants showed lower familiarity with tools related to AI-generated audio narration and digital storytelling support**.** Although the mean score of 3.59 indicates that participants believed digital storytelling could enhance language learning, their knowledge of digital storytelling methods **(**3.23**)** and prior integration of these approaches into teaching practice **(**3.16**)** remained relatively limited. These findings suggest that while participants recognise the potential pedagogical value of both AI tools and digital storytelling**,** they still require additional training and practical experience to effectively apply these technologies in language teaching. Overall, the average mean score of 3.54 reflects generally positive perceptions toward AI tools and digital storytelling while highlighting the need for further pedagogical support and structured training opportunities.

2. Attitudes towards the use of AI tools for developing teaching materials

To examine how the AI-powered digital storytelling training influenced participants' perceptions, the study employed a pre-test and post-test survey based on the Technology Acceptance Model (TAM). The survey measured six constructs: Perceived Usefulness, Perceived Ease of Use, Behavioral Intention, Attitude, Trust,

Actual System Use,

Table 2. Pre-Service English Teachers' Attitudes Toward the Use of AI Tools for Developing Teaching Materials

Statements (N=90)	**Pre-Test**		**Post-Test**	
	M	**SD**	**M**	**SD**
Perceived Usefulness				
AI can facilitate individualized learning experiences for students.	3.87	.090	4.16	.083
AI can enhance the accessibility of English language materials for diverse learners	3.90	.089	4.14	.081
AI can help in analysing students' learning progress and adapting instruction accordingly.	3.57	.088	3.94	.084
AI can aid in creating engaging and interactive learning experiences.	3.82	.094	4.16	.085
Perceived Ease of Use				
Learning to use AI-powered tools for English language teaching should be relatively simple.	3.69	.083	4.02	.082
Integrating AI into English language lesson plans would not be challenging.	3.58	.084	4.00	.076
As a pre-service teacher, I can quickly adapt to using AI in their teaching practices.	3.73	.092	4.07	.082
AI tools come with comprehensive user guides and support resources.	3.61	.088	3.86	.086
Behavioural Intention				
I am eager to incorporate AI into my future English language teaching.	3.77	.082	4.11	.084
I intend to actively seek opportunities to integrate AI tools into my teaching practices.	3.58	.081	4.01	.077
I believe that using AI in English language teaching will be essential for future educators.	3.91	.098	4.18	.077
I am excited about the potential of AI to revolutionize English language education	3.69	.089	4.08	.084
Actual System Use				
I have used AI-powered tools to supplement classroom activities.	3.52	.091	4.04	.088
I have collaborated with peers to explore the potential of AI in language learning.	3.42	.084	3.86	.092
Attitude				
I believe that integrating AI into English language education can foster innovation in teaching practices.	3.81	.079	3.86	.085
I have concerns about the ethical implications of relying too heavily on AI in education.	3.91	.101	4.20	.081
Trust				
I trust AI to provide valuable insights into student learning patterns and preferences.	3.63	.075	4.11	.077
I am cautious about relying too heavily on AI without proper human oversight and intervention.	3.83	.091	4.16	.083

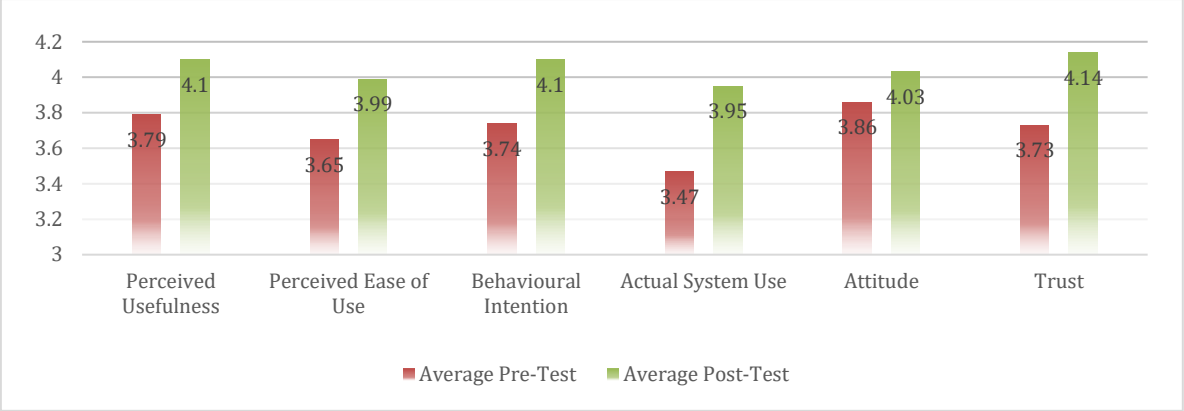

Figure 1. Pre- and Post-Training Mean Scores Across TAM Constructs

Table 2 shows a general increase in mean scores across all TAM constructs following the training intervention. The most noticeable improvements were observed in Perceived Usefulness and Behavioral Intention, indicating that participants developed stronger beliefs that AI tools could support their future teaching practices. Similarly, the mean scores for Perceived Ease of Use increased after the training, suggesting that participants found AI tools easier to operate once they had gained hands-on experience with them. The mean score for statements related to the simplicity of learning and integrating AI tools increased from 3.69 to 4.02. This suggests that participants felt more comfortable with the usability of AI tools after the training. However, the score for the availability of comprehensive user guides only increased modestly, highlighting ongoing concerns about support resources.

Furthermore, participants demonstrated a significant increase in their intention to use AI tools in their future teaching. The mean score for eagerness to incorporate AI tools grew from 3.77 to 4.11, and the belief in AI's essential role in future education rose from 3.91 to 4.18. This reflects a stronger commitment and enthusiasm towards AI integration post-training. The actual use of AI tools improved, with the mean score for using AI to supplement classroom activities increasing from 3.52 to 4.04. This indicates that participants were more likely to implement AI tools in their practices. However, collaboration with peers to explore AI remained less emphasized, with only a modest increase in the mean score from 3.42 to 3.86.

In addition, the constructs of Attitude and Trust toward AI technologies also showed positive shifts, reflecting a more favorable perception of AI-assisted teaching tools following the training activities. The mean score for integrating AI to foster innovation in teaching rose from 3.81 to 3.86, while trust in AI's ability to provide valuable insights increased from 3.63 to 4.11. However, there was also an increased awareness of the ethical implications of using AI, with the mean concern score increasing from 3.91 to 4.20. The comparison between pre-test and post-test data reveals a clear positive shift in participants' attitudes towards AI tools. The improvement in perceived usefulness and ease of use suggests that participants gained a better understanding and appreciation of AI tools' capabilities and their integration into teaching practices. The increased behavioural intention highlights a growing eagerness and belief in the importance of AI for future educational practices. Although the increase in scores varies across constructs, the overall pattern indicates that exposure to structured AI training can positively influence pre-service teachers' acceptance of emerging educational technologies.

These findings provide important insights into how pre-service teachers' initial technological familiarity and perceptions evolve after participating in AI-powered digital storytelling training. The implications of these results are discussed in the following section.

Discussion

The findings revealed that most participants had limited prior knowledge of AI tools for educational purposes, particularly in developing instructional materials, such as digital storytelling content. Although several participants reported familiarity with widely used platforms such as ChatGPT and Canva, their understanding of how to integrate these tools into language teaching practices remained relatively limited. This suggests that while these pre-service teachers may be considered digital natives and are generally open to technological change, they still lack the pedagogical framework required to integrate AI tools effectively into educational practice. This finding aligns with Widianingtyas et al. (2023), who noted that language teachers are generally familiar with AI technologies and have a strong desire for professional development. For example, their study reported that 87% of teachers were aware of tools such as ChatGPT for educational purposes. However, the relatively lower levels

of training experience observed in the present study reveal a critical gap between awareness and pedagogical application.

The findings, therefore, highlight an important challenge in teacher education programs: the gap between technological exposure and pedagogical integration. Without guided training experiences, pre-service teachers may struggle to transform technological tools into meaningful instructional resources. This supports previous research suggesting that teacher education programs should incorporate structured digital training to help future teachers develop both technological competence and pedagogical confidence (Menekse, 2023). Several studies also highlight teachers' increasing interest in professional development related to artificial intelligence. For example, a study by Nyaaba & Zhai (2024) shows that many educators who participate in webinars focused on generative AI actively seek professional development opportunities to better understand and utilise AI tools. Another study also reported that teachers recognise the importance of continuous training to address challenges associated with AI integration in education, suggesting that without sustained professional development, the effectiveness of AI implementation may remain limited.

This growing interest in AI-related professional development is also reflected in the broader research project from which the present study is derived. A previous phase of the same project documented how pre-service teachers required guided training to transform their initial interest in AI technologies into practical instructional materials (Nikmah et al., 2025). While that earlier study primarily examined the development of AI-assisted digital storytelling materials, the present study extends this line of inquiry by exploring how such training experiences influence pre-service teachers' perceptions and acceptance of AI technologies in teaching and learning contexts. During the intervention, participants successfully moved from theoretical understanding to practical application by creating digital stories across various genres, including fairy tales. The results also demonstrate that participation in AI-powered digital storytelling training led to positive changes in participants' perceptions of technology, as reflected in the increased mean scores across all TAM constructs. By using AI tools to support language-learning activities such as listening, writing, and reading assessments, participants began to perceive AI not merely as a technological tool but as a pedagogical partner that can support instructional design and language learning.

These findings align with previous research demonstrating that digital storytelling provides authentic and meaningful learning opportunities that support language development and learner engagement (Belda-Medina & Goddard, (2024), Nair & Yunus, 2021; Ngoi et al., 2024; Nuriyah et al., 2024) Such environments allow learners to integrate narrative development with multimodal digital resources, thereby fostering creativity and deeper engagement in language-learning activities. Furthermore, the positive shift observed across the Technology Acceptance Model (TAM) constructs suggests that the training influenced participants' evaluation of the usefulness of AI tools in educational contexts. Students increasingly recognised AI tools as technologies that can support personalised learning and assist teachers in designing more engaging instructional materials. Previous research also indicates that AI-powered learning systems can provide adaptive and personalised learning experiences that enhance student engagement and improve learning outcomes (González-Calatayud et al., 2021; Zafari et al., 2022). Belda-Medina & Goddard (2024) further argue that AI-driven storytelling tools can function as creative partners in the learning process, enabling learners to experiment with language production, narrative construction, and multimodal communication. For example, the use of Speechace, an AI-powered language assessment tool, has been shown to improve students' speaking skills in terms of fluency, vocabulary, grammar, and overall communicative competence (Ningsih, 2024).

Similarly, participants' perceptions regarding the ease of use of AI tools improved after participating in the training. This indicates that hands-on experience and guided instruction play a significant role in helping pre-service teachers feel more confident in using emerging technologies. Previous studies have also demonstrated the positive impact of AI integration in educational practice. For example, González-Calatayud et al. (2021) and Lemke et al. (2023) studied the use of AI tools to help teachers in assisting administrative tasks such as grading, admissions, and placement processes, which can make teaching more efficient and less time-consuming. The application of Classtime.com in assessment, which is integrated with AI, can help the teacher assess students' midterm tests and test students' grammar quickly (Ningsih, 2023). Taken together, these findings suggest that structured AI training experiences play a critical role in shaping pre-service teachers' perceptions of technology, confidence, and readiness to integrate emerging technologies into future teaching practices.

Lastly, the findings of this study highlight the importance of providing comprehensive and structured training opportunities for pre-service English teachers. In this study, sixth-semester students participated in a training program designed to equip them with the skills and confidence to utilise AI tools in their future classrooms. Research indicates that addressing pre-service teachers' attitudes toward technology, including their self-efficacy

and prior knowledge, can significantly influence their readiness to integrate AI into teaching practices (Yetkin & Özer-Altınkaya, 2024).

The findings of this study provide several implications for teacher education programs, particularly in contexts where AI integration is still emerging. First, pre-service teachers need structured opportunities to explore AI tools within meaningful pedagogical contexts, as simply introducing AI technologies without guided practice may not be sufficient for classroom implementation. Second, the positive perception changes after the training highlight the importance of hands-on learning experiences in shaping teachers' attitudes toward technology. Training that combines practical experimentation, collaborative projects, and reflective discussion may better prepare future teachers for technology-integrated classrooms. Finally, AI-powered digital storytelling demonstrates how creative pedagogical approaches can serve as an effective entry point for introducing emerging technologies in teacher education while supporting both technological literacy and pedagogical innovation.

While this study offers valuable insights, it also has several limitations. First, the sample size was limited to two classes, which may not fully represent the broader population of pre-service English teachers, particularly within UIN Sayyid Ali Rahmatullah in East Java, Indonesia. Additionally, the sample may not capture the diversity of attitudes and experiences among pre-service English teachers across different regions and institutions in Indonesia. Future research could involve larger and more diverse samples to better understand how AI training programs influence pre-service teachers' technological readiness and pedagogical practices in different educational contexts.

CONCLUSION

This study examined pre-service English teachers' prior knowledge of AI tools and the changes in their technological perceptions after participating in AI-powered digital storytelling training. The findings revealed that although many participants were generally aware of AI tools such as ChatGPT and Canva, their prior knowledge of how these technologies could be applied for instructional material development was relatively limited. This suggests that exposure to AI in everyday digital environments does not necessarily translate into pedagogical readiness for classroom integration. After participating in the training, the results demonstrated a consistent increase across all Technology Acceptance Model (TAM) constructs, particularly in perceived usefulness, perceived ease of use, and behavioral intention. These improvements indicate that hands-on training experiences can play an important role in strengthening pre-service teachers' confidence and willingness to adopt AI technologies in future teaching practices. The findings, therefore, highlight the importance of integrating structured AI training activities into teacher education programs, especially through project-based approaches such as digital storytelling, which allow participants to experience technology in authentic instructional contexts. Despite these contributions, this study has several limitations. The research was conducted within a single university context and focused primarily on participants' perceptions rather than long-term classroom implementation. Future research may explore how AI-powered digital storytelling influences actual teaching practices, student learning outcomes, and long-term technology adoption among teachers.

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