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The Association of Independent Liberal Arts Colleges for Teacher Education (AILACTE) is a non-profit organization dedicated to the work of educator preparation programs in private liberal arts institutions. AILACTE supports, recognizes, and advocates for private higher education institutions that offer a liberal arts education. As an affiliate of the American Association of Colleges for Teacher Education (AACTE), AILACTE provides communication, resources, information sharing, and leadership across organizations.

Each year AILACTE publishes an issue in the peer-reviewed *AILACTE Journal* with the goal of disseminating scholarly work that enhances the field of teacher education in independent liberal arts colleges and universities.

Manuscripts may address any issue that enhances the work of teacher educators in a liberal arts context. Topics that are appropriate for the journal include teaching and learning strategies; diversity, equity, inclusion, and social justice; responding to state mandates; candidate and faculty recruitment; tenure track and the use of adjuncts and professors of practice; budget issues; candidate and program assessment; program leadership; clinical practice and partnerships; policy changes; program models; technology; etc. *Although submissions are not limited to research studies, manuscripts that are grounded in literature and supported by empirical data will be given stronger consideration.*

Manuscripts are due **June 10, 2026** and can be submitted on the *AILACTE Journal* website. Manuscripts must follow all Review Criteria, as well as additional requirements posted on the *AILACTE Journal* website. Please review all materials before submitting a manuscript for consideration. If you have questions at any point, please feel free to contact the Guest Editors.

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From the Editors

This year's *AILACTE journal* issue is a timely-themed volume addressing the Integration of Artificial Intelligence in Teacher Education Programs. Since the release of ChatGPT in 2022, educators have been engaged in understanding how to realize the potential of artificial intelligence to support learning while mitigating the concerns associated with generative AI. The four articles included in this issue examined a variety of topics and findings demonstrated the benefits and challenges associated with the integration of artificial intelligence into K-20 education.

In the first article, Kristin Cook, Jordyn Gedes, and Kevin Thomas report on findings from a study of undergraduate pre-service teachers' perspective on artificial intelligence use in both their field experiences and university courses. Participants reported K-12 teachers and university faculty used AI for a variety of educational purposes; however, they recommended faculty in TPPs develop clear policies on student use and provide instruction on how to effectively and ethically use AI in their future classroom.

The theme of teacher leadership is taken up by Kelly Lenarz, Catherine Nelson, and Jan Fitzsimmons, who examine the leadership knowledge, skills, and competencies acquired by teacher candidates. The findings suggest areas of strength and growth, underscoring the need for integrating leadership development into preservice programs to better prepare candidates for the challenges of teaching and leadership in schools.

Elizabeth Falzone, Michael D'Angelo, and Caitlin Riegel conducted a qualitative study of adult English Language Learners to explore the ability of artificial intelligence to support the development of language and digital literacy skills. The use of AI tools like ChatGPT and Canva to create digital artifacts on their personal experiences increased participants' language skills and digital confidence, but there were some limitations.

Samaa Haniya and Reyna García Ramos used a mixed-methods approach to examining the potential of artificial intelligence to support a professional development workshop for in-service and pre-service teachers and staff from mostly Title 1 schools. Several key insights into developing and implementing professional development on AI emerged from the study. Ethical concerns, a theme in the literature on AI and in the articles in this issue, were also expressed by participants.

Finally, Evelyn Nash and Kathryn Kelley employed a smart university approach to explore the use of artificial intelligence for strategic, institutional-level tasks in a graduate teacher preparation program. Findings suggest that with proper training and support, AI can assist with program assessment and academic program review. Concerns that emerged from the results included the potential for inaccuracies as well as ethical concerns.

It takes a village to publish a journal, and we would be remiss if we did not thank all of those who contributed to the 2025 *AILACTE Journal*: our authors; the AILACTE Editorial Board; Jess Smith, copy editor; and Alyssa Haarer, executive assistant. We would also like to acknowledge the guidance and leadership of longtime editor Jackie Crawford. Finally, we would like to thank the AILACTE Executive Committee for their support.

Perspectives of Pre-Service Teachers on Artificial Intelligence Usage in Education

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Abstract

The purpose of this study is to highlight pre-service teacher student feedback on AI to help inform programs, policies, and coursework within the School of Education. An undergraduate student advisory board designed and conducted a survey collecting Education majors' perspectives on the usage of AI in both university courses and in the K–12 field experiences, as well as their needs and recommendations for how college faculty should support pre-service teachers with AI understanding and skills for their future career. Results indicated that both K–12 teachers and university faculty used AI for a variety of educational reasons and allowed some usage of AI by students related to initial brainstorming and drafting but not to create final products. AI usage across K–12 and university settings exhibited unclear expectations and inconsistent enforcement, though some educators were taking a proactive approach by teaching ethical AI usage and critical thinking skills as they explored AI tools alongside their students. There was a clear distinction for the need for policies that reflect the use of AI in professional practice and an explicit request for specific parameters that also acknowledge the realistic usage of AI technologies both from a student and educator perspective. Results from this study can help inform educator usage and policies regarding AI in their K–12 or university settings.

Keywords: pre-service teachers, artificial intelligence

Perspectives of Pre-Service Teachers on Artificial Intelligence Usage in Education

There is no mistaking the growth in the use of artificial intelligence (AI) technologies in education. The percentage of undergraduate students using AI in their schoolwork increased from 66% in 2023 to 92% in 2024 (Freeman, 2025). During that same period of time, university faculty use increased from 22% to 72% (National Education Association [NEA], 2024). Likewise, high school students' use increased from 51% in 2023 to 67% in 2024, and teacher use went from 51% to 67% (Merod, 2025). One explanation for the increases in adoption of AI is the numerous benefits identified by both students and teachers. Students use AI to save time (Shoaib et al., 2024; Zaugg, 2024), personalize and differentiate instruction (Rapti & Panagiotidis, 2024), assist with research (Quinn, 2024) and writing (Gayed et al., 2022), and improve learning (Zhao et al., 2019). Teachers use AI to assist with lesson planning (Kehoe, 2023), assess students (Xia et al., 2024) , and free up time by automating tasks (Shoaib et al., 2024; Zaugg, 2024).

Despite these benefits, numerous concerns have been raised about the use of AI. Some of the most common and serious concerns have to do with bias (Greene-Santos, 2024), inaccuracy (Sun et al., 2024), plagiarism (Chiu et al., 2023), equity of access (Vesna, 2025), and privacy/security issues privacy (Gouseti et al., 2025). Educators are also concerned about a lack of training and support regarding AI (Slagg, 2024). According to the 2025 Global AI Faculty Survey, 78% of faculty do not believe they have been properly trained by their institutions to use AI in their teaching (McMurtrie, 2025). Students share these concerns. In fact, only 33% of students believe that faculty at their institution are well equipped to support them in their work with AI (Freeman, 2025).

Purpose of Study

To assist in the development of effective pedagogical practices for preparing pre-service candidates to effectively integrate AI technologies into their future classrooms, a Student Advisory Board (SAB) was asked to conduct a survey of their classmates on their perceptions and uses of AI technologies. Prior research has found that pre-service teachers' beliefs are key determinants in technology use, and it is necessary to consider students' perspective and learning needs prior to developing new instruction (Ruth et al., 2022).

The SAB is a group of undergraduate students who meet monthly to discuss information that will help inform programs, initiatives, and events in the School of Education. The SAB members are tasked with bringing information items to and collecting data from relevant constituencies (e.g., peers, university student support services, field experiences, community stakeholders, etc.) to garner broader student feedback on key areas as needed and/or suggested for Board review. The faculty and staff of the School of Education requested the SAB to provide information on student perspectives on the usage of AI in both their university courses as well as their K–12 field experiences. The purpose of this request was to gather and analyze student feedback on AI from their experiences in university and K–12 settings to help inform programs, policies, and coursework within the School of Education. Faculty and staff in the School of

Education were engaged in a multi-part learning series on AI in education and wished to include the student perspectives alongside information they were delving into from the Department of Education, local school districts, and professional organizations.

Literature Review

Defined as "any technology or machine that can perform complex tasks that are typically associated with human intelligence" (Notre Dame, 2025, para 1), AI has been a part of education for decades; however, the degree of use in education has increased dramatically since ChatGPT was released in November of 2022. ChatGPT is a particular type of AI called generative AI. Generative AI can be defined as "AI techniques that learn a representation of artifacts from data and use it to generate unique content (including images, video, music, speech, and text) that preserves a likeness to original data" (Sheehan, 2023, para. 2). Wang et al. (2024) argue that the field of education:

> lends itself to AI technologies since educational activities, including learning and teaching, are knowledge-intensive cognitive activities, and AI applications, which are created for cognition and problem-solving based on algorithms and knowledge base, can effectively support and augment educators' and learners' abilities in teaching and learning. (p. 2)

Research supports the benefits of AI, including the ability of AI to support instruction and student performance (Zaugg, 2024); however, there are serious concerns about the use of AI by students and teachers. These concerns include the degree to which teachers are effectively integrating AI into their instruction (Freeman, 2025) and educator preparation programs (EPPS) are preparing pre-service teachers to use in their future classrooms.

Benefits of Artificial Intelligence

The growing prevalence of AI in education is due in large part to the benefits it provides both students and teachers. The primary benefits identified by students include saving time and improving the quality of their work (Freeman, 2025). AI-based teaching can positively impact students' academic achievement (Zhao et al., 2019) and improve student motivation and engagement (Martinez et al., 2023). One way AI improves student achievement is through its ability to personalize learning experiences (Murtaza et al., 2022; Woodruff et al., 2023) and serve as personalized tutors for students (Khan, 2023). AI can provide students with personalized assessment feedback (Huang et al., 2023; U. S. Department of Education, 2023). Additionally, AI can provide access to information, which can change the way students access and interact with educational materials (Woodruff et al., 2023). Other benefits include serving as a personal partner to engage in conversation with while learning a language (Yang et al., 2022) and assisting students with writing through predictive text and spell checking (Gayed et al., 2022).

Teachers also benefit from the integration of AI into education. AI can save time by reducing administrative tasks (e.g., attendance, assessment, record keeping, etc.) (Shoaib et al., 2024; Zaugg, 2024). This allows teachers more time for engaging in other tasks like working

with students (Ahmad et al., 2022; Kim et al., 2022). AI can also be used to differentiate instruction (Rapti & Panagiotidis, 2024), lesson plan (Kehoe, 2023), analyze assessment data, create rubrics (Langreo, 2024), and provide real-time feedback to teachers (U. S. Department of Education, 2023).

Concerns about Artificial Intelligence

Despite the benefits associated with AI, educational stakeholders have expressed numerous concerns about the use by students and educators. Concerns include plagiarism (Chiu et al., 2023), bias (Greene-Santos, 2024), inaccuracy (Sun et al., 2024), equity of access (Vesna, 2025; Freeman, 2025), privacy (Gouseti et al., 2025) as well as ethical concerns (Akgun & Greenhow, 2021). Educators also point to a lack of training, classroom integration, and support regarding AI (Slagg, 2024). An additional concern is the potential for an over-reliance of AI, which could negatively impact students' creativity and critical thinking skills (Xia et al., 2024). Kusmawan (2023) also expressed concerns about the potential for AI to diminish the human aspects of teaching. Finally, AI has a negative impact on the environment. The computational power required to run and train AI demands a great deal of electricity, which results in the production of a huge carbon footprint. By 2026, data centers, where AI are trained and run, will be the fifth largest consumers of power—between the nations of Japan and Russia—in the world (Zewe, 2025). Furthermore, the electricity demands require a great deal of water to cool the data centers.

Artificial Intelligence Policies in Education

In the 2023 report, "Artificial Intelligence and the Future of Teaching and Learning," the US Department of Education stated that policies on AI use were urgently needed; however, due to the rapid emergence and changing landscape of AI in education, development of policies on AI in both the K–12 and post-secondary setting has been slow. Data on K–12 school policies is conflicting. Diliberti et al. (2024) found 90% of teachers indicated on a teacher survey that "their school district did not have policies outlining students' use of AI products and tools" (p. 11); however, a 2025 report from the National Center for Educational Statistics (NCES) (2024) revealed that only 31% of all public schools have written policies on students' AI use in school. According to a recent survey by *Education Week*, 60% of teachers state that their districts have not made their AI policies clear to them or students (Langreo, 2025). Reports on policies in post-secondary schools are also mixed. A 2024 survey by *Inside Higher Ed* found 20% of universities have a published policy on the use of AI, including in teaching and research (Quinn, 2024). Most universities allow faculty to determine their own classroom AI policies (Ruediger & Blankstein, 2024).

The most important requirement for the development of AI policies in educational settings is "creating policies and systems that can evolve alongside the technology, ensuring its potential benefits are realized while mitigating risks" (Eutsler et al., 2025, p. 2). Additional recommendations for AI policy include ongoing evaluation and adaptation to feedback,

providing clear and concise expectations on including AI in the classroom protecting data, students and students' privacy, and including students, teachers, parents, and administrators in the development of policies (Eutsler et al., 2025).

Pre-service Teachers and AI

Like other instructional technologies, pre-service teachers (PSTs) are primarily concerned with the ability of AI to improve instructional effectiveness and learning outcomes (Zhang et al., 2023). As previously stated, the predominance of AI demands that PSTs be able to effectively use and teach their students how to use AI tools. Gatlin (2023) surveyed 105 PSTs on their knowledge and efficacy in using AI. Only 31% of them reported being comfortable using AI, and only 19% felt they were ready to integrate AI into their classrooms. When asked about their beliefs on the use of AI in their future classrooms, 49% of PSTs thought AI may improve student outcomes and 36% believed AI can personalize learning experiences; however, 55% of participants expressed ethical concerns and 44% believed AI should be used sparingly. Finally, when asked if teacher preparation programs should invest in learning AI, 63% of the PSTs agreed. Likewise, 44% of participants felt EPPs should provide AI training to students (Gatlin, 2023).

Recommendations for Preparing Pre-service Teachers to use AI

Research has identified a number of factors that influence PSTs' likelihood to learn and integrate AI technologies into their instruction.

- Degree to which they feel prepared (Ayanwale et al., 2024; Sanusi et al. 2024)
- Basic knowledge/AI literacy (Zuagg et al., 2024; Sanusi et al., 2024)
- Perceived ease of use (Zhang at al., 2023)
- Perceived usefulness/personal relevance (Zhang et al., 2023; Sanusi et al., 2024)
- Self-efficacy (Sanusi et al., 2024; Zhang et al., 2023)
- Subjective norms (Sanusi et al., 2024; Zhang et al., 2023)
- Perceived ease of use (Zhang et al., 2023)
- Perceived usefulness/personal relevance (Zhang et al., 2023; Sanusi et al., 2024

To address all of these factors, EPPs should integrate AI instruction into teacher training, including requiring a foundational course in AI education for pre-service teachers (Gatlin, 2023; Sanusi et al., 2024; Zaugg, 2024). The degree to which students feel prepared can be achieved by increasing basic knowledge (Sanusi et al., 2024; Zaugg 2024). Perceived usefulness and personal relevance can be improved through modeling AI technologies and teaching pedagogies through engaging and personalized learning experiences (Ayanwale et al., 2024; Sanusi et al., 2024; Zuagg, 2024). Additionally, this will reduce anxiety and increase self-efficacy in future teachers. Ease of use is a key determinant in perceptions of use and adoption, so instruction should start with intuitive AI technologies (Zhang et al., 2023). EPPs should prepare PSTs to understand the ethical issues related to AI and be able to train students on the ethical use of AI (Ayanwale et al., 2024). EPPs should also work with local schools to provide observation hours to PSTs in classrooms where AI is currently being utilized (U.S. Department of Education, 2023). Finally,

EPPs should constantly review AI policies and practices as the capabilities of AI technologies develop (Freeman, 2025, p. 11).

University Faculty AI Preparation

In order to prepare PSTs to effectively use AI, EPP faculty need to be prepared to use AI. While the majority of instructors who participated in the 2024 US Instructor Survey indicated that they had experimented with using AI as an instructional tool, of the 2,654 instructors who participated, only 18% agreed or strongly agreed that they understood the teaching applications of AI and only 14% felt confident in their ability to use AI in their instruction (Ruedigner & Blankstein, 2024). This finding of low levels of faculty AI literacy is supported by additional research (Chiu et al., 2024; Mah & Groß, 2024). In order to prepare university faculty with the necessary knowledge and skills to use AI, EPPs need to invest in professional development (Mah & Groß, 2024; Sanusi et al., 2024). In particular, faculty prefer online, self-paced courses (Mah & Groß, 2024).

Research Methodology

This study was conducted in a small midwestern university within a School of Education. The School of Education's EPP supports undergraduate students earning their degrees in either elementary (grades P-5), middle (grades 5-9), or secondary (grades 9-12) education. Elementary and middle students double major in Learning and Behavioral Disorders (P-12). Because undergraduate education students are taking courses in various programs across the university (i.e., education, arts & sciences) and conducting field experiences in local district classrooms, they have garnered an expansive view across the K-16 spectrum from teachers using and discussing AI in a variety of ways. The School of Education has a Student Advisory Board (SAB) that has functioned since 2020 to inform programming and policies.

Participants in this study complete their field work and professional semesters in two settings. The majority of PSTs are placed in a large (approximately 100,000 students), urban public school system. The policy in the large, urban school district where the PSTs in this study complete their field experience and professional semesters states that teachers will be able to use AI software on school devices, but students will not be allowed to use AI (Stratman, 2023). PSTs are also placed in a large (approximately 18,000 students) private school system. This system allows each school to develop their policy on AI.

Data Collection

Tasked with collecting their peers' feedback on the usage of AI in both university courses and in the K–12 field experiences, the SAB designed a survey. Student perceptions of AI usage in their university and K–12 experiences were collected in the form of qualitative data. A total of 36 PSTs (juniors and seniors) were administered the online survey, which included the following six open response prompts:

1. What are the AI policies you have for your college courses?

2. In what way are you using AI in your college courses?
3. What are the AI policies you are seeing teachers use in the field?
4. How are you seeing AI being used in the field?
5. What do you want the faculty of the School of Education to consider as they draft their acceptable use policies for courses?
6. What do you want the faculty of the School of Education to consider as they prepare you to be teachers regarding AI practices?

The SAB decided to focus on distributing the survey to juniors and seniors only for two main reasons: 1) juniors and seniors have been officially admitted into the School of Education and spend multiple days each week in field experiences; 2) the group of juniors and seniors represent PSTs across all content and grade level areas of specializations. The latter reason meant that elementary, middle, and secondary education students could be surveyed regardless of which content area certification they are pursuing. The juniors and seniors surveyed in this study were placed in field site classrooms for over 200 hours of observations during the academic year. Their responses highlight their perspectives of usage across multiple field classrooms and with multiple cooperating teachers. For the best response rate, the SAB decided to ask the faculty of two courses to conduct the survey during class time. The two courses were: Computer Applications in Education (juniors) and Special Topics in Curriculum (seniors). The faculty of these courses agreed to dedicate class time for students to complete the survey. For this reason, we had a 100% (N=36) response rate to the survey.

Data Analysis

Due to the lack of extant research on student perceptions of AI usage in K-16 classrooms, the research team elected to maintain a flexible coding list to authentically and organically capture PSTs' perceptions of AI in their university courses and field experiences. As the researchers engaged in both independent coding and team discussions of student responses, data were organized for each survey question. Within each question, several themes were revealed that warranted the refinement of existing codes or a new code to better describe the data the researchers were uncovering during the coding process. This thematic analysis allowed researchers to consider multiple aspects of AI usage in relation to the settings (i.e., university-level of K–12 school-level) respondents highlighted. The consensus codes for that student response then became the final code, thus reaching 100% intercoder agreement for all responses by the end of the coding process. Once complete, the codes were examined for overlap and redundancy and collapsed into broad themes (Creswell, 2013). Themes that emerged were triangulated across participants with careful attention to maintaining an audit trail back to the original data. Collaborative coding enabled the authors to bring their content expertise to the analytic process.

Limitations

To establish trustworthiness of the findings, we used a validation process as described by Creswell and Poth (2018). The survey was created by SAB members for peers. The creation of the survey serves as an example of collaboration across students and faculty/staff as a strategy for establishing trustworthiness (Creswell & Poth, 2018). The purpose of this study was to present perceptions of undergraduate students on AI usage in their own university courses and field experiences, not to generalize beyond the setting. Further, data collection and analysis was organized across content area specialization or grade level (i.e., elementary, middle, and high school), so parsing out data by these contexts was beyond the scope of this study and is a potential limitation.

Results

Pre-service Teachers Perspectives of K–12 Teacher Usage of AI

Overall, PSTs indicated they were seeing a variety of ways teachers were using AI for various tasks. With regard to teacher usage, PSTs noted the use of AI for tasks that could be categorized in the following ways: 1) administrative and planning support, 2) classroom resource development, and 3) assessment and feedback.

Using AI for administrative support, PSTs noted teachers used common AI platforms (i.e., MagicSchool AI, Chat GPT, and Gemini) for grading, creating lesson plans, developing rubrics, designing assessments and exit tickets, planning units and activities, and breaking down content standards into specific learning targets. As one student noted:

> AI is being used in the field to give teachers innovative ideas and new ways of creating engaging lessons. I have also seen teachers use it to break standards apart into clearer and more cohesive words so that they can use it for their learning objectives.

The usage of AI enabled teachers to support the administrative aspects of their job to assist with preparation of lessons and grading support.

PSTs also noted teacher usage of AI for classroom resource development or adaptation. In essence, AI was being utilized to create and/or modify teaching materials. For example, teachers were using AI to adapt reading materials for different levels or create worksheets that were differentiated for students. A student noted, "Some teachers use generative AI to come up with writing or discussion prompts, create lesson or activity outlines, look at potential answers to their own discussion questions, or to put together lists of potential ideas/relevant topics." PSTs observed teachers using AI to design games and activities that would complement their curricula or generate discussion prompts for texts they were reading in the classroom. This aspect of teacher usage enabled them to modify resources to fit the needs and interests of their students.

Assessment and feedback were primary areas PSTs saw teachers employing AI. Not only were teachers using AI to develop formative and summative assessments, but they also used it to generate student feedback to assist with deeper learning or target areas for improvement.

Additionally, teachers used AI to provide feedback to parents on how their children were doing and provide strategies for at-home support.

PSTs also noted that their cooperating teachers shared AI tools and strategies with them and even recommended ways to use AI. For example, teachers recommended to some PSTs that they could use AI to support a substitute teacher. Overall, PSTs perceived that using AI as a teacher in the future would assist with time management and task completion and could be a good way to support individual students' needs.

Pre-service Teachers Perspectives of K–12 AI Classroom Policies and Practices

While teacher usage of AI in the K–12 classrooms seemed prevalent to PSTs, the usage allowed by K–12 students was a different story. PSTs noted that they saw some K–12 students trying to use AI, but there was restricted use in most classrooms. Noticing the discrepancy between teacher usage of AI and allowable usage by K–12 students, one PST said, "Teachers are allowed to use AI however they want; I haven't seen any policies regarding AI for teachers. Students are not allowed to use it."

There was a range of usage among teachers as well as a range of policies about the usage of AI. The subject area context mattered as PSTs indicated there was less talk with students about AI occurring at the elementary level or in certain subject areas (i.e., math). Many PSTs reported they had not seen or heard about their elementary students using AI, while others reported older students using AI for assignments sometimes outside of the policy (i.e., students trying to use it to replace their own writing) and sometimes within policies (i.e., students using AI tools to brainstorm ideas or organize their writing in their English classes). Table 1 highlights the range of classroom policies and practices the PSTs observed in K–12 classrooms.

Table 1

PST Perspectives of K–12 AI Classroom Policies and Practices

Category	Examples / Details
Zero Tolerance / Strict Ban	- Most teachers are against AI in the classroom - "Zero tolerance" policies are common - Students not allowed to use AI at all - "If you use it, you get in big trouble" - AI sites blocked on Chromebooks
No Clear Policy / Not Yet Addressed	- "I have not seen any AI used in the field" - "They have not yet adapted AI policies" - "I haven't seen any AI policies on an elementary level" - "N/A" - Teachers haven't stated a specific policy - Policies not developed due to limited internet usage in younger grades

Conditional Use / Limited Student Use	- Students can't copy directly from AI - AI allowed for brainstorming, not full drafts - Encouraged ethical use for idea generation, organization, and planning - Some students permitted to use AI for research or idea help only
Teacher Use Permitted, Student Use Banned or Unclear	- Teachers can use AI freely (e.g., for emails, grammar, rubrics) - No policies restricting teacher use - Students restricted or not mentioned

PSTs noted from field experiences a range of allowable student usage within the K–12 schools. Teachers provided them with strategies for detecting AI generated work and how to determine if students were using AI inappropriately to pass it off as their own work. Other teachers talked to PSTs about the advantages of using AI to organize their thinking as an aid to their writing. As one PST noted, "I've seen both blanket bans on student use of generative AI and ethical discussions & encouragement of exploring AI technology as a potential tool to aid with brainstorming, organization, and planning." PSTs also noticed that there were subject matter differences in perspectives on AI usage as math subjects tended to restrict the use of AI while English classes and more writing-intensive classes encouraged the use of AI to aid in writing development.

PSTs described there being no established policies in many schools, and an absence of observable policies particularly in elementary settings. Despite teacher usage being widespread, there were unclear guidelines for teacher AI use and no guidance for determining proper use of emerging tools. When there was not a complete ban on student use, there were unclear boundaries between permitted and prohibited uses for K–12 students. Despite this, teachers were trying to support some students' use of AI when it made sense for their topic or assignment as a thinking aid to students. These teachers were positioning AI as a tool rather than a threat. Overall, these data suggest that K–12 AI policies are still evolving, with many schools either taking a restrictive approach or lacking formal policies altogether.

Pre-service Teachers Perspectives of College Faculty Usage and Policies on AI

PST responses about AI usage in the college setting had similar and unique characteristics compared to what was reported at the K–12 level. In terms of similarities, there was a range of AI usages across contexts noted by university students and many faculty were trying to position allowable AI usage as a tool rather than as a threat to learning. In terms of unique differences, PSTs noted at the university level that there were clearer guidelines for AI usage as well as reflective engagement in discussing the proper and ethical usage of AI.

Like in their K–12 field classes, PSTs reported that faculty had different approaches and perspectives on AI usage within their subject areas. Some of these approaches ranged from zero tolerance to some allowance of AI when properly cited, with some faculty requiring students to

use AI for certain assignments. As one PST noted, "This differs per course and instructor. Some instructors allow use of AI if it is cited while other instructors allow no AI usage at all." The most frequent use of approved AI PSTs reported was on idea generation/brainstorming, grammar and spellchecking, first draft assistance, and early researching stages.

From their experiences in university-level classes, PSTs reported that AI policies centered on a clear distinction: AI as assistance versus AI as replacement. Across disciplines, faculty were consistently drawing a distinction between using AI to enhance human thinking versus allowing it to substitute for original thought. University students repeated phrases like, "AI can be used as a tool but not to complete assignments for me" and "You can use AI to get ideas but not to do work for you." PSTs reported being allowed and even encouraged to use AI assistance in the brainstorming process but not to write for them.

Guidelines were incorporated on syllabi, and there were clear consequences for AI usage outside of the boundaries that were allowable and without proper citations. University students reported that faculty typically specify their AI policy on the syllabus and may have different policies for different assignments within the same course, but that prior approval was important. One PST echoed a common refrain that there were clear penalties for inappropriate use of AI; "You may use it to help brainstorm ideas but using it to fully complete assignments is considered cheating." Faculty were trying to incorporate clear guidelines on syllabi and demarcate acceptable use versus plagiarism. One PST said, "Terms and guidelines are listed in our syllabus. It notes that the use of AI is not permitted, and if caught, the student will be penalized." Although different classes and faculty had different policies on AI, university students seemed to have a clear picture of when AI use was allowed and when it was not in their college courses.

PSTs also reported that faculty were intentionally incorporating AI for exploratory learning and reflection purposes. Some faculty were encouraging students to explore the capabilities and potential application of AI as part of coursework and then using those experiences on which to reflect on issues and ethical usage. As one PST said, "My college courses are very pro AI. They want us to use it ethically and correctly teaching us to use it to edit papers or generate ideas." In their university-level experiences, faculty were offering students the opportunity to explore alongside them the potential applications of AI with their discipline but prioritize a focus on the limitations and improper use. Another PST said:

> We have used AI in classes as a way to experiment with it and see what it can offer. Sometimes professors have told us they want us to use AI so we can get a better sense of it and see how we can use it as a tool.

Pre-service Teachers Recommendation to Education Faculty on AI Policies and Practices

Students who are in the EPP shared what they want to learn regarding AI applications. The common themes of interest include practical implementation, management, student-centered thinking, and general awareness of AI technologies. As noted in Figure 1, there was a surplus of PSTs within the program that wanted more understanding regarding the practical implementation of AI for both students and teachers. Practical skills that were mentioned by PSTs include the

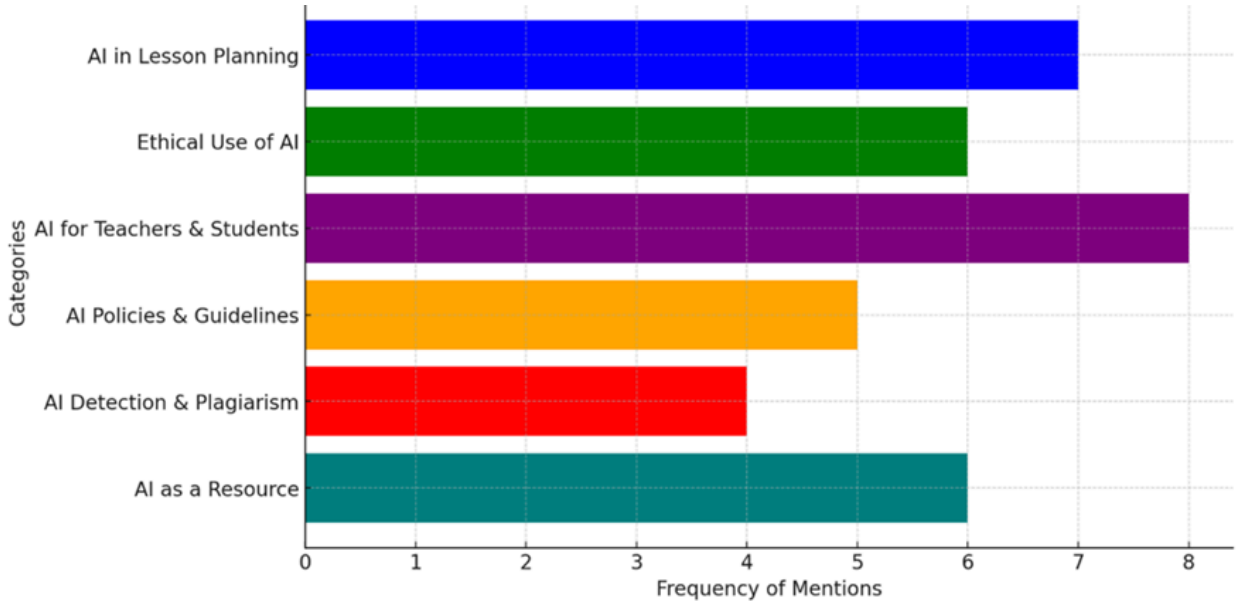
integration of AI into effective teaching, the use of specific tools like MagicSchool AI, lessening the workload on teachers, and student-based real-world applications.

Furthermore, students in the program also recognized a need for training involving the management of AI. Specifically, they wanted more training regarding the detection of AI usage in student work and professional workload management through lesson planning and material making. PSTs want more awareness of the balance between allowing their students responsible usage of AI while avoiding the act of plagiarism that is often associated with AI usage within educational settings. For professional management of AI, university students shared that they were interested in learning about how to reduce the daily workload that is placed upon teachers. This includes using AI to plan effective lessons that save time for day-to-day planning. These interests also correlate with the student-focused consideration that students had regarding the physical usage of AI on both the teacher and student front.

There was also an interest in knowing more about the ethical and responsible usage of AI in addition to the desire that students had for comprehensive knowledge about AI technologies. PSTs requested guidance on the appropriate versus inappropriate uses as well as ethical considerations, professional boundaries, and responsible implementation. This shows an overall desire for a general awareness and overview of these technologies to gain a better insight into the benefits and setbacks, the tools available through AI, and the future implication in education regarding AI usage.

Figure 1

Student Responses on what they Want to Learn about AI



With PSTs wanting to know more about AI, there were also recommendations they had for faculty regarding AI policies and practices. The overall findings showed that university students acknowledged the professional practice of AI, desired clearer guidelines and ethical boundaries, educational focus, AI literacy, and workload considerations. PSTs noted that they wanted policies that reflect how practicing teachers use AI and prepare them for real world teaching by acknowledging AI growing role in education. One student stated, "Today AI is everywhere, whether people realize it or not. Prepare teachers with how to effectively use AI in their own classrooms." The desire of policies and practices to reflect the use of AI in classroom settings was a consensus throughout the survey.

Along with the professional practice of AI comes the need for clear guidelines and boundaries through clear policies. PSTs requested throughout the survey explicit definitions of acceptable and unacceptable use of AI, specific examples of permitted tools and uses, like Grammarly, and realistic policies that acknowledge AI limitations. One student stated, "I would probably specify what sources we can use (Grammarly) so it is not overused/used incorrectly." PSTs showed strong support for the acknowledgment of these permitted uses specifically with applications that allow for spell checking, grammatical error correction, and lesson plan outline development. When having clear guidelines and boundaries, students mentioned that these policies should have an educational focus. PSTs indicated that they want AI policies to emphasize support rather than hindering learning, consideration of course level and student maturity, academic integrity while allowing innovation, and balance of efficiency with educational objectives.

Participants indicated that EPPs should teach AI literacy, suggesting instruction regarding responsible AI usage, guidance for teaching students about AI, the development of AI evaluation skills, and understanding AI strengths and limitations. In addition to applying policies, PSTs made it clear that they would want faculty to recognize the efficiency considerations that AI technologies have on students. They mentioned how AI can help manage heavy workloads by having time saving benefits and how these tools can reduce stress while maintaining standards that are set in place. One university student commented, "While it should never take the place of a teacher/student teacher's full authentic planning and creation process, we should be aware of and familiar with the multi-utility of AI technology." PSTs noted how overtime efficiency gains can be achieved ethically through the policies that are in place regarding AI technologies and the ethical usage of these technologies.

Discussion

Pre-service Teachers Perspective of K–12 Teacher Usage

PSTs perspectives of AI usage in K–12 classrooms were that usage varied, with some educators allowing AI tools for certain tasks, like brainstorming and grammar checks, but prohibiting its use for completing assignments while others prohibited student use. Overall, data suggested that K–12 teachers and students are using AI tools for a variety of educational tasks and some of that

usage was encouraged while some was restricted. These findings regarding PSTs' perspective on K–12 teachers' use of AI aligned with the research in this area. One of the primary benefits of AI use by teachers is saving time (Freeman, 2025). Participants in this study noted that they observed teachers in the field using AI for a variety of tasks to assist in time management. Several of these tasks were administrative—grading and creating lesson plans, which aligns with findings from research conducted by Shoaib et al. (2024) and Zaugg (2024). Participants also observed teachers using AI to create engaging lessons. This finding is supported by research (Ahmad et al., 2022; Kim et al., 2022), which found that one of the ways teachers used AI to increase engagement was through differentiation. Likewise, in a study of 116 foreign language educators, Rapti and Panagiotidis (2024) found that teachers used AI for facilitating differentiated instruction. Participants also indicated that teachers used AI for assessment and providing feedback, which was identified by the U.S. Department of Education (2023) as benefits of AI integration.

Pre-service Teachers Perspectives of K–12 AI Classroom Policies and Practices

One of the most evident patterns in the data is the lack of formal AI policies. At the K–12 schools, and particularly at the elementary level, there were no clear guidelines or guidance on the usage of AI. This lack of guidance extended to both student and teacher practices, leaving much of the decision-making to individual discretion. These findings on the use of AI in the classrooms are aligned with the policies of each of the school systems in which participants complete their field work and professional semester. For example, participants reported that K–12 teacher use was prevalent, but many classrooms did not permit student use. This observation aligns with the policy of the public school system in which the majority of participants are placed. The AI policy in this system states that teachers can use AI, but students cannot. A small number of participants were placed in a private school system where each school develops their AI policy. Participants' observations reflect this as does the literature on AI policy. Participants observed schools with no established policies (Langreo, 2025), unclear policies (Langreo, 2025), and evolving policies (Eutsler et al., 2025).

Pre-service Teachers Perspectives of College Faculty Usage and Policies on AI

Not surprisingly, PSTs' perspectives on AI use and policy for the university instructors were similar to that of the K–12 teachers in their field experiences. Regardless of the setting, the pros and cons associated with AI integration remain the same. However, PSTs did note that their university instructors were more likely to allow students to use AI than the K–12 teachers in their field experiences, and their policies were more clearly stated. This is not surprising considering that most universities allow individual instructors to develop their own classroom AI policies (Ruediger & Blankstein, 2024). Interestingly, the most frequently allowed uses of AI in their university courses (e. g., brainstorming, draft assistance, and research) mirror those identified in a survey of 2,654 instructors as part of the US Instructor Survey (Ruediger & Blankstein, 2024). Finally, participants' acknowledgement of the inclusion of AI policies in faculty syllabi, the clear

instructions given in these AI policies (e.g., intentional use, use as a learning assistant and not substitution, ethical considerations), and collaborative use with faculty reflect the work the institution has engaged in over the past two years. For the past two years, the School of Education has engaged in intentional small and whole group work around the use of AI. Additionally, the institution as a whole provided numerous learning opportunities on AI, including a whole day conference at the beginning of the 2024-2025 academic year.

What Pre-service Teachers Want to Learn about AI

The PSTs who participated in the study expressed clear expectations for learning about AI. Increasing their knowledge about AI, especially through practical applications, was the overriding theme of their feedback. Research demonstrates that PSTs are not comfortable using AI nor integrating AI in their instruction (Gatlin, 2023). One method for improving PSTs' self-efficacy in the use of AI and integration of it into their future classrooms is by increasing their foundational knowledge of AI through training (Ayanwale et al., 2024) and relevant, authentic application (Sanusi et al., 2024; Zaugg, 2024) as well as mentoring and modeling, including in the K–12 setting (Gatlin, 2023). PSTs indicated that they wanted to learn about ethical issues, especially concerning student use (e.g., cheating). Ayanawale et al. (2024) indicate that it is imperative that PSTs "comprehend the ethical implication associated with AI technologies" and "be well-prepared to guide their students in the responsible utilization of AI" (p. 219).

Pre-service Teachers Recommendation to Education Faculty on AI Policies and Practices

As one participant noted, AI is everywhere, and PSTs need to be prepared to use it. To effectively use AI and integrate it into their future classrooms, PSTs need AI policies that provide clear guidelines and boundaries, especially about acceptable and unacceptable use. PSTs reported that AI policies in the K–12 setting were not always clear. In all fairness, teachers report that their districts policies are not made clear to them (Langreo, 2025). In order for teachers to effectively integrate AI, it is imperative that the university and school district policies provide clear and concise expectations on AI use in the classroom (Eutsler et al., 2025).

Recommendations

Overall, the data suggests that K–12 teachers and students are using AI tools for a variety of educational tasks and some of that usage was encouraged while some was restricted. PSTs perspectives of AI usage in their college courses and K–12 classrooms were that usage varied, with some educators allowing AI tools for certain tasks, like brainstorming and grammar checks, but prohibiting its use for completing assignments while others prohibited student use.

One of the most evident patterns in the data is the lack of formal AI policies. At the K–12 schools PSTs observed, and particularly at the elementary level, there were no clear guidelines or guidance on the usage of AI. This lack of guidance extended to both student and teacher practices, leaving much of the decision-making to individual discretion. New AI tools

continue to emerge, and teachers and students discover how they may be useful while policy or proper usage guidelines have not kept pace, resulting in unclear expectations and inconsistent enforcement of any guidelines that may exist. It is recommended that educators have discussions school-wide about the approach to AI in an effort to develop some clear usage guideposts. While school-wide policies can allow for different allowances of AI usage across subjects or assignments, establishing clear parameters will enable students (and teachers) to more clearly determine appropriateness of AI usage themselves.

Another notable trend was the divide between teacher and student AI use. Teachers were using AI with no oversight or knowledge of best practices—for lesson planning, assessments, differentiation, or creating instructional materials—while students face strict limitations or prohibited use. There is little guidance on how to equitably manage AI usage between these two groups, and boundaries between acceptable and unacceptable use remain ambiguous. There was also no evident focus on the quality of AI output or the best practices for AI tool use.

Despite this lack of clear guidance and inconsistent usage, some educators were taking an approach that prioritized learning about AI tools and use alongside their students. Rather than treating AI solely as a threat, some faculty are focused on teaching ethical usage, emphasizing critical thinking, and clearly outlining expectations at the beginning of the semester. This was especially evident at the college level. This reflects a thoughtful stance, positioning AI as a tool to support learning rather than a shortcut to avoid it. It is recommended that educators discuss ethical issues and the quality of AI output directly with students—not only to include them in the exploration of the benefits and challenges of AI but also to support their buy-in about the goals of critical thinking within the course objectives.

Other patterns include the awareness of AI technologies and the practical implementation within pre-service teacher programs. Based on the survey, it is evident that PSTs desire a deeper understanding and application of AI from a student and teacher perspective. PSTs identified many practical skills and applications that can be applied to enhance the effectiveness of instruction. There is little structure involving the management of AI specifically for the detection of AI in students' work and professional workload management. The lack of structure is extended to both PSTs and students due to the need for training and AI literacy awareness within educational settings. It is recommended that EPPs develop courses and/or integrate existing courses with best practices for teacher and student use of AI.

To form structure within educational settings, like EPPs, a notable trend regarding the formation of AI related policies was evident throughout the data. There was a clear distinction for the need for policies that reflect the use of AI in real-world settings. These policies allow for professional practice that is needed before joining the workforce. There was an explicit request for specific parameters that also acknowledged the realistic usage of AI technologies both from a student and educator perspective. There was a clear distinction that PSTs made evident between specific policies and policies that emphasized an educational focus. The data showed that PSTs believe that these policies should take a supportive approach while upholding academic integrity. Thus, it is recommended that EPPs engage in exploration of AI with pre-service teachers, stay

connected to what is happening with AI in their field classrooms and surrounding districts policies, and understand the landscape of how AI is impacting education so that they are prepared to enter careers where they can be active participants and advocates for developing best practices in AI.

Implications

Due to the rapid emergence of AI, the goal of this study was to provide PST perspectives of its use in K–12 and university settings. The findings complement prior research regarding AI usage within K–12 settings and EPPs. Previous research showed that AI can have positive impacts on student learning, including their achievement and motivation (Martinez et al., 2023). In addition, teachers in K–12 also benefit from the usage of AI through the reduction of administrative tasks (Shoaib et al., 2024; Zaugg, 2024). In this study, PSTs shared similar findings in K–12 education settings and AI usage. To prepare PSTs to effectively integrate AI, EPPs need to understand their PSTs' perspectives on its use. Research on AI use in education indicates that pre-service teacher training should include mentoring and modeling, including in the K–12 classroom. AI policies should be flexible and evolve with technology and best practices for its use (Eutsler et al., 2025). Findings from this study will provide valuable insight into PSTs experiences with AI in the K–12 and university setting so that faculty can consider the student perspectives in their own development of AI policies and usage.

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Language, Literacy, and Legacy: Exploring AI's Role in Cultural Narrative Preservation

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Abstract

With increased globalization, today's classrooms include students from different cultural backgrounds, speaking different languages, and with different technical skill sets. Innovative tools are needed to support both the preservation of culture and the development of essential skills for success in today's society. This study examines how generative artificial intelligence (AI) can support English language learners (ELLs) in preserving cultural narratives while developing language and digital literacy skills. Through a qualitative design, participants engaged in an AI-driven storytelling project, using tools like ChatGPT and Canva to create digital artifacts based on personal or traditional experiences. Data sources included story maps, digital artifacts, and a focus group. Thematic analysis of artifacts and focus group data revealed increased language skills, digital confidence, and cultural pride. While AI supported cultural expression, some limitations in cultural accuracy were noted. Findings suggest that AI can serve as a culturally responsive tool to enhance engagement, support language acquisition, and promote digital literacy. Implications for educator preparation programs (EPPs) include integrating authentic, multimodal assessments and school-community collaboration.

Keywords: artificial intelligence (AI), cultural preservation, language acquisition, digital literacy, culturally responsive teaching

Language, Literacy, and Legacy: Exploring AI's Role in Cultural Narrative Preservation

Preserving culture is essential to maintaining the richness, diversity, and identity of communities around the world. As Darici (2023) indicates, "the beliefs, customs, and historical knowledge of a culture are stored in the cultural narratives" (p. 413). These narratives, rooted in language, traditions, and shared experiences, form the foundation of how individuals understand themselves and connect with others (Banks, 2015). However, as globalization occurs and people migrate, adapt to new environments, and adopt new languages, there is a risk that personal narratives may be lost or diluted across generations, directly impacting the identity of future generations (Barnwell, 2018; Fivush et al., 2019; Smart, 2011, Weststrate et al., 2024). Ensuring that cultural stories are passed down and remain accessible is not only a matter of heritage preservation but also a powerful way to promote belonging and resilience among marginalized and multilingual populations (Paris & Alim, 2017). Innovative tools are needed to support both the preservation of culture and the development of essential skills for success in today's society.

Artificial intelligence (AI) can be a powerful tool for supporting language development. Al-Khresheh (2024) conducted a systematic review of ChatGPT's role in English language teaching and found that "ChatGPT has considerable potential as an educational aid, especially for feedback personalization, learner engagement, and self-directed learning" (p. 23). When used with personalized prompts, AI encourages individualized practice and literacy skill-building. Furthermore, tools like ChatGPT can generate stories and images that authentically reflect diverse communities and identities. These AI-generated outputs often capture meaningful aspects of family life, serving as vivid reminders of cherished memories, cultural traditions, and shared experiences across generations.

In an increasingly globalized and digitally driven world, the intersection of cultural preservation and AI presents powerful opportunities for language learning and storytelling. This study explores how AI can serve as a tool for adult English learners to develop both language and digital literacy skills while preserving their unique cultural narratives. By engaging in an activity where participants use AI to create original stories and images based on personal or traditional cultural experiences, this work underscores the potential of AI to not only enhance educational outcomes but also honor and sustain cultural heritage.

Literature Review

Cultural Preservation in 21st Century

Culture and heritage represent the spiritual and intellectual wealth of civilizations and have become increasingly important in supporting human development, especially in the latter half of the twentieth century (Idris et al., 2016). Culture shapes identity, values, beliefs, and behaviors, and is reflected in daily practices such as music, dance, and customs. It is socially learned, passed down through generations, and serves as a link between the past, present, and future, helping to foster community connection and understanding (Idris et al., 2016). Preserving cultural heritage in today's world is essential for maintaining identity, fostering social cohesion,

and promoting intercultural understanding. Cultural heritage also holds significant economic and educational value, contributing to tourism, stimulating local economies, and serving as a learning resource for future generations (Hoang, 2021).

In the 21st century, digital technology plays a key role in preserving culture and heritage by providing accessible tools for archiving materials for future educational use. While it offers fast and effective ways to transmit information, especially through computers and the internet, digital technology is constantly evolving (Idris et al., 2016). Digital tools such as 3D modeling, online archives, and virtual museums are increasingly used to document, safeguard, and share cultural heritage, making it more accessible worldwide.

AI and Culture

The use of AI in cultural heritage conservation is transforming how cultural assets are preserved, understood, and experienced. AI offers powerful tools for reconstructing lost knowledge, enhancing cultural expression, and creating emotionally engaging, immersive experiences (Ghaith, 2024). Practical applications include restoring artworks, categorizing images, and processing cultural data through technologies like networks and predictive modeling, which help overcome traditional conservation challenges (Ghaith, 2024). Innovative uses of AI, such as avatar-driven visitor experiences, can significantly increase public engagement, but they must be designed to protect the authenticity and integrity of cultural artifacts (Ghaith, 2024).

In addition to these practical applications, AI is reshaping the cultural landscape by influencing how societies interact with, interpret, and value their heritage. As highlighted in recent research, AI enhances the documentation, communication, and educational outreach of cultural heritage through advanced image analysis, 3D reconstruction, and immersive virtual environments (Silva & Oliveira, 2024). By facilitating access to historical imagery and enabling new forms of interaction, AI can support the democratization of cultural knowledge, allowing wider audiences to engage with cultural heritage beyond traditional museum settings (Silva & Oliveira, 2024).

While AI demonstrates promise for cultural preservation, there are several limitations. The first, and most documented, is the ability for AI-driven tools to produce an output unrelated to the prompt or generate content that is incorrect and unsupported (Maleki et al., 2024). It is possible that those generating prompts aimed at preserving specific cultural narratives may be embedding a level of machine error. Additionally, Kmainasi et al. (2024) found that the large language models (LLMs) supporting many AI-driven tools perform well in English-dominant tasks. It follows that if a non-native English speaker chooses to construct a prompt in their native language, they may limit the accuracy of the output. If a non-native English speaker chooses to generate a prompt in English, they may limit the ability to discern prompt quality, write prompts, and refine prompts, which are vital prompt effectiveness (Oppenlaender et al., 2025).

Language and Digital Literacy

AI is increasingly effective in improving both language and digital literacy. Foundational AI tools such as text-to-speech and speech-to-text technologies assist learners in decoding text, improving fluency, and enhancing comprehension (Xu & Wang, 2024). Writing assistants like Grammarly and AI-powered paraphrasing tools offer real-time feedback on grammar and syntax, supporting the development of writing skills (Yang, Gao, & Shen, 2024). For individuals with limited digital literacy, AI-driven platforms provide personalized learning experiences that adapt to users' needs, thereby fostering the acquisition of essential digital competencies (Xiao, Yi, & Akhter, 2024).

Specifically for English language learners (ELLs), AI offers targeted support that addresses unique language acquisition challenges. AI-assisted writing platforms reduce cognitive load and allow students to focus more on content organization and language structure (Yang et al., 2024). Moreover, in a quantitative study of 60 university students, an experimental group receiving AI-mediated instruction achieved significantly higher English language outcomes as well as increased motivation, language achievement, and self-regulated learning strategies (Wei, 2023). AI-mediated instruction provides personalized feedback and adapts to learners' proficiency levels, creating more inclusive, accessible, and effective learning environments (Karataş et al., 2024). Integrating AI into educational settings not only enhances overall literacy but also supports the diverse needs of multilingual learners.

Methods

This research focused on exploring the potential use of AI as a tool for preserving cultural narratives while developing language and digital literacy. The study sought to answer the following research questions:

1. In what ways can AI-generated stories help participants preserve and share their cultural narratives?
2. What is the perceived impact of creating digital cultural artifacts on participants' language and digital literacy development?

Informed consent was obtained from all participants prior to the start of the project and the study received approval from an Institutional Review Board.

Participants

Convenience sampling was used to identify 10 adult (18+) English language learners (ELLs) participating in a class within a low-socioeconomic community in the Northeast region of the United States (see Table 1). The sample consisted of females (80%) and males (20%) ranging in age from early 20s to late 50s. Participants represented diverse linguistic and cultural backgrounds with no more than two participants sharing the same primary language and ethnicity. Participants self-indicated varying educational backgrounds and levels of English proficiency (i.e., basic, intermediate, or advanced). The majority of participants (60%) indicated

they re-settled in the United States within the last five years. Two translators, also serving as participants, were available throughout the project to support comprehension and communication in participants' primary languages.

Table 1

Participant Demographics

#	Ethnicity	Primary Language	Gender	Age	Educational Background	Date of US Settlement	Self-indicated English Proficiency
1	Pakistani	Urdu	Female	50-59	Masters	2022	Intermediate
2	Hispanic	Spanish	Female	20-29	Some University	2024	Intermediate
3	Bangladeshi	Bangla	Female	40-49	High School	2021	Basic
4	Bangladeshi	Bangla	Female	30-39	Masters	2023	Intermediate
5	Indian	Punjabi	Male	50-59	High School	2019	Intermediate
6	Indian	Punjabi	Female	50-59	High School	2019	Intermediate
7	Yemen	Arabic	Male	20-29	Some College	2025	Basic
8	Moroccan	Tamazight	Female	30-39	High School	2020	Basic
9*	Pakistani	Urdu	Female	50-59	Masters	1998	Advanced
10*	Hispanic	Spanish	Female	40-49	Associates	1983	Advanced

** = served as translator*

Data Collection

This qualitative study utilized a participatory approach (Creswell & Creswell, 2023) to explore how adult ELLs engaged with AI to preserve cultural narratives while simultaneously developing language and digital literacy skills. Data collection via artifact review and focus group was designed to capture both the process and participant reflections across three key domains: cultural preservation, language development, and digital literacy.

Over the course of two sessions (2.5 hours each), participants engaged in an AI-generated story project. Each participant completed a story mapping organizer designed to brainstorm

potential story topics that depict cultural experiences and/or traditions and draft a story. This story map (see Appendix A) was developed by the researchers to be accessible for all levels of English language proficiency and translators were utilized as needed. After completing the story map, each participant utilized generative AI (i.e., ChaptGPT) to generate an original story depicting their cultural experience or tradition. Generative AI (i.e., Canva) was also used to develop an accompanying visual image that reflected the narrative. When complete, participants were provided time to share their artifact in a group setting through a digital publication. These digital artifacts served both as the focal point of the project and a primary data source for subsequent analysis.

Following artifact development and sharing, participants took part in a one-hour focus group facilitated by a member of the research team. Focus group questions (see Appendix B) explored the participants' perceptions of the project across three key domains: cultural preservation, language development, and digital literacy. The focus group ended with an overall project reflection as well. All focus group responses were recorded through notes taken by a member of the research team capturing verbatim responses and participant actions (e.g., head nods, etc.).

Data Analysis

Data analysis followed a qualitative thematic analysis approach (Clarke & Braun, 2017), allowing the research team to identify patterns and themes across participant story maps, AI transcripts, and artifacts. Thematic coding was conducted using both deductive and inductive strategies (Saldaña, 2025). Deductive codes were derived from the research questions and the structure of the focus group protocol focused on three core domains: cultural preservation, language development, and digital literacy. Inductive codes emerged organically from participant responses and were refined through iterative research team discussions. All members of the research team independently coded focus group notes. Any discrepancies were discussed until consensus was reached to ensure inter-coder reliability. Coded data were organized into thematic clusters reflecting recurring patterns in participants' experiences and perceptions. Themes were refined to ensure clarity, depth, and connection to the research questions. Special attention was given to verbatim language conveying emotion, pride, and/or growth, as these moments offered insight into participants' personal development.

Participant artifacts, including their story map, AI-generated narrative, and AI-generated images, were analyzed as supplementary data to provide contextual insight into the themes expressed in the focus group. While not formally coded, artifacts were reviewed to support triangulation and illustrate participants' engagement with cultural storytelling and support participants' digital literacy skills.

Results

Cultural Preservation

Of the 10 participants, five were able to develop their artifact using AI. The titles of the five artifacts included:

1. Eid-ul-Fitr: A Day of Faith, Gratitude, and Joy
2. La Paradura del Niño: Honoring Baby Jesus in Mérida
3. [Participant]'s Independence Day
4. [Participant]'s Ramadan and Eid Party
5. The Day the Kings Came

The topics of the artifacts included holidays (90%) and patriotism (10%). Prompts entered into AI ranged between 1-2 sentences. For example, one participant entered the following prompt into ChatGPT:

> *Write a short story about Paradura (Manger) Celebration from Merida, Venezuela which is a celebration of the birth of baby Jesus after December 24 and wait to put away the nativity scene until January. Baby Jesus is honored by singing and praying for his birth.*

Prompts were developed individually with the use of two translators accessible to all participants. Common themes from the five developed artifacts included celebrating religious holidays (10%), traditional clothing and food (90%), and family/extended family involvement (90%). These themes suggest that when asked to share a cultural experience or tradition, participants most often choose events that highlight communal celebration, familial connection, and cultural pride. The prominence of religious holidays and the consistent inclusion of traditional clothing and food demonstrate a strong desire to maintain cultural practices through sensory and symbolic elements. The frequent mention of extended family underscores the role of intergenerational bonds in cultural transmission.

Of the five stories generated, four AI-generated images were developed. An image was omitted related to the story discussing Independence Day in Bangladesh, given AI's inability to generate an accurate image. As indicated by the participant, the images generated by AI were situated in India and Pakistan with flags and symbols that did not reflect Bangladesh. Common themes from the four AI-generated images included traditional clothing (100%), community (75%), multi-generational (75%), and gifts (50%). During the focus group discussion, participants stated that their stories were deeply rooted in efforts to maintain and pass down their cultural traditions, as well as establish cultural experiences in new contexts while living in the United States. Participants expressed interest in using AI to support cultural preservation in the future with other cultural experiences and traditions.

Language & Digital Literacy Development

Participants reported that the development of their artifacts supported language growth in areas of writing and speaking. Several participants noted that they began the writing process in their native language and then translated their stories into English, which supported vocabulary development and cross-linguistic transfer. For example, one participant shared that they learned how to say new words such as "manger" and "nativity," demonstrating the project's potential to

expand specific vocabulary related to cultural and religious traditions. Additionally, participants emphasized that sharing their stories with others enhanced their speaking skills.

All 10 participants were able to complete a portion (60%) or all (40%) of the story map used to aid in the development of their artifact. Of the four story maps completed in full, the participants' self-indicated levels of English proficiency included basic (50%) and intermediate (50%). It should be noted that all participants had access to translators in the room to utilize at any time during artifact development; however all participants were responsible for writing information on their own story map. The story maps demonstrated the use of sentence fragments, keywords, and proper writing conventions (i.e., grammar and spelling).

All (100%) of the participants indicated familiarity with AI, with varying degrees of prior experience using ChatGPT. Several participants reported frequent use of AI in their home countries, such as Pakistan and India, for tasks ranging from translating text and writing stories to completing essays, job applications, and other written communications. As one participant shared, "It's my Google," reflecting the role AI plays as a daily digital tool. Throughout the development of their artifacts, participants reported growth in their AI skills, especially in learning how to adjust prompts and refine language to receive more accurate or contextually relevant outputs. To get to the final output demonstrated by the sample artifact in Appendix C, two additional prompts were entered after the main prompt to simplify language and make the story more personal. A common challenge noted was AI's difficulty in generating culturally specific content. As previously mentioned, one participant was unable to obtain an accurate image representing Bangladesh's Independence Day. While participants expressed strong confidence using AI in their native languages, they acknowledged experiencing some hesitation when using English, suggesting that language remains a factor in their overall digital confidence.

Discussion

These findings indicate that participants view cultural preservation not only as a personal endeavor but as a collective experience. Participants' reflections demonstrated that cultural identity is maintained not only through individual expression but also through communal practices such as shared rituals, storytelling, and social engagement. The visual representations developed reinforced the cultural values highlighted in participants' stories, such as the importance of heritage, familial connections, and shared celebration. However, the omission of an accurate representation for Bangladesh also revealed limitations in AI's cultural specificity and accuracy, underscoring the need for critical engagement and user input when using AI tools. These findings contribute to emerging conversations on the ethical and cultural implications of integrating AI in educational and creative contexts.

Moreover, participants' responses underscored the interplay between interpersonal and digital modes of sharing in sustaining cultural identity. In particular, digital platforms served not only as spaces for creative expression but also as bridges connecting generational and linguistic communities. This suggests that technology, when used thoughtfully, can support the maintenance and transmission of culture across diverse and dispersed contexts. Finally, the

overall experience provided multilingual learners with meaningful opportunities for authentic language use and development. By engaging with culturally grounded content and multimodal tools, learners were able to express complex ideas, negotiate meaning, and connect language learning to personal and cultural relevance. This finding reinforces the pedagogical value of integrating culturally responsive, technology-enhanced learning experiences into multilingual education.

Limitations

While this study provides valuable insight into the use of AI to create narratives that preserve culture and support the development of language and digital literacy skills, there are some limitations. During implementation of the activity, focus group participants demonstrated a hesitation to share "challenges" they faced, with several shaking their heads or declining to elaborate. This reluctance may reflect a culturally/socially rooted desire to avoid appearing critical and may have led participants to withhold constructive criticism regarding user difficulties and barriers. Additionally, some candidates expressed difficulty completing their story maps and related artifacts within the allotted time, highlighting a need for greater scaffolding, clearer timelines, and structured support to ensure meaningful engagement and completion of the assignment. Lastly, an overreliance on AI to represent culture also raises concerns. While technology can assist in storytelling, it cannot replace the depth of human knowledge required to accurately reflect cultural identities, potentially leading to misrepresentation.

Implications for Educator Preparation Programs

This study reinforces the need for EPPs to reconsider how cultural competency is both taught and assessed in the development of teacher candidates. Integrating AI to support the creation of cultural narratives presents powerful opportunities to deepen this work. When candidates engage in authentic, technology-integrated practices, they are better prepared to connect meaningfully with the diversities found in today's classrooms (Foulger et al., 2017). These experiences support their growth into culturally responsive and competent educators. AI-supported storytelling enables candidates to move beyond theoretical knowledge to actively demonstrate culturally responsive pedagogy. Furthermore, embedding AI tools into coursework equips teacher candidates to both model and teach digital literacy, a core competency for students in the 21st century (Black et al., 2024). In doing so, future educators gain the ability to guide students in using emerging technologies to explore, express, and preserve their cultural identities and family stories, enriching classroom learning and community connections.

Based on the findings of this study, it is recommended that EPPs prioritize the integration of authentic, multimodal assessments that integrate traditional literacy and digital literacy skills into their coursework and clinical experiences. These assessments should move beyond traditional evaluations to include projects like AI-generated cultural narratives, which require teacher candidates to demonstrate their ability to engage diverse student backgrounds through

meaningful, technology-enhanced instruction. Equally important is the intentional promotion of school-community partnerships that encourage teacher candidates to collaborate with families and local communities. By connecting coursework to the lived experiences of students and their families, teacher candidates gain firsthand experience in designing instruction that reflects and respects cultural diversity (Ladson-Billings, 1995). Fostering these practices ensures that EPPs are producing teacher candidates who are culturally competent educators who are equipped to support diverse learners.

Conclusion

This study highlights the powerful potential of AI as a tool for fostering culturally responsive, authentic, and innovative learning experiences. As classrooms grow increasingly diverse and digital tools become integral to education, leveraging AI in meaningful ways can help educators preserve culture, promote language acquisition, and enhance digital literacy. By engaging multilingual adult learners in the creation of AI-generated stories and visuals grounded in personal and cultural traditions, this study illustrates how technology can both celebrate cultural heritage and support essential 21st-century skills. It reveals that AI, when used intentionally and critically, has the capacity to not only support language and literacy development, but also honor the cultural narratives that define individuals and communities. To truly harness AI's potential in education, it must be integrated in EPPs in ways that empower learners to tell their own stories and amplify voices that are too often underrepresented in curriculum and instruction.

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Appendix A

Preserving Cultural Narratives: Language, AI, and the Power of Personal Stories
Graphic Organizer

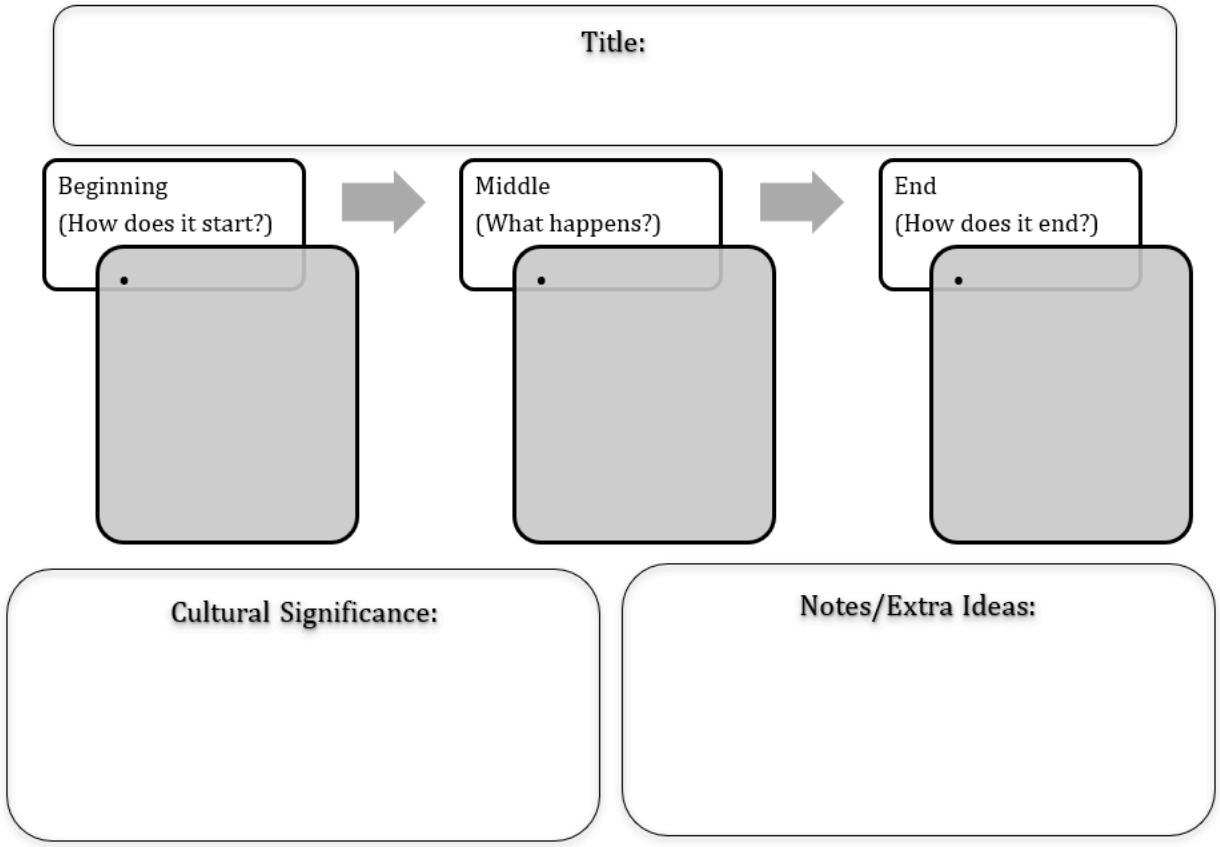
This graphic organizer will help you plan your cultural story. Use the boxes to write or draw your ideas.

STEP 1: Brainstorm Your Cultural Experience or Tradition

Think about a time, place, or tradition that's important in your culture.

What is the tradition or event?	**Where** does it happen?	**When** does it happen?	**Who** participates?	**Why** is it important to you?

STEP 2: Plan Your Story – Story Map



Appendix B

Focus Group Questions

Demographics:
Age
Ethnicity
Primary Language
Date of US Settlement
Educational Background

Cultural Preservation:
How, if at all, does your artifact seek to preserve your culture?
In what ways, if any, do you plan to share this artifact?
How, if at all, can you replicate this project to preserve other elements of your cultural experiences and/or traditions?

Language Development:
How, if at all, did the development of your artifact improve your language skills?
In what ways, if any, did you use your primary language to support your writing?
How would you rate your overall language growth throughout this project?

Digital Literacy Development:
What experiences, if any, did you have with Artificial Intelligence (AI) prior to this project?
How, if at all, did the development of your artifact improve your skills with AI?
What challenges, if any, did you face using AI?
How would you rate your overall confidence working with AI?

Overall Reflection:
How would you rate your overall experience working on *Preserving Cultural Narratives: Language, AI, and the Power of Personal Stories*?
What challenges, if any, were there in completing this assignment?
What aspect of this project provided you with a connection to your culture?
What aspect of this project made you the most proud?

Appendix C

Sample Artifact

[Participant]'s Ramadan and Eid Party

[Participant] is a kind mother from Bangladesh. She lives with her husband and two children, Salehin and Sakirin. Every year, she looks forward to Ramadan. It is a special time for her and her family.

On the first day of Ramadan, [Participant]'s husband woke up very early, even before the sun rose. He gently wakes up his wife, [Participant], and their two children. Little Salehin and Sakirin are only ten years old and seven years old so they don't fast yet.

In the kitchen, [Participant] prepares suhoor. She makes rice, lentils, eggs, and warm milk tea. She wears her soft cotton salwar kameez, a traditional dress from Bangladesh. Her bangles make a soft sound as she moves around the kitchen. The family eats together and then prays before sunrise.

All day, they avoid eating and drinking. [Participant] still does her housework, helps the kids with school, and spends time reading the Qur'an. Even when she feels tired, she smiles and says, "This is a blessed month. We are lucky to be together."

When the sun begins to set, the house starts to smell like home. [Participant] is in the kitchen again, cooking iftar. She fries golden beguni (eggplant fritters), prepares chola (spiced chickpeas), and makes biriyani with chicken. There are also dates, water, and sweet juice on the table.

Salehin is excited because he tried fasting today. "Can I break my fast today, Amma?"
"You did very well today, baba," [Participant] says, hugging him. "Yes, you can."

At the sound of the call to prayer, the whole family breaks their fast with dates and water. They smile, say "Alhamdulillah," and eat together. [Participant]'s heart feels full.

Every evening, the family prays together. Sometimes, they visit the nearby mosque. Everyone wears clean clothes, and the children love to see the colorful lights and hear the prayers.

After a month of fasting, Ramadan ends, and it is time for Eid! On Eid morning, [Participant] wakes up early and takes a shower. She wears a beautiful new saree from Bangladesh—bright red with golden borders. She helps her boys dress in their panjabi (traditional shirt).

They all go to the mosque with their neighbors and friends. The streets are full of happy people in new clothes. After the prayer, everyone says "Eid Mubarak!" and hugs each other. The children get small gifts and money, called Eidi.

Back at home, [Participant] has been cooking since the day before. She made biriyani, beef curry, firni (rice pudding), and pitha (sweet rice cakes). Family and friends come to visit. The house is filled with laughter, the smell of spices, and the sound of children playing.

[Participant] looks around at her happy family. Her heart is full of peace and joy.
"This is the true beauty of Eid," she thinks, smiling.

It is a day of love, faith, and togetherness—and [Participant] is thankful.

Demystifying Artificial Intelligence for Preservice and In-Service Teachers: An Evaluation Study

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Abstract

While much attention has been placed on creating effective professional development opportunities centered on Artificial Intelligence (AI) for preservice and in-service teachers, little has been done to shape the experiences with the enthusiasm, knowledge, and concerns teachers bring to it. This study set out to evaluate a professional development learning opportunity for teachers. By utilizing a co-design approach with teachers from primarily Title 1 schools, the study aimed to demystify AI in education and develop a comfort level among teachers with new generative AI technology. This evaluation study relied on a mixed-method approach to analyze teachers' experiences in the online and in-person sessions of a professional development initiative on Generative AI. The findings revealed that teachers found this training to be helpful and beneficial in bringing generative AI to schools. Teachers were able to decide for themselves how and when to use AI for teaching and learning. While the study aimed to 'demystify' AI, it also allowed for collaborative learning of preservice and in-service teachers on how to leverage AI technologies for their own unique educational settings. This study offers an insightful guide for teachers, school leaders, and decision makers on how to bridge the AI literacy gap among teachers to be AI-ready.

Keywords: Generative AI, professional development, teachers, AI literacy, evaluation

Demystifying Artificial Intelligence for Preservice and In-Service Teachers: An Evaluation Study

The introduction of Artificial Intelligence (AI) has changed how we approach teaching, both in higher education and in PK–12 school settings. Thus, teacher educators are not alone as they navigate how to prepare the next generation of educators for the field with and through the use of AI. While AI has facilitated innovative ways to support preservice and in-service teachers with the many responsibilities they are tasked with, it has also spurred critical discussion on the best way to provide professional development where AI is at the center of the experience (Ning, 2024). Paradoxically, however, since the release of ChatGPT in November of 2022, the debate over its ethical and security considerations continues to challenge educators at all levels, including teachers in schools (Evaristo & McQuiston, 2024).

One way to create space and facilitate critical discussion for learning opportunities has been through specially designed professional development sessions geared to help teachers develop a level of comfort with the new technologies. While many professional development sessions are structured with the teachers in mind, understanding what educators need and why they would participate can create unique learning experiences that empower educators to move beyond the session to explore more confidently on their own (Poth, 2023).

As AI enters the classrooms, it is even more important to support preservice and in-service teachers with an understanding of AI, its foundations, and how it can facilitate workload, as in planning for instruction, but also the possibilities for enhanced learning opportunities for their students (Ning, 2024). This paper shares the outcomes of an evaluation research study that brought together preservice and in-service teachers into professional development sessions to collaboratively explore the use of generative AI. For the purpose of this work, generative AI is defined as the "computational techniques that are capable of generating seemingly new, meaningful context such as text, images, or audio from training data" which are machine learning algorithms that can process and analyze large amounts of data to generate responses to inquiries as in ChatGPT and Dall-E among others (Feuerriegel et. al., 2023, p. 1). Furthermore, this study demonstrated how preservice and in-service teachers were afforded the opportunities to demystify emerging technology and wrestle with the possibilities to critically examine when and how they use AI for teaching and learning.

Review of the Literature

Rise of Generative AI

Over the years, advanced technologies have transformed our world, enhancing everyday life, driving innovations, and reshaping education nationally and globally, such as the metaverse (Hao & Haniya, 2023), virtual reality, robots, social media, big data, cloud computing, and AI (Haniya et al., 2023; Whiting et al., 2023).

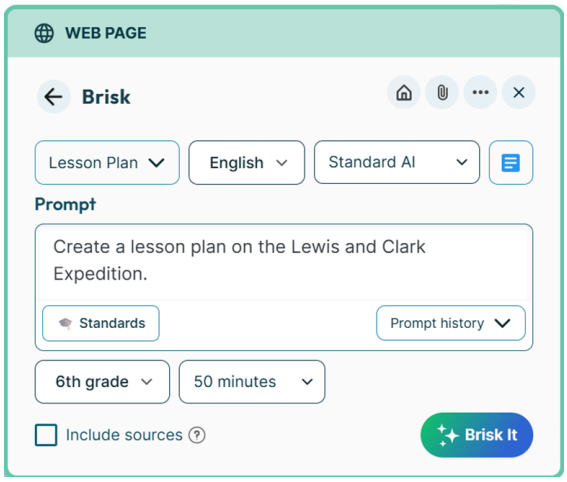
AI in education is not a new phenomenon; it can be traced back to the 1960s with the PLATO system. Originated at the University of Illinois Urbana-Champaign, PLATO, which

stands for Programmed Logic for Automated Teaching Operations, was one of the earliest computer-assisted instructional systems. It helped lay the foundation for AI to rise (Cope & Kalantzis, 2023). Today, AI in education systems has rapidly evolved in scale, usability, and range of applications, especially with the rise of Generative AI (Holmes et al., 2022). This evolution has brought Generative AI into schools and led to a widespread phenomenon. Its integration into schools, though, has sparked diverse opinions of supporters and opponents of AI in education. Supporters believe that generative AI can transform teaching and learning by providing personalized support, automated feedback, and increased accessibility, especially for marginalized populations (Akgun & Greenhow, 2021; Anand et al., 2023; Greene, 2023; Labadze et al., 2023; Lo & Hew, 2023). This transformation benefits both students and teachers alike. For instance, students can progress at their own pace with personalized scaffolding support generated by AI systems, which offers immediate and adaptive feedback for all learners. By tailoring content and addressing diverse learning needs, Generative AI would help students to overcome learning barriers (e.g., language competency, accessibility, etc.). Take, for instance, the Khanmigo AI tool. It offers immediate mathematical tutoring support to enhance learning and accessibility at any time and from anywhere, providing guides through problem-solving without directly giving answers.

Generative AI can also empower teachers, helping them to be more efficient and effective. Generative AI can help teachers handle tedious, time-consuming tasks, such as lesson planning, identifying learning gaps, creating personalized assessments, and managing email communication (Dede et al., 2021). This frees up teachers' time, allowing them to focus more on direct student engagement and mentorship. An excellent example of this is the use of an AI tool like Brisk Teaching. It can automatically generate lesson plans, quizzes, activities, and more, all while ensuring alignment with Common Core standards (see Figure 1).

Figure 1

Creating a Lesson Plan Sample for 4th Graders using Brisk Teaching



On the other hand, other scholars argue that AI may hinder educational progress by diminishing critical thinking skills, promoting overreliance on technology, and raising ethical concerns (Chan & Hu, 2023; Kosmyna et al., 2025; Ong et al., 2024). Despite these opinions, Generative AI is continuously growing and becoming an integral part of our lives, which emphasizes a need for further investigation, especially in relation to its use in school systems. A recent empirical study revealed that AI is expected to significantly impact education systems and institutions within the next five years, but institutions are unprepared for this change (Johnson et al., 2024). Recent studies have shown that the majority of students are relying on generative AI to support their education, but not all teachers are on the same page as students; they are not fully prepared for AI integration in schools (Almatrafi et al., 2024). Therefore, this study sheds light on the implementation and evaluation of a professional development study that aimed to bridge the AI literacy gap among educators in Title 1 schools across Southern California, named "Demystifying AI for Educators".

Professional Development for Teachers

Teacher professional development (PD) has consistently been seen as a way to support teachers with new content, pedagogy, and requirements in the field (Calderón et al., 2011). The onset of new technologies, and AI in particular, over the past decade has forced schools to think about how to share the latest platforms, tools, or devices, and at times without any real thought on how teachers can manage or take charge of the evolving technological landscape (Chen, 2024). Furthermore, current research demonstrates that much of what transpires during professional development on AI in schools is focused on the novelty of the technology, devoid of teachers' background knowledge or questions they have prior to their participation or after participating in PD sessions with AI at the center of the sessions (Chen, 2024).

When it comes to PD on AI literacy, it is imperative that sessions focus on understanding teachers' initial interest or hesitation as they enter the experience. Professional development on AI is, in the end, professional development for teachers. The research on professional development continuously points to the fact that the most successful attempts to empower teachers with new experiences can happen when facilitators take into account what drew the teachers to participate in the first place (Calderón et al., 2011). If successful PD is defined as "structured professional learning that results in changes in teacher practices and improvements in student learning outcomes," then the purpose and scope of the PD sessions needs to take into account elements that include active learning, supported collaboration, feedback, and reflection, among others (Darling-Hammond et al., 2017, p. 2). Thus, this work utilized a co-design approach (Zamenopoulos & Alexiou, 2018) in structuring the PD experience to: 1) get to know the participants, 2) understand their needs, and in some cases fears, and finally, 3) aim to successfully meet participants' desired outcomes. This allowed the researchers to structure the sessions as follows: a pre-virtual session to meet the participants and understand their needs, a one-day in-person workshop with AI experts, and a post-virtual session to showcase how they had integrated AI for their personal and professional needs.

Theoretical Framework

This study was guided by the "Intelligence Augmentation" (IA) theoretical framework which states that AI tools can augment human intelligence by complementing tedious and complicated "reckoning" tasks (Dede et al., 2021) such as lesson planning, innovating the instruction to be interactive, designing multiple means of assessment and activities, and communicating with students and parents. This theoretical framework suggests that the strategic partnership between teachers and AI tools may help educators and teachers to concentrate on higher order "judgment" skills, thereby fostering deeper intellectual engagement.

Core Competencies for AI-Literate Educators

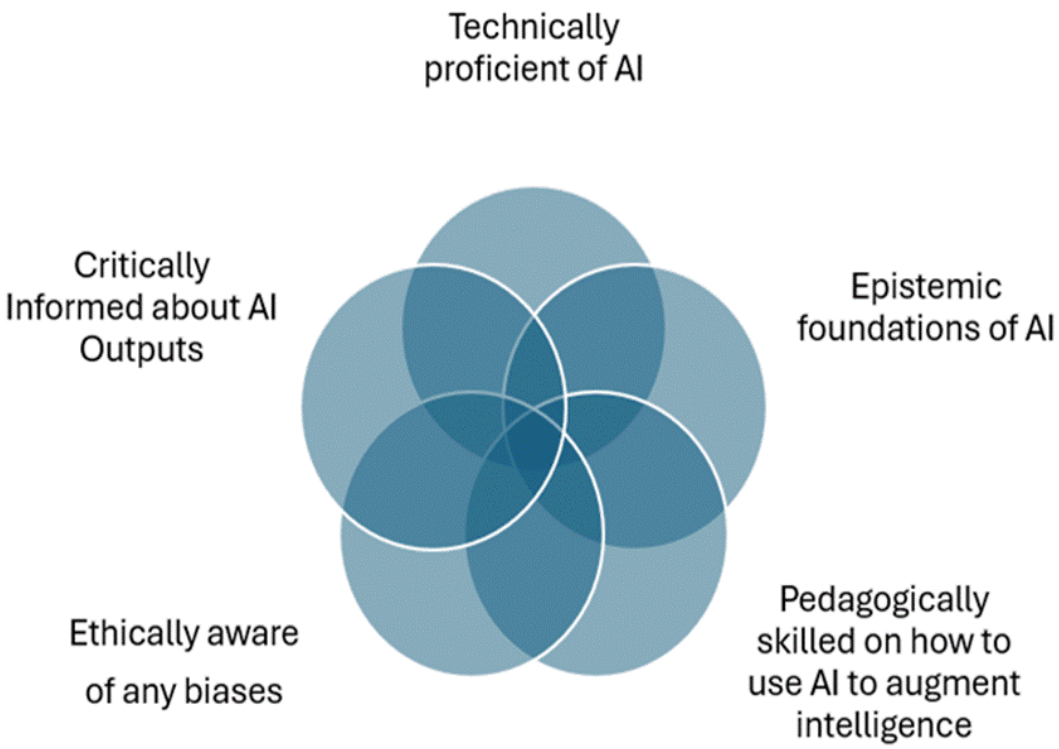
The rapid development of and increased access to Generative AI tools across multiple disciplines and domains, and more importantly in education, have created new challenges for teachers to better understand these tools in order to support students' learning. With these advancements in place, AI competency has become a foundational requirement for educators, emphasizing the need for teachers to acquire the necessary AI literacy to engage with students and Generative AI more appropriately (Almatrafi et al., 2024). This competency even extends beyond traditional digital literacy skills of access and use as we know them. According to Long and Magerko (2020), AI literacy refers to "a set of competencies that enables individuals to critically evaluate AI technologies, communicate and collaborate effectively with AI, and use AI as a tool online, at home, and in the workplace" (p. 2). In other words, AI competency involves a deep understanding of Generative AI, its critical evaluation, and responsible use in the classrooms and thus the real world (Kong et al., 2022). By empowering educators to effectively and ethically leverage AI in the classrooms this will save time and effort by allowing teachers to focus on other teaching and learning aspects that foster collaboration and engagement. Adopting this approach would position AI as an educational partner, guiding and enriching the learning experience rather than being viewed as a replacement for teachers.

Several guiding principles and AI frameworks have emerged to guide educators and researchers on impactful training programs and effective teaching strategies to communicate the fundamental components of AI. Among these guidelines is the one developed by the United Nations Educational, Scientific and Cultural Organization (UNESCO) to offer guidelines for teachers worldwide. Deeply rooted in a human-centered mindset, this framework outlines five key competency areas: Human-centered mindset, AI foundations, pedagogy, ethics, and professional development (UNESCO, 2025). It provides a clear pathway for educators to progress from a basic level to a more advanced one, emphasizing responsible use of AI through ongoing learning, critical thinking, and validation. Additionally, there is the AI-TPACK, which offers practical guidelines on how to effectively teach and integrate AI in educational contexts (Mishra et al., 2023). AI-TPACK framework for teachers focuses on the intersection of pedagogical knowledge, content knowledge, and AI-related technological knowledge. This framework helps teachers to know what to teach, how to teach it, and which AI tools to use in order to support student learning. In another study, Long and Magerko (2020) have introduced

another AI literacy framework which is centered around a set of competencies through five main questions: 1) What is AI?, 2) What can AI do?, 3) How does AI work?, 4) How should AI be used?, and lastly, 5) How do people perceive AI? This framework offers a holistic view by focusing on AI knowledge, skills, and pedagogy. In general, most of the previous literature reviews on AI competency frameworks have emphasized the need to prepare teachers to be AI-competent. This involves being technically proficient, knowledgeable about epistemic foundations of AI, pedagogically skilled, ethically aware, and critically informed about the capabilities and limitations of generative AI in education. While literacy in each dimension is vital, the greater impact comes from recognizing and leveraging how these dimensions intersect to achieve intended educational goals as shown in Figure 2. In alignment with these reviews, we have developed the PD initiative, "Demystifying AI for Educators" to reflect these dimensions and enhance the AI literacy for both in-service and pre-service teachers in Title 1 Schools in Los Angeles, California.

Figure 2

AI Competency for Teachers



Methods

Context

Funded through a grant from a private institution's office of the provost, the goal of the Demystifying Artificial Intelligence for Educators Workshop for Teachers in Underserved Schools was to demystify AI for educators in Title I schools and, further, to bridge the AI literacy gap. Working with Title I schools allowed the research team to explore unequal AI access or resources for teachers working in underserved communities. Their experiences with the technology are crucial for understanding how these tools can help overcome learning barriers and improve teaching practices to support student learning in marginalized communities. The study engaged both in-service and preservice teachers to build partnerships and engage diverse cohorts of participants to foster mentorship and professional growth among expert educators and emerging teachers.

Recruitment

After receiving the IRB approval, we started the recruitment process. To recruit in-service teachers, we distributed a flyer to various Title I schools in the greater Los Angeles metropolitan area. The flier provided a brief overview of the study's purpose, project activities, and time commitment. Teachers who were interested in participating were asked to complete and submit a signed consent form to confirm their voluntary participation. We also recruited student preservice teachers from a teacher preparation program at a private university in the same geographical area. Recruitment of preservice teachers included an email announcement to students in the program and sharing the flyer with the faculty for a wider reach.

Participants

The study involved an interdisciplinary team of faculty, staff, and preservice teachers, as well as in-service teachers from various public schools, to deeply explore the promises and risks of using AI in education. The research team consisted of two university faculty members, who consulted with an AI software developer, two representatives from the local school district, and a public school teacher who was experienced in AI. Twenty-one participants were recruited to be part of the study, as the study initiated, only 15 in-service and two preservice teachers from Title 1 schools who consistently participated in the PD experience. Nearly 90% of the participants were bilingual instructors teaching across different grade levels from elementary to middle and high school. They came from different schools and different districts in the Los Angeles metropolitan area with various years of teaching experience spanning from under five years to over twenty.

Design and Implementation

The project consisted of three distinct phases, which included a pre- and post-virtual session and a one-day in-person workshop. Collectively, this became the professional development experience for this study. This format was selected to allow teachers to reflect on their needs and allowed the researchers to tailor the workshop to accommodate participant's

preferences and needs. The term workshop was intentional so as to distinguish from any preconceived notions of past professional development sessions participants may have experienced. The workshop was structured as an interactive day with lots of social time built into the day's experience to differentiate from required PD sessions they may have received through their own district or school.

During the first online session in March of 2024, teachers were introduced to the project and were asked to share their needs and concerns regarding responsible implementations of generative AI in the classrooms. This was a continuous effort by the research team to understand if teachers in Title 1 schools had unique equity challenges, where their students represent diverse multicultural and multilingual communities. Following principles of co-design, the pre-virtual session allowed the researchers to incorporate the data and use it to structure the one-day workshop with the participating teacher's needs at the center of the experience. The full-day in-person workshop was held in April 2024. The goal of the workshop was to help educators experiment with AI tools and resources from experts in the field and explore the potential risks associated with it. The workshop also had a playground built into it as part of the full-day experience that allowed the teachers to select where and how they wanted to spend part of the day. Finally, the researchers followed up with the participating teachers through a post-virtual session for reflection in May of 2024. During the post-virtual session, the participating teachers reflected on how they integrated AI tools into their classrooms and shared the practices and challenges they have faced.

The pre- and post-virtual sessions as well as the workshop were designed using the co-design approach. Co-design is an iterative and collaborative process where a team of individuals work together by identifying a real-world challenge and then share insights for practical solutions (Zamenopoulos & Alexiou, 2018). It aligns with a human-centered approach where participants are engaged in every phase of workshop development: from ideating to prototyping and testing solutions (Norman, 2023). Similarly, the one-day workshop in this study was designed with the participating teachers in mind. Teachers were engaged in the workshop from the beginning to the end by defining problems, co-developing lesson plans and activities, and testing at a surface level. Given this modality, the workshop was centered on real needs, classroom contexts, and pedagogical goals to empower teachers with AI knowledge, skills, and pedagogical techniques. Following the co-design process, multiple aspects were covered in the workshop. The first aspect presented a comprehensive overview of generative AI and how it works, and further, how it impacts education. Following this, an AI playground session was presented, where preservice and in-service teachers experimented with several AI tools in collaboration with other teachers, researchers, and the AI developers. The goal was to test different applications and strategies to solve educational problems they saw in their classrooms, such as the opportunity to support their multilingual students through customized language and translation tools, adapting difficulty levels, and leveraging classroom engagement. The workshop ended with an "ethical AI session" to critically examine the limitations and challenges of

generative AI, such as data privacy, algorithm bias, and hallucination. A complete list of different topics covered during the workshop is presented in the agenda (see Figure 3).

Figure 3

Agenda for In-Person Workshop for Participating Preservice and In-Service Teachers

AI Workshop Agenda		
Time	**Topic**	**Activity**
08:00 - 08:30	Welcome and Breakfast	Socializing and getting to know each other
08:30 - 10:00	AI in Education: Yesterday, Today, and Tomorrow	Lecture and Group Work
10:00 – 12:00	AI Playground Session 1 (with an AI software developer and AI AI-skilled teacher)	Hands-on Activity of trying and exploring different AI in Education tools
12:00 – 01:00	Lunch Break	
01:00 – 02:00	AI Pedagogy and AI-TPACK	Whole Class Discussion on how pedagogy leads AI in transforming teaching and learning
02:00 – 03:30	AI Playground Session 2 (with an AI-skilled Teacher as a guest Speaker)	Round Table Activity: Teachers work together to solve an educational problem with Generative AI
03:30 – 04:30	AI School Policy with a guest speaker from the school district	A whole-class discussion to discuss AI ethical concerns and biases, and find solutions to deal with them

Evaluation Framework

The research aims to evaluate the effectiveness of this workshop in meeting its intended purpose of demystifying AI among educators, to improve teachers' understanding of generative AI and learning how to use it appropriately in the classrooms. Unlike traditional research approaches, where the aim is to develop new knowledge, evaluation studies focus on practical application and program improvement (Kupiec et al., 2023; Owen, 2020). Influenced by theorists Cronbach (1963), Weiss (1998), and Patton (2008), the purpose of this evaluation is to improve teachers' learning and understanding of Generative AI. Moving beyond the practical use of this evaluation, there is more to be gained from this evaluation than just program improvement. For instance, the evaluation could also indicate more knowledge about the AI literacy gap among teachers and attempt to answer how big the gap is. Additionally, it could provide insights into teachers' perceived AI literacy needs for engaging with Generative AI technologies, and their overarching perspectives on AI's role in education.

In doing so, this study utilized a mixed-methods research design to evaluate the effectiveness of the AI workshop (Greene, 2013; Weiss, 1998). Combining both qualitative and quantitative data sources is crucial to provide a comprehensive and nuanced understanding of participant experiences. Data collection involves rich data, collected from post surveys, live sessions transcribed with Zoom, field notes, and direct observations of the participants as they

were engaged in the workshop. Survey questions were used to gauge participants' overall satisfaction, and field notes and the transcript served as complementary sources of data to contextualize and deepen the understanding of participants' responses. We triangulated data sources to enhance the validity of the study. Data was analyzed by looking at the emerging themes of strengths and challenges. These themes were checked by another researcher until we reached an agreement.

Results

To understand the strengths and weaknesses of the workshop, we synthesized the qualitative themes from field notes and Zoom transcripts with the quantitative data from the post-survey and organized them surrounding strengths and challenges.

Strengths

The evaluation study demonstrates several key strengths that contribute to the effectiveness of the professional development training as explained below.

Shifting Teachers' Mindsets Towards AI Integration

Data analysis indicates a significant change in participants' views on AI. According to post-survey results, 60% of the respondents reported that their vision of AI had "Improved" while 40% "Greatly improved" as a result of the workshop. These findings were evidence in the qualitative data. Indeed, this theme is woven throughout the workshop by observing teachers' enthusiasm to learn and grow from asking simple questioning, such as "What [is] AI?", "Why AI?" to "how it might be useful," and "how it can be relevant to what I teach." One participant mentioned: "I have gained an amount of confidence and let go of my immense fear in using AI in the classrooms." While another teacher commented, "AI has been demystified, and somewhat debunked as the evil tool against educators, and has actually shed some light on how education can be enhanced by AI."

Enhancing Teachers' AI Knowledge and Skills

Data analysis reveals that the workshop content and skills resonated well with participants, leading to an enhanced understating of what AI is and how to use it. For instance, teachers reported high satisfaction with the knowledge and skills gained in the workshop. Responses indicated 45.5% of the respondents were satisfied with the knowledge gained and 54.5% were very satisfied with the topic discussed and knowledge gained. Similarly, 40% were "Satisfied," and 60% were "Very Satisfied" with the skills gained in the workshop. Survey results also have shown that "AI Tool Demonstration" was favored by 90.9% of respondents, followed by "AI Impacts on Teaching and Learning" with 81.8%. Throughout the workshop, participants were engaged with the hands-on component of the workshop, specifically the AI playground lab, as they explored different tools. Some of the tools involved: 1) *School AI*, where teachers can create an AI learning experience with an avatar, 2) *Diffit.AI*, where teachers can create grade-level content adjustments, and 3) *Gemini* to generate photos and art. One participant said: "As a

teacher, I want to use it as an assistant … something like building a schedule … create content and scenarios based with a rubric." This data highlights the strengths of the workshop in engaging teachers with valuable content and practical skills. Another participant commented:

> Using Generative AI is a tremendous advantage. I can create lesson plans in seconds, which means I no longer need to search for lessons on Teachers Pay Teachers or request funds from my principals. Instead, I can generate a multitude of lessons effortlessly using tools like School AI. I'm truly grateful for the information, time, care, and concern provided during this professional development. I'm excited to see the impact AI will have in the classroom and can't wait for my fellow teachers to learn how to save time and create meaningful lessons too!

Building Partnership and Collaborative Engagement

The structure of this workshop aimed to build a more dynamic learning environment through partnership building and mutual collaboration between in-service and preservice teachers and guest speakers from the district and an AI company. Survey results revealed that 45% of participants were "Very Satisfied" with the structure of the workshop and 54% were "Satisfied." They also specifically liked "Hands-on Activities," "Whole Class Discussion," and "Small Group Discussion," confirming the effectiveness of the interactive and collaborative elements. During the 1-day workshop, and particularly the AI playground lab, participating teachers and stakeholders shifted from one table to another in smaller mixed teams to explore different AI tools and solve different educational problems as small teams and then as a whole group. This design allowed the groups to include diverse perspectives and diverse individuals. One participant said: "I really enjoyed having [the workshop]…, it is very engaging. I also appreciated … the other presenters, [they] were great in facilitating conversation and answering questions." Another participant commented "Oh yeah, that's why we need a team approach."

Challenges

While the workshop demonstrated several strengths, there were challenges to consider in future iterations of similar workshops. Mostly, these challenges were related to ethical discussions and time concerns.

Need for Clear AI Ethics Policy Guidelines

Despite teachers' engagement with the topic of AI ethics, teachers have shown some concerns related to the lack of a more clear and actionable AI ethics framework in educational spaces. While 54% of the participants indicated they liked the AI Ethic Discussion in the post survey, they also indicated some concerns related to the unacceptable usage of Generative AI in the open-ended question of the survey. One participant showed concern related to "cheating and academic dishonesty." Another mentioned "It's vital that students understand the importance of originality and the proper ways to use AI as a tool rather than a means to bypass learning." These findings indicate that teachers are still seeking more guidelines surrounding AI ethics to help teachers manage student use in the classrooms more appropriately.

Time Limitations for Further Exploration

While the participating teachers found the workshop to be useful and relevant to their needs, they also indicated a desire for more in-depth exploration. One of these areas, as previously mentioned, is AI ethics and another one is the AI tools evaluation. One participant mentioned: "…evaluating like the right AI tools for … the right situation". A second participant mentioned in the open-ended question in the post survey: "It has been an interesting experience, one that you still have to invest some time and energy to [it]." Another participant reflected in the post workshop saying "I need to provide those [AI tools] experiences to students to like. Show them, you know ... And so much I want to share. But where do I find a time." As a matter of fact, AI is growing exponentially, which requires ongoing learning and exploration. This makes it difficult for teachers who have time limitations and other responsibilities.

Discussion

This study evaluated a PD workshop that equipped in-service and preservice teachers with the skills and confidence to effectively integrate generative AI tools into their classrooms. The results of the study revealed key insights for enhancing AI PD in schools. We have organized these findings into four major points, which are discussed in relation to prior literature.

Generative AI is a Teacher Companion, Not a Replacement

The study reveals a shift in teacher attitudes. Before the workshop, many teachers expressed some fear regarding the use of AI in the classrooms. But when teachers realized its tremendous opportunities that could help to remove part of their workload, this feeling started to go away. Findings of the survey have shown how their vision of AI has greatly improved to a more positive feeling. Teachers felt better when they knew how AI tools could assist them in doing tedious and time-consuming tasks, such as lesson planning, customizing assignments, and accommodating learners' needs. In fact, this is consistent with the Augmented Intelligence theoretical framework by Dede and colleagues (2021) as it ensures teachers perceive them with a positive attitude to make an impact.

Hands-on Experiences are Essential for Learning

Another key insight raised in this study related to the significance of hands-on exploration, especially in relation to learning Generative AI. In other words, grasping AI technology knowledge and skills alone are insufficient for effective learning. Teachers need to interact with the tools and systems and try them out. Most of the participating teachers appreciated the AI playground component and learning about the different tools. Results from the post-survey indicated that the most liked activities of the workshop were the "AI Tool Demonstration" and "Hands-on Activities." As AI keeps evolving, ongoing AI professional development should focus on more hands-on experiences to enhance practical learning. Adding to the previous studies by Long and Magerko (2020) and Kong et al. (2022), our research supports their finding that AI literacy involves more than simply learning the tool. Rather, it involves engagement and interaction with AI tools through exploration and active learning.

Collaborative Partnership is Central to Professional Development

When it comes to teachers' PD, working in teams is essential for these workshops to be successful. Data analysis has shown how teachers praised the "team approach" and the ability to work in small group discussions, while exploring the Generative AI tools. This insight suggests that future teachers' PD should focus more on community building by involving different stakeholders in the design and implementations (e.g., teachers, principals, parents, technology developers, and school staff, etc.) to think collectively about challenges and solutions and ensure more productive outcomes. Supported by previous literature, these results emphasize the significance of building partnership and co-learning environments for enhanced learning (Darling-Hammond et al., 2017; Zamenopoulos & Alexiou, 2018)

AI Ethical Concerns Remain a Big Concern for Teachers

Despite the many benefits of improving teachers' attitudes and enhancing their AI knowledge and skills, teachers in the workshop are still questioning how to navigate AI ethics in the classroom more appropriately. They have expressed concerns about cheating and academic dishonesty and the need for clear policies to guide their use of AI. While several ethical frameworks have been developed to promote fairness in AI, there is a need for more context-specific guidelines. These could better address specific issues within unique situations and subject areas. These results are consistent with the concerns raised in previous studies (Evaristo & McQuiston, 2024; Chan & Hu, 2023; Kosmyna et al., 2025; Ong et al., 2024).

Limitations

Although the study offers many valuable insights to bridge the AI literacy gap in the context of PD for teachers, whether preservice or in-service, it has some limitations that should be highlighted. One of these limitations is the sample size of the participants. The small sample size of preservice and in-service teachers who participated in this study does not allow for generalization. Despite the fact that Southern California is a myriad of diverse school districts, a limitation in this study is the educational context from which the participants hailed, as almost all came exclusively from Title I schools. The participating teachers had different needs and experiences when it came to Generative AI; therefore, results may not be directly transferable to teachers in other school settings or socio-economic areas. Another challenge relates to the time constraints and budget, which limited the number of participants and topics that were covered in the workshop.

Furthermore, while the study employed a mixed-methods evaluation approach, the qualitative data analysis could be further developed through one-to-one interviews to gain deeper insights from the participants about their experiences and outcomes. This means not all experiences and specific challenges faced by teachers have been fully captured. Finally, another limitation related to the difficulty of measuring the long-term impact of the AI literacy workshop to see if it helps teachers to responsibly integrate generative AI in the classrooms to support

students' learning. The study would require follow-up interviews with participants over an extended period to evaluate the long-term impact.

Recommendations

Building on the identified limitations, this study offers several recommendations to the design, future implementations, policy, and research on AI teacher professional development. Future AI literacy workshops should continue to encourage teachers' partnership and active engagement in design. These approaches are responsive to the specific needs and contexts of teachers and educators. Also, future AI literacy workshops should move beyond the knowledge and skills of generative AI to integrate pedagogical tools. This involves developing curriculum, teaching strategies, and assessments that promote active learning. Furthermore, there is a need to address ethical considerations in AI use. This can be done by following an AI ethics framework and engaging students in critical thinking activities about AI's biases and concerns.

For future implementations, focus should center on building more scalable AI training for delivering ongoing PD sessions. At the policy level, institutions and educational leaders must recognize that teachers' willingness to change requires a long-term support system. In terms of research, there is a need to conduct longitudinal research designs with larger, more diverse participants to accurately measure the long-term impact of AI professional development on teaching practices and student learning. Finally, this study recommends that educator preparation programs (EPPs) integrate a specific focus on AI literacy into their curriculum. The focus needs to go beyond the basic understanding of AI but also include more hands-on professional learning that equips future teachers with the skills to use AI ethically and responsibly in their classrooms. The opportunity for preservice teachers to collaborate with in-service teachers outside of student teaching was a welcomed experience.

Conclusion

In conclusion, this evaluation study aimed to shed light on the AI professional development training to bridge the AI literacy gap and empower teachers with the AI knowledge and skills needed to enhance teaching and learning in underserved areas in Los Angeles, California. The training was designed in alignment with a human-centered approach and co-design strategies to ensure collaboration and engagement. The study used a mixed-methods approach for evaluation to present the strengths and weaknesses of the training in meeting the needs of preservice and teachers. Teachers who took the AI professional development training indicated several learning benefits, such as demystifying AI use in the classrooms, exploring various AI educational tools, engaging pedagogy while using AI technologies to foster active learning, personalization, differentiating assessments, and breaking down the mystery of AI biases. On the other hand, teachers in this study raised a concern regarding the lack of general AI ethics for teachers and students to ensure the responsible use of Generative AI in education at large. The study also highlighted that teachers are willing to change and innovate when given adequate support. Overall, the study highlighted a need for more AI literacy training to keep

teachers, parents, and schools up to date with AI innovations, especially in underserved communities.

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Leveraging AI for Assessment in Higher Education: Insights from an Autoethnographic Study

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Abstract

As society is ushered into the Age of Intelligence, so are higher education institutions (Occhipinti et al., 2024). However, the application of artificial intelligence (AI) technologies within colleges and universities in the United States remains controversial (Crompton & Burke, 2023). Despite concerns around ethics (McDonald et al., 2025; Shapiro & Lam, 2025; Stahl & Wright; 2018), overreliance on AI for decision-making (Abulibdeh et al., 2025), and the potential bias of AI (Dwivedi et al., 2021), many universities are rapidly adopting and leveraging AI tools for advanced analytical functions, contributing to the rise of the smart university, an institution that seeks to integrate technologies (such as AI) across all functions—from classroom instruction to program evaluation (George & Wooden, 2023). By embracing a smart university approach, this study adds to the existing body of research by providing an in-depth exploration of the use of AI for more strategic, institutional-level tasks. An autoethnographic case study approach is utilized, capturing the rich lived experiences of a senior administrator at a private, faith-based university who integrated AI into key assessment activities for two graduate-level educator programs. The findings highlight opportunities to reimagine assessment practices, underscore the importance of institutional readiness, and identify key skills and strategies for effective AI integration in higher education institutions.

Keywords: artificial intelligence, smart university, education preparation programs, program assessment

Three years after the debut of ChatGPT in 2022, artificial intelligence (AI) has quickly moved from the fringes to the forefront of society, being used in everything from the social media applications we casually scroll to performing highly advanced quantum computing calculations. Despite its prevalence and prominence in many sectors, higher education institutions have been slower to adopt AI (Lee et al., 2024; McGrath et al., 2023). Concerns regarding the ethics of AI within education, effectiveness in enhancing learning, and the potential dependency it creates with students, faculty, and staff have stalled higher education from fully embracing it (Abulibdeh et al., 2025). In defiance of this opposition, there is a growing momentum calling for the integration and use of AI in colleges and universities. Such proponents for AI note the multitude of benefits from enhancing students' learning experiences (Neumann et al., 2023), improving student support services (Hannan & Liu, 2023), and enhancing the data analytics capabilities of institutions to name a few (George & Wooden, 2023; Lemay et al., 2021).

Regardless of the mixed reception of AI technologies in higher education, the mass adoption and integration of AI in other sectors and society at large has ushered civilization into the "Age of Intelligence" (Occhipinti et al., 2024, p. 1). With this evolution, many estimate that AI will likely automate or transform 50% to 60% of jobs in the workforce by 2040, and even up to 80% by 2050 (Kelly, 2025). Furthermore, the Digital Education Council conducted a study of 3,839 undergraduate, graduate, and doctoral-level students across 16 countries, and revealed that 86% of them use AI regularly (Rong & Chun; 2024). Thus, higher education institutions are forced to quickly confront the future of AI in the sector as they face both external pressures (e.g., broader societal adoption of AI) as well as internal pressures (e.g., rapid and prevalent use of AI by university students). Many have started adopting and integrating it, striving to become what George and Wooden (2023) dub as an "AI-centered smart university" (p.1). An AI-centered smart university leverages AI in every aspect of the institution, from curriculum design to admissions (George & Wooden, 2023).

Upon examining the ways in which higher education institutions are embracing the use of AI, majority are leveraging the technology for education management purposes. Some of the most common uses include services such as personalized learning support for students, educational assessment, grading, and curriculum design (George & Wooden, 2023; Igbokwe, 2023). Meanwhile, there are far fewer examples of AI for administrative and strategic purposes beyond admissions, administrative services, and resource management (George & Wooden, 2023). To fully transition into the Age of Intelligence and truly transform into AI-centered smart universities, higher education institutions need to begin incorporating AI beyond student-facing goods and services for more strategic and programmatic applications. Unfortunately, given the speed at which the sector is being called to make such changes and adopt AI, there are limited resources and empirical studies to guide decision-making and integration. This study sought to

explore the use of AI in the assessment processes of a graduate college of education and, in doing so, serve as a case study that could inform future research and practice.

Purpose & Research Questions

Leveraging autoethnography, the study draws upon the rich lived experience of a senior-level administrator at a private, faith-based institution to provide exploratory insights to inform future research and practice regarding the use of AI. The administrator works specifically with the graduate college of education, which houses both graduate teacher preparation and doctoral programs. This research builds upon the current body of literature by delving into the use of AI for strategic and programmatic purposes of a teacher preparation program as well as a doctorate in philosophy program. Additionally, it extends previous studies by exploring the integration of AI applications into higher education institutions from the perspective of staff at an administrative level. The study was guided by the following research questions:

1. How does the use of AI technologies influence strategic assessment and academic program review processes within a department of learning and teaching at a private, faith-based institution?
2. What challenges and considerations arise from an administrative perspective when integrating AI technologies into planning and program-level assessment as part of becoming a smart university?

Literature Review

Program Assessment and Strategic Planning in Higher Education

In the 1980s, the United States education system fully embraced the "assessment movement" (Ewell, 2009, p. 5). This movement was driven by a call for curriculum reform, enhanced knowledge of effective teaching and learning pedagogies, and newfound developments in the understanding of the student learning experience (Ewell, 2009; Wolf, 1990). At the program level (known as program assessment), assessment is defined as evaluating student learning and experiences to determine whether graduates have achieved the knowledge and competencies associated with their field of study (Stassen et al., 2001). Scholars underscore that effective program assessment should be ongoing, systemic, and data-informed – involving the engagement of multiple stakeholders and the integration of varied data sources (Stassen et al., 2001). Prior research also emphasizes that program assessment should not only inform course, program, and department-level decisions but also accreditation compliance and institutional strategic planning functions (Ewell, 2009; Good & Kochan, 2008). Collectively, these perspectives reveal that program assessment functions as a critical mechanism for institutional effectiveness, ensuring continuous improvement across multiple levels of higher education (Richardson, 1988; White, 2007).

Artificial Intelligence

Artificial intelligence, first coined in 1956, has only recently come to the forefront of public discourse in the 2020s with its rapid evolution and widespread applications (Crompton & Burke, 2023; George & Wooden, 2023). Defined as computing systems that can learn, adapt, and synthesize data for complex processing tasks (Popenici & Kerr, 2017), more recent advancements in AI now perform sophisticated functions such as summarizing large amounts of text, recognizing patterns, and generating new ideas (Lee et al. 2024; Wang et al., 2024). These newer AI technologies, known as generative AI, feature advanced computational and conversational abilities delivered through straightforward interfaces (e.g., ChatGPT and Google Gemini) (Wang et al., 2024). While these tools offer powerful opportunities, they also carry limitations, most notably hallucinations, or the production of inaccurate or fabricated content (Bansal, 2024; Kim et al., 2025). Scholars emphasize that such limitations can often be reduced through refining strategies in how we engage, or prompt, the interfaces which reflect the need for users to remain deliberate and discerning when applying AI in higher education contexts (Bansal, 2024).

Applications of AI Technologies in Higher Education

As AI technologies have become more advanced and widespread, their applications have moved beyond technical fields to other industries such as education. Even as early as the 1960s, various tools and applications for AI within education have been utilized (George & Wooden, 2023; Guan et al., 2020). However, the enhanced capabilities of more recent developments have resulted in a much faster and widespread adoption and integration of AI technologies in higher education institutions (Crompton & Burke, 2023). In their literature review, Guan et al. (2020) identified the three categories of applications for AI in higher education institutions: (a) learner-oriented, (b) instructor-oriented, and (3) institutional system-oriented. Of the 425 studies reviewed, the majority of institutions were concerned with learner-oriented and instructor-oriented tasks, with less than 10% devoted to institutional-system oriented activities. Similarly, Crompton and Burke's (2023) literature review yielded comparable results, with only 11% of the 138 articles examined emphasizing the managerial experience with AI, compared to 17% on instructors and 72% on students. These findings aligned with other reviews (e.g., Abulibdeh et al., 2025; Khairullah et al., 2025), which suggested that within the context of higher education, applications of AI were concentrated primarily on teaching and student learning experiences rather than institutional functions.

Benefits and Opportunities of AI Integration in Higher Education Institutions

Some scholars examining strategic and institutional applications of AI in higher education have highlighted its promise and potential. When utilized for functions such as program assessment, budgeting, and goal setting, the exploratory use of AI tools has been shown to strengthen decision-making by enabling advanced forecasting and predictive analytics (Dwivedi et al., 2021; George & Wooden, 2023; Igbokwe, 2023). Beyond financial or planning

applications, the pattern recognition and computational power capabilities of AI tools can also expand analytic capacity in functions such as curriculum design and program development (Abulibdeh et al., 2025). Furthermore, in the current landscape where higher education institutions face extraordinary pressures, the ability of AI to enhance administrative efficiency through saving time, reducing resource demands, and streamlining processes presents a particularly valuable contribution (Abulibdeh et al., 2025; Shapiro & Lam, 2025).

Risks and Concerns of AI Integration in Higher Education Institutions

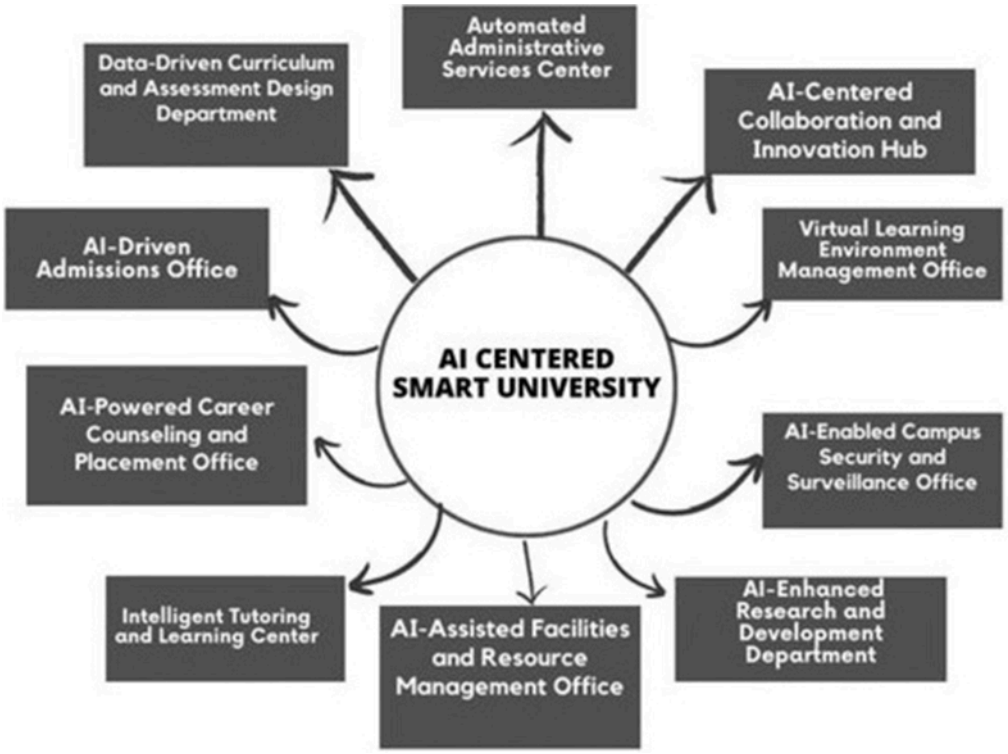
Conversely, prior research also raises a variety of concerns around AI applications in higher education institutions. A prominent concern presented is the privacy implications of using personal data in AI tools (McDonald et al., 2025; Shapiro & Lam, 2025; Stahl & Wright; 2018). Universities in the U.S. must adhere to the Family Educational Rights and Privacy Act (FERPA), which has stringent policies on protecting the data and privacy of students. Many AI tools are not inherently FERPA-compliant; therefore, entering student information (e.g., grades or identifiable records) into such systems could constitute a violation of the act and pose significant legal risks (McDonald et al., 2025). Another concern of AI use is the potential for overreliance on AI tools for decision-making. Depending on AI applications without sufficient human oversight risks compromising decision quality, missing errors, data inaccuracies, reducing stakeholder accountability, and undermining human agency (Abulibdeh et al., 2025). Furthermore, prior research cautions against the use of AI technologies due to the inherent bias of many tools and applications (Abulibdeh et al., 2025; Dwivedi et al., 2021). AI algorithms tend to mirror societal biases, therefore using these technologies carries the risk of reinforcing inequitable decision-making processes, thereby reducing fairness and perpetuating systemic inequalities (Abulibdeh et al., 2025). In addition to these findings, the current body of literature also presents several notable gaps, particularly the limited inclusion of staff and administrator perspectives (Evert, 2024; Reina Marín et al., 2025), long-term implications of AI (Abulidbdeh et al., 2025), and how to navigate institutional reception—both acceptance and mistrust—of AI (Khairullah et al., 2025).

Smart Universities

A smart university is a university that leverages technology to enhance administrative tasks and processes in order to achieve its mission (Pornphol & Tongkeo, 2018). While this concept has existed for many years, AI technologies introduce a new realm of possibilities for institutions. Rather than replace humans, the intention of a smart university is to leverage AI technologies for data-rich, cumbersome, and time-intensive tasks (Pornphol & Tongkeo, 2018; Srinivasan, 2022). Doing so has been demonstrated to reduce cost, improve efficiency, and enhance data-making capabilities of institutions (George & Wooden, 2023; Schiff, 2022). To conceptualize what a smart university might entail in the age of AI, George and Wooden (2023) propose a comprehensive framework (see Figure 1).

Figure 1

Smart University Model by George and Wooden (2023)



Central to George and Wooden's (2023) model of an AI-centered smart university is the prevalence of AI technologies in many functions —from teaching and research to human resource management. Extending beyond previous frameworks of smart universities (e.g., Pornphol & Tongkeo, 2018 & Srinivasan, 2022), George and Wooden's (2023) model emphasizes extensive use of AI technologies for not only mundane tasks (e.g., scheduling meetings and drafting emails) but also complex tasks (e.g., professional development guidance for staff and financial aid distribution). Such a framework helps to conceptualize the promising role of AI technologies in higher education. However, George and Wooden (2023) warn that this is an emergent topic and future research needs to examine how institutions are currently integrating AI into administrative, management, and institutional system-oriented tasks.

Theoretical Framework

To investigate the use of AI technologies for strategic assessment and review purposes, this study employed Sociotechnical Systems Theory (STS) as its theoretical framework. Modern STS, conceptualized by Cherns (1976), posits that organizations are comprised of both social systems (e.g., people, culture, and structure) and technical systems (e.g., tools, processes, and

technologies), and that these components are not isolated subsystems but interdependent elements that must be aligned and integrated to optimize organizational performance (Walker et al., 2008). In the context of AI integration in higher education institutions, STS offers a useful lens to examine not only how AI technologies are implemented but also how they interact and influence decision-making, organizational norms, and institutional goals. This is illustrated in recent scholarship by Tarisayi (2024) and Dell et al. (2021). Tarisayi (2024) argued successful AI adoption required recalibration of policies, norms, and human practices to ensure alignment. Similarly, Dell et al. (2021) demonstrated that AI automation only delivers value when done in collaboration with human processes and safeguards.

Methodology

An autoethnographic methodology was used to provide an in-depth exploration into the use of AI for academic program review purposes. First emerging in the 1970s, this methodology was originally referred to as "self-ethnography" (Adams et al., 2017, p. 1), as the 'self' became both the researcher and the subject. Although originally met with some hesitation, autoethnography has earned its place within academia, especially educational research, as a valid research method to capture the rich, lived experiences of individuals (Ellis et al., 2011; Star, 2010). Given the exploratory nature of this study and the need to capture the experience of integrating AI from an administrative lens, autoethnography presents as a useful strategy to unearth these findings.

Following the example of Glazko et al. (2023), this study applied autoethnography as a means of personal reflection as well as an analytical lens within a broader study design drawing from Yin (2014). Rather than centering exclusively on the researcher's internal experiences, the hybrid methodology was used to systematically examine the process of AI integration in academic program review. This approach allowed for reflective insights to be grounded in the context of real institutional practices and decision-making, offering both personal and organizational perspectives.

Participant/Researcher

The participant/researcher serves as a senior-level administrator overseeing assessment and accreditation processes for the college of education. This role is responsible for serving as a project manager during the academic program review (APR) process, guiding faculty and fellow administrators through the self-study and internal and external reviews as well as leading the development of a long-term data-informed strategic plan. As Holmes (2020) cautions, a researcher's positionality—their lived experiences, worldviews, and biases—can shape the research process, making reflexivity and awareness essential. In this study, it is important to acknowledge the researcher's relationship to AI technologies. The researcher approached AI with openness and eagerness, viewing it as a promising tool to enhance efficiency and insight. At the same time, given the compliance-driven and high-stakes nature of APR, assessment, and

accreditation processes, the researcher exercised caution to ensure the integrity and accuracy of outcomes.

Serving as both the participant and the researcher provided a unique vantage point, fostering critical reflection on the processes undertaken and the outcomes that followed. The dual perspective serves as a valuable lens for informing future project management and strategic planning, while also uncovering opportunities to enhance assessment and planning practices in more meaningful ways. It is important to note that to enhance the trustworthiness of this autoethnographic study and mitigate potential bias or over-identification with the subject matter, a co-author was included in the research and writing process. The co-author works on the same team as the primary researcher and author but was not directly involved with the specific APR. Consistent with autoethnographic methodology, the primary narrative and analysis are rooted entirely in the lived experience of the lead researcher. However, the co-author contributed a critical external perspective, supporting the literature review, questioning assumptions, reviewing interpretations, and helping to ensure analytic rigor throughout the process.

Data Collection Site

This study took place at a private, faith-based university within a graduate school of education. It is also worthwhile to note that the university is an emerging Hispanic-Serving Institution (HSI). This context is relevant because the institution's strategic planning initiatives need to align with this initiative and reflect the diverse student body. At this institution, all academic and non-academic programs participate in a comprehensive APR on a five-year cycle. This process includes a semester-long self-study, followed by a site visit conducted by external reviewers from peer or aspirational institutions, and an internal review by a committee of program representatives and leadership. Programs receive detailed feedback from both external reviewers and the university Academic Review Committee, which highlights strengths, areas for growth, and formal recommendations. These materials collectively inform a long-term action plan—essentially a formal agreement between the program and the university outlining strategies for improvement over the next five years.

For the purpose of this study, the focus was on the department of learning and teaching, which was concurrently reviewing two academic programs, both of which are graduate-level programs serving aspiring and current educators. Two separate faculty teams were involved in developing the long-term plans for each program, and the researcher served as the project manager, supporting both teams throughout this multi-week process. During this time, the researcher utilized generative AI tools to assist in synthesizing the self-study findings, external and internal review feedback, and university-level strategic priorities. This site offered a rich opportunity to examine how AI might support strategic academic planning within a real-time, high-stakes institutional process.

Data Collection

Following guidance from Cooper and Lilyea (2021), and in keeping with the tradition of autoethnographic inquiry, the data collected in this study prioritized the researcher's own reflections, observations, and internal experiences rather than the perspectives or reactions of others involved in the process (though future research could certainly expand to include those voices). Data were drawn from multiple sources. The primary data source consisted of the researcher's memos and reflective writings throughout the APR processes. Additional data included AI-generated outputs, chat logs detailing prompt strategies and iterations, and relevant communications such as emails and internal notes that informed or contextualized the use of AI.

Data Analysis

Once the data were collected, all files were uploaded into Dedoose (Version 9.2.22), a qualitative data analysis software available for free through the institution. This platform supported the organization, coding, and analysis of the data. Thematic analysis was employed to allow themes and patterns to emerge naturally from the data, aligning with the autoethnographic nature of the study, which centers on the lived experience of the researcher (Naeem et al, 2023). Within Dedoose, in vivo coding was used to create a coding scheme grounded in the researcher's lived experiences and reflections. This was important for maintaining the exploratory nature of the study, enabling findings to emerge from the data rather than being shaped an a priori framework. Furthermore, the approach was chosen intentionally to preserve the authenticity of the researcher's voice and maintain fidelity to the autoethnographic tradition (Manning, 2017).

Findings

The findings reflect two overarching lines of inquiry: how AI technologies influenced assessment and APR processes at the departmental level, and what challenges and considerations administrators encountered in using AI technologies to advance the university's strategic planning and smart campus initiatives. Emerging from the rich data were several notable themes that reflect the researcher's lived experiences navigating the integration of AI in academic program review within a department of teaching. These themes provide insight into the complexities, challenges, and opportunities encountered throughout the process. The following section presents these findings in detail, while the subsequent section offers a discussion of their broader implications for higher education institutions and assessment practices.

Balancing Gains and Risks of AI Technologies

Evident across the data collected was the dual nature of AI technologies and how it can both remove barriers while simultaneously creating new ones. In some instances, the use of AI tools showed great promise in accelerating goal development and surfacing themes across large reports, all while bearing in mind the programmatic needs of the educational programs at hand as well as broader institutional influences (e.g., accreditation and becoming an HSI). In practice, AI tools were used to generate draft reports synthesizing a wide range of sources such as prior evaluation reports, the university's strategic plan, the HSI strategic plan, and mission and vision statements. These draft reports were then reviewed and refined by the Academic Review

Committee (ARC) (a committee of department faculty and leadership) before being carried into the APR action plan. Upon reflecting on the usefulness of AI it was noted that, "It has worked very well in synthesizing large reports, identifying themes, commonalities and differences, and generating objectives to support strategic goals." However, in other instances, using AI presented accuracy issues when applied to nuanced, human-centered tasks. This discovery offered an opportunity for pause and reconsideration, acknowledging that, "With this, I think it is clear that there are still hiccups as far as generative AI and the trueness of the facts it produces. However, this can be improved by more specific prompting and coaching with the platform." Rather than relying implicitly on the outputs of AI tools, the researcher still reviewed and refined the draft reports for accuracy before they were included in the larger APR and associated long term plans. While the AI-generated drafts saved time and resources by synthesizing information across multiple sources, human review was still essential to ensure accuracy, relevance, and contextual alignment.

Integrating AI Technologies Supported a Mission-Driven Approach

Central to the very nature of a faith-based institution is being mission-driven. AI applications presented as worthwhile tools to align strategic assessment and review activities with the broader institutional mission and vision. In this study, AI applications were explored as tools to align strategic assessment and review activities with the broader institutional mission and vision. To ensure this alignment, the researcher consistently provided the AI tools with the institution's mission and vision and explicitly asked that recommendations be generated with these guiding principles in mind. Within a faith-based context, where mission is not just a statement but a cornerstone, these AI tools provided new ways to reinforce institutional commitments. As one reflection emphasized: "AI can be a tool to ensure that every proposal, reflection, assessment, and plan is done so under the lens of the vision." Emerging from the data, it became clear that one of the significant ways AI technologies supported this mission-driven approach was by removing remedial or "cumbersome" (e.g., synthesizing large amounts of data from different sources and theme identification) tasks to allow for more meaningful stakeholder engagement. As noted by the researcher, "The manpower and hours spent developing reports takes away from the productive planning that can happen from the data produced." From the researcher's experience, it became clear that AI technologies made time-intensive tasks (such as synthesizing large data sets) more efficient, allowing for more time for collaboration during the APR process.

AI-Enhanced Decision-Making

Throughout the data, AI was regarded as a tool that improved the clarity and quality of decision-making throughout APR for the department. Most significantly, AI tools were noted to be beneficial at identifying institutional priorities and synthesizing multiple forms of feedback. In doing so, it shifted decision-making from reactive to proactive by allowing more time and focus for strategic discussions which was regarded as "incredibly useful to identify common

recommendations by external and internal reviewers of the APR." The potential to offload initial data analysis and theme generation also enabled faculty and administrators to reallocate their time toward more meaningful work. One analytical memo described this realization noting that, "When AI was able to generate great options for the long-term plan based on all findings, it opened my eyes to additional opportunities for using AI at different stages of the program review process." Furthermore, AI enabled the researcher and the faculty teams to shift toward more strategic uses of their time. This was particularly salient for faculty engagement, as time and cognitive energy could be redirected toward more interpretive and value-driven discussions. One memo capturing this sentiment noted that, "Faculty felt that by having the initial analysis complete and a first set of goals established, it allowed for the work to follow to be more meaningful and engaging."

Human-AI Engagement Required

Despite presenting as easy and accessible tools, integrating AI technologies into program assessment processes required sustained, iterative effort. The researcher noted this several times in their reflections, including in one observation that, "Specificity is key. With AI, the more you put in, the more you get out." This was also evident in the chat logs, which revealed numerous back-and-forth exchanges between the AI platforms and the researcher—sometimes as few as three and other times as many as ten—before an output was deemed acceptable. At times, the revision process involved simple prompting strategies, such as asking the tool to "list the recommendations in an outlined bullet-point format." Other times, the adjustments were more nuanced, such as instructing it to "integrate the university's R2 classification and its implications for strategic goals." One reflection captured this learning curve, stating, "Next time, I will be more strategic about the prompts I use and reflect on previous prompts and the follow-up prompts I needed."

The honing process involved more than refining outputs; it required developing targeted, strategic prompts that effectively captured institutional goals and priorities. As noted by the researcher, "When I am using AI to help form strategic goals… I make sure to prompt it to consider certain things, such as the fact that we are developing additional doctoral programs." These results suggest that outcomes improved with more intentional and strategic human-user input. Developing such prompting strategies not only saved time for the researcher by reducing the number of revisions and increasing alignment with institutional objectives, but also improved the relevancy and utility of the results by ensuring they were aligned with institutional initiatives as well as departmental objectives.

Organizational Culture as a Facilitator of AI Adoption

The final notable finding of the study was how the culture of the institution created a welcoming context for integrating AI technologies into the APR. Even before integrating AI tools in APR process, the researcher noted that both the school and department shared a "welcoming" disposition towards AI applications. As further described in one of the analytical

memos, “Our administration supports its use for increasing productivity and efficiency.” This provided a supportive institutional culture that served as a catalyst for exploring AI applications in these assessment practices. The researcher further explained, “Knowing that this outlook was shared among stakeholders made me feel comfortable introducing AI to the process.” Thus, further illustrating how shared attitudes towards AI technologies created a sense of psychological safety that empowered the researcher to experiment and take initiative in integrating AI into the assessment process. Overall, these findings highlight both efficiencies as well as challenges in using AI for assessment-related processes.

Discussion

This study illuminated the lived experience of a senior-level administrator leveraging AI technologies for institutional systems-oriented functions. The insights shed light on both the opportunities and limitations of using emerging technologies for critical academic functions such as program assessment and APR. To better situate these findings, the following discussion is framed by the study’s guiding research questions. The first considers how the use of AI technologies influenced strategic assessment and APR processes. The second will then address the challenges and considerations that arise from an administrative perspective when striving to become a smart university by integrating AI tools and applications.

RQ1 Influence of AI Technologies on Strategic Functions

One of the most significant revelations from this study is the potential for AI technologies to improve strategic planning and assessment activities within universities. Such potential is especially powerful within the context of educator programs, which must navigate the complex needs and demands of their students, faculty, institution, state and national compliance bodies, and the broader U.S. educational system. As the researcher acknowledged, “Educator support/preparation programs are so intertwined with community needs that ensuring that long-term planning is done in consideration of current trends and local/regional needs is key.”

The findings from this study also revealed the potential of AI technologies to shift the focus of assessment from simply a compliance activity to a more strategic process for continuous improvement. As the researcher noted, using AI-enabled tools was “incredibly useful” at synthesizing large amounts of data, identifying themes and patterns, and limiting “cumbersome” tasks. These efficiencies created more time and space for the faculty to connect the assessment results with broader institutional priorities, including the university’s R2 research classification, HSI designation, and long-term strategic plan. Consistent with Dwivedi et al., (2021) and Igbokwe (2023), the finding demonstrate how AI applications have the potential to bolster institutional responsiveness and strategic alignment. Rather than merely producing reports, faculty and administrators were able to engage in forward-looking dialogue about program direction, alignment with institutional goals, and opportunities for meaningful program development.

These insights also align with George and Wooden (2023) as well as Schiff (2022) who highlight the potential role of AI applications within smart universities. While much of the discourse around the use of AI technologies is the potential timesaving benefits (George & Wooden, 2023), the findings in this study affirm that benefit, particularly in reducing cumbersome tasks and accelerating data synthesis. Yet, as the researcher described, these efficiencies created space for more thoughtful and forward-thinking assessment conversations. From the reports input, AI was able to surface themes, examine alignment with strategic goals, and generate reflections and considerations for the program's evolution in the context of the institution's broader mission and values. In this way, generative AI tools supported the team's efforts to contextualize data and decide future directions rather than substituting it. This supports the STS perspective discussed by Cherns (1976) and Walker et al. (2008) where it is central that technological tools enhance human expertise, not replace it.

RQ2 Administrative Challenges and Considerations of AI Technologies

Many previous studies around AI integration in higher education have focused on its applications, with less attention to how its adoption and use are shaped. This study addressed this gap noted by Khairullah et al. (2025), Evert (2024), and Reina Marín et al. (2025) by focusing on the perspective of an administrator as well as bringing to light broader institutional forces at play. The findings reveal the importance of institutional readiness and a culture of openness when seeking to integrate AI technologies into these assessment-related practices. Most importantly, leadership and stakeholders should be seeking to leverage AI applications for purposes of value, not just for the sake of being tech-driven and using the latest and greatest technology. Doing so requires effort and discernment from all users involved, but especially leadership (as demonstrated in this study with the iterative process of using the AI tools by the researcher). This also aligns with Khairullah et al. (2025) on the need for responsible leadership within the realm of AI adoption and integration within higher education institutions.

Furthermore, the study's findings suggest that institutional culture can either enable or inhibit the successful integration of AI technologies into institutional-level tasks such as program assessment and academic planning. At this institution, an embrace of the possibilities of AI in both instruction, organization, and administration was evident in the early development of an AI task force, the implementation of an Innovations Committee by the school of education with a AI inquiry embedded in its mission, and the roll out of targeted AI learning labs where colleagues in specific areas could come together to discuss both possibilities for their role and to learn about how to use AI in a responsible and ethical manner. The institution recognized the data vulnerability that AI use can create and worked swiftly to ensure there was a safe and internal platform for employees to utilize to minimize said risk. Taken together these initiatives created a safe and supportive environment for the researcher to employ AI in assessment and strategic planning processes, without which, the researcher felt they would not have been able to use the tool to the extent they did.

As noted by the researcher, outputs were not always helpful or accurate, as the AI tools occasionally provided "outdated" information or made recommendations that were not appropriate. These limitations mirror concerns raised by Shapiro and Lam (2024) as well as Church and Hestness (2019), who caution that current generative AI systems often lack context sensitivity, recency, and evaluative nuance, especially in complex educational settings. These findings highlight not only what occurred in the APR process, but also how broader contextual factors—such as organizational leadership sentiment and prevailing attitudes toward AI—shaped the APR team's engagement with these tools. These results shed light on some of the benefits of AI applications, suggesting that integrating it into processes enables deeper collaboration and frees up time for more strategic, creative, or relational aspects of administrators' work. This involved refining prompts, adjusting task parameters, and reviewing multiple outputs to ensure that the reports were comprehensive and met the expectations of the APR process. Although often marketed as instantaneous, this process required multiple rounds of revision and reflection. In this case, generating the reports took several hours, with additional time needed for review and refinement. However, some of these tasks might have otherwise taken days or even weeks to complete manually. Throughout this AI-augmented process, the researcher encountered a tension similar to that noted by Butson and Spronken-Smith (2024): the desire to leverage the speed and efficiency of AI technologies while still ensuring accuracy, effectiveness, and ethical use.

Furthermore, the findings underscore that successful integration of AI-enabled technologies hinges not only on the mere use of these tools, but also on individual-level dispositions such as openness to iteration, adaptability, and reflective practice. This study is consistent with prior research (such as Tarisayi, 2024 and Dell et al., 2021), further demonstrating that AI applications can be powerful analytical tools when users cultivate curiosity and discernment. As Bansal (2024) emphasized, developing the skill of effective prompting represents a new form of cognitive labor that requires sustained experimentation and refinement. These insights highlight a key implication for practice, namely the need for AI literacy initiatives that extend beyond technical mechanics to foster cognitive flexibility and adaptive problem-solving. The findings also caution against full dependency on AI technologies, emphasizing that the value of these tools is contingent upon thoughtful and critical human engagement.

These findings contribute to the literature in several ways. First, they illuminate an administrative perspective that is notably scarce within the discourse around the use of AI technologies within higher education research (Evert, 2024). Student and faculty perspectives and experiences with AI technologies are critical to understand, but they fail to capture the entire picture. As noted by the researcher, their role in these assessment processes is as a liaison between the program and the broader institutional administration. This requires not only in-depth program knowledge but also knowledge of broader school, university, accreditation, and state/federal agency directions. This is not necessarily unique to the researcher's role, as administrators typically must consider larger forces at play beyond just the direct needs of the students and the faculty (although those are imperative to consider as well). In this case, with

discernment, the administrator was able to utilize it as an effective and efficient tool. Furthermore, while the concern of over-reliance on AI technologies is evident in many studies (e.g., Abulibdeh et al., 2025) these findings suggest that a human element is still critical, but the involvement and the way humans interact with AI will be evolving and require new skillsets. Finally, these findings underscore the importance of higher education institutions to invest in professional development and internal capacity-building initiatives to support responsible and effective AI integration, as suggested by Khairullah et al. (2025).

Limitations

Although this study reveals new insights into the use of AI technologies for strategic assessment-related purposes within an educator preparation and teaching program, it is important to note that the study has several limitations. First and foremost, there are the inherent limitations of an autoethnographic study. Given that the study was done at a single site and only drawing upon one individual's perspectives, the findings cannot be generalized as the results of a quantitative study could (Ellis et al., 2011). However, this is precisely the rationale behind autoethnography; rather than aiming for broad generalizability, it seeks to offer rich, contextualized insights that allow readers to determine the relevance and applicability to their own settings (Adams et al., 2017; Ellis et al., 2011). In this case, this study provides an in-depth account of a senior-level administrator utilizing AI, bringing to the forefront the unique challenges and opportunities it presents. Second, it is pertinent to acknowledge that this study was an early-stage study that was exploratory in nature. While generalizable conclusions cannot be made, this study sheds light on the value of performing additional research in this area (Hallingberg et al., 2018). A third limitation of this study was being prone to subjectivity and bias given its qualitative, autoethnographic methodology (Ellis et al., 2011). To help mitigate this and avoid navel-gazing, a co-author was engaged throughout the research and writing process to encourage reflection, provide additional critique, and add a layer of critical analysis (Soyini Madison, 2006). The inclusion of a co-author also served as investigator triangulation, helping to illuminate alternative perspectives and enhance the trustworthiness of the findings (Denzin, 1978).

Conclusion and Recommendations

As society continues its evolution into the Age of Intelligence, the role of AI technologies in daily life is rapidly expanding and reaching a critical inflection point. Individuals and institutions alike are increasingly tasked with discerning if—and to what extent—AI-enabled tools should be integrated into their functions and processes. This is evident in the higher education industry, where the current landscape reflects both enthusiasm for and trepidation toward AI technologies. Within this context, this study captured an in-depth experience of a senior administrator, offering a nuanced perspective on the opportunities and considerations of AI integration. These insights provide a valuable contribution to ongoing conversations, providing insights to inform both future research and practice.

From an academic perspective, future research should build upon this study to capture the range of institutional voices by expanding to include additional staff perspectives such as frontline workers, middle managers, and senior leadership. Additionally, as higher education institutions strive to become smart universities, studies should employ longitudinal research methodologies to capture the long-term impact of AI-centered processes as well as evaluate the outcomes of goals that are informed by AI over time. Furthermore, future research can expand beyond this study by exploring AI adoption across various institutional types and contexts (e.g., public institutions and online universities). This study offered an in-depth snapshot of one department of teaching; expanding research to include diverse institutional types and academic units could deepen our understanding of AI integration across higher education.

Beyond implications for research, this study also offers implications for practice as well. For one, it makes the case for embracing the ideology of a smart university and integrating AI not just at the student-level and instructor-level of institutions, but at the institutional level as well. At this level, AI can be a worthwhile tool for supporting assessment and strategic initiatives while still aligning with the organization's mission and vision. Additionally, this study made it evident that proper training and support will need to be in place to train stakeholders on the appropriate use of AI to yield maximum results. Finally, the results of this study suggest that the use of AI should be reflective and human-led in nature. As Sundar Pichai, CEO of Google, most astutely said, "The future of AI is not about replacing humans, it's about augmenting human capabilities" (Harroch & Harroch, 2025, para. 4). Such findings give hope to the potential for AI for improving the human experience not only in higher education, but beyond.

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