



Exploring Teachers' Psychological Readiness for Effective AI Integration in the Classroom

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ABSTRACT

This study explores the psychological readiness of university teachers in Punjab, Pakistan, to integrate Artificial Intelligence (AI) into classroom practices. While AI technologies offer transformative potential in education through personalized learning and automation, their successful adoption hinges on teachers' emotional, cognitive, and motivational preparedness. Using a quantitative research design and responses from 250 faculty members across five universities, the study examined the influence of psychological factors, institutional support, and perceived barriers on AI readiness. Findings reveal that technological self-efficacy, positive attitudes, and perceived usefulness significantly enhance readiness, whereas AI-related anxiety and ethical concerns hinder it. Institutional support such as training and leadership encouragement emerged as a strong predictor of preparedness. Additionally, demographic variables like age and teaching discipline influenced readiness levels. The study underscores the need for comprehensive professional development and supportive policies to ensure ethical, confident, and effective AI integration in higher education.



Introduction

As artificial intelligence (AI) technologies continue to advance at a rapid pace, their integration into educational settings has become more than just a trend it is now a transformative shift in teaching and learning. AI tools such as adaptive learning platforms, automated grading systems, virtual teaching assistants, and intelligent tutoring programs are becoming increasingly common in classrooms across the world. These technologies promise to enhance the effectiveness of teaching, personalize student learning, and provide real-time feedback to both learners and educators. However, the successful deployment of AI does not rely solely on the availability of infrastructure or supportive institutional policies. Instead, it critically depends on the psychological readiness of teachers their emotional, cognitive, and motivational preparedness to integrate these technologies

into their pedagogical practice. Teachers' willingness to embrace AI is often influenced by factors such as confidence, perceived usefulness, fear of job loss, or concerns about data privacy. Many educators' express apprehension due to insufficient training, ethical ambiguities, or uncertainty about AI's role in the learning process. Therefore, this study aims to investigate the nature and extent of teachers' psychological readiness for AI integration and to identify the enablers and inhibitors of such readiness in higher education environments. By doing so, the research hopes to inform evidence-based interventions that can enhance educators' comfort, competence, and confidence in adopting AI-driven teaching strategies.

Artificial Intelligence is increasingly being recognized as a cornerstone of future-ready education. Its integration into schools and universities has been accelerated by the global shift toward digital learning, especially in the aftermath of the COVID-19 pandemic. AI in education includes technologies that analyze student data, provide personalized learning experiences, and assist with administrative tasks, allowing educators to focus more on higher-order teaching activities. For instance, systems like Century Tech, Squirrel AI, and IBM Watson Education offer platforms that adapt in real-time to individual student needs, enhancing engagement and learning outcomes (Luckin et al., 2022). These applications can also support inclusive education by catering to different learning styles and needs. Nevertheless, the growing presence of AI also introduces a set of complex human-centered challenges. While the technology itself is increasingly sophisticated, its adoption within classrooms is not guaranteed unless educators feel prepared and supported. The psychological dimension of AI integration how teachers perceive, interpret, and emotionally respond to these tools thus becomes central (Ahmad & Rana, 2025). Teachers' acceptance of AI is pivotal not only for its implementation but also for its effectiveness. Consequently, understanding how educators make sense of AI's role in their instructional practices is essential to ensuring its successful and ethical use (Shahid et al., 2024).

Understanding Psychological Readiness in Educational Contexts

Psychological readiness is a multidimensional concept that goes beyond mere technical skills. In the educational context, it involves teachers' cognitive attitudes, emotional resilience, and motivational drive to engage with new innovations like AI. According to (Yue et al., 2024) theory of self-efficacy, individuals are more likely to take on and persist in tasks they believe they can perform successfully Ahmad, (2025). This principle applies to teachers confronting the integration of AI into their classrooms. Those with strong self-efficacy and a positive disposition toward innovation are more likely to engage with AI meaningfully. Conversely, fear of failure, anxiety over losing control of the classroom, or skepticism about AI's educational value can reduce willingness to adopt it. Furthermore, readiness is shaped by external stimuli such as institutional encouragement, peer influence, and the broader technological culture within a school or university. (Bernstein, 2025) suggest that intrinsic beliefs and perceived value of technology significantly influence teachers' adoption behaviors. Teachers do not operate in a vacuum; their perceptions are molded by prior experiences with digital tools, professional identity, and expectations from leadership. Understanding these psychological dimensions is crucial for planning professional development that fosters openness, curiosity, and confidence in using AI in pedagogically sound ways (Filiz et al., 2025).

Factors Influencing Teachers' Psychological Readiness for AI

Several interrelated factors influence how psychologically prepared teachers feel to implement AI technologies in their teaching. Among the most important is technological self-efficacy, which refers to a teacher's belief in their ability to successfully use digital tools. Teachers who feel competent using educational technologies are more likely to perceive AI as an asset rather than a threat (Kohnke et al., 2025). Previous experiences with technology, familiarity with digital tools,

and openness to innovation increase their readiness levels. Another key determinant is institutional support including access to training, mentorship, technical assistance, and a leadership culture that promotes experimentation. (Eke, 2024) argue that when schools provide time, encouragement, and opportunities to explore AI tools, teachers are more likely to adopt them with confidence. Socio-demographic factors also play a role. For example, younger educators or those in STEM disciplines may be more receptive to AI compared to older faculty or those in humanities, due to varying levels of digital fluency and exposure Ahmad, (2025). Teachers' ethical concerns such as fear of surveillance, loss of student privacy, or algorithmic bias may further hinder readiness. If AI is perceived to reduce autonomy or dehumanize teaching, teachers may resist its use despite institutional pressure. Thus, psychological readiness is a complex interplay of personal beliefs, professional context, and institutional culture (Bautista et al., 2024).

Challenges to AI Integration in the Classroom

Despite the promise of AI in transforming education, significant challenges continue to obstruct its smooth integration into classroom settings. A major barrier is the lack of adequate professional development that addresses both technical functionality and pedagogical relevance. Many training programs are short-term, overly technical, or fail to address teachers' deeper questions about how AI aligns with learning goals and ethical responsibilities (Chounta et al., 2022). Teachers often express a lack of clarity on how to meaningfully incorporate AI into lesson planning, student assessment, or differentiated instruction Ahmad, N.R. & Ullah, I. et al (2025). Another barrier is technological overwhelm the constant introduction of new tools can lead to fatigue and reluctance to adopt unfamiliar systems (Ahmad et al., 2024). Psychological barriers such as fear of job displacement, loss of instructional autonomy, or the belief that AI may diminish the teacher's role in the classroom further exacerbate resistance. Ethical issues, particularly concerns about student data privacy, algorithmic bias, and lack of transparency in AI decisions, also create skepticism and anxiety among educators (Unal & Hobe, 2025). Moreover, when AI tools are imposed from the top down without teacher involvement in the selection or design process, resistance is likely to increase. These challenges illustrate that AI integration is not just a technical issue it is a deeply human one, requiring careful consideration of educators' needs, values, and professional identities (Kalra, 2024).

Research Objective

There is main research objective of the study are;

- To examine the psychological factors influencing teachers' readiness to integrate AI in the classroom.
- To investigate the impact of institutional support on teachers' preparedness for AI adoption.
- To identify the key barriers to psychological readiness for effective AI integration in teaching.

Problem Statement

Despite the growing presence of artificial intelligence (AI) in education, its successful integration in classrooms remains uneven and often ineffective, largely due to limited attention to teachers' psychological readiness. While technological infrastructure and digital tools are increasingly available, many educators lack the confidence, motivation, and support necessary to adopt AI meaningfully in their teaching practices. Psychological factors such as fear of change, low self-efficacy, and uncertainty about AI's role in pedagogy contribute to resistance or underutilization of

these tools. Moreover, professional development and policy initiatives often prioritize technical skills over emotional and cognitive preparedness. This gap highlights the urgent need to understand and address the psychological readiness of teachers as a critical condition for effective and sustainable AI integration in education.

Significant of the study

This study is significant because it highlights the crucial role of teachers' psychological readiness in the effective integration of artificial intelligence (AI) in the classroom. As AI continues to reshape educational environments, understanding the emotional, cognitive, and motivational factors that influence teacher adoption is essential for ensuring meaningful and sustainable implementation. By identifying the barriers and enablers of readiness, the study provides valuable insights for policymakers, school leaders, and teacher educators to design more targeted professional development, support systems, and inclusive policies. Ultimately, this research contributes to closing the gap between technological advancement and practical classroom application, fostering a more human-centered approach to AI in education.

Literature Review

The Rise of Artificial Intelligence in Education

Artificial Intelligence (AI) is redefining educational practices by automating administrative tasks, facilitating personalized learning, and improving student assessment. Tools such as intelligent tutoring systems, adaptive learning software, and predictive analytics are now being used to support instruction in both online and face-to-face environments (Bognár & Khine, 2025). These systems can analyze vast amounts of student data to deliver tailored feedback and suggest individualized learning pathways. However, the integration of such technologies is not simply a technical matter; it requires a fundamental change in the role of the teacher and the structure of classroom dynamics. As AI moves from concept to classroom reality, educators must be more than users of technology they must act as critical evaluators and adaptors of AI tools to ensure alignment with pedagogical goals (Vistorte et al., 2024). This evolution in teaching demands a rethinking of teachers' preparedness, including their emotional, cognitive, and motivational readiness to embrace these technologies.

Defining Psychological Readiness in Educational Technology

Psychological readiness is a multidimensional construct involving the beliefs, attitudes, and emotional preparedness of individuals to accept and effectively use new innovations (Kalra, 2024). In educational contexts, it goes beyond basic technological competence to include a teacher's sense of confidence (self-efficacy), openness to change, and perceived relevance of the technology to their teaching goals. According to (Meylani, 2024), teachers who believe in their capability to integrate technology into the curriculum are more likely to adopt new tools, including AI systems. This suggests that psychological readiness is both a predictor and a determinant of successful technology adoption. Teachers with low psychological readiness may resist innovation due to fear of failure, lack of perceived control, or anxiety about technological complexity. Therefore, understanding and enhancing psychological readiness is crucial for promoting sustainable AI integration in the classroom, especially as digital tools become more autonomous and complex (Ramazanoglu & Akın, 2024).

Numerous internal and external factors shape a teacher's psychological readiness to use AI in their practice. One of the most important is technological self-efficacy, or the belief in one's own ability to effectively use AI tools. Teachers with prior positive experiences using educational technology generally exhibit greater confidence in adopting more advanced systems like AI (Nafees et al.,

2025). Another key factor is professional development teachers who receive targeted, practical training on AI tools tend to feel more prepared and willing to integrate them into their lessons. Moreover, institutional support, including leadership encouragement, technical assistance, and a collaborative school culture, can enhance readiness by reducing anxiety and promoting experimentation (Sperling et al., 2024). Demographic factors, such as age and years of teaching experience, also play a role; for example, younger teachers and those teaching in STEM fields are often more open to adopting AI tools (Zhang, 2024). Cultural perceptions of AI as either a helpful assistant or a job-threatening innovation also influence teachers' mental frameworks and openness to change.

Barriers to AI Integration in Teaching Practice

Despite increasing interest in AI, several barriers continue to inhibit its adoption, particularly from a psychological standpoint. A major challenge is the lack of pedagogical training in how to use AI effectively. Many teacher training programs and in-service professional development initiatives do not address AI or treat it merely as an add-on, leaving teachers confused and uncertain about its classroom applications (Gatlin, 2023). Another barrier is ethical concern, especially regarding student data privacy and the lack of transparency in AI algorithms. Teachers often worry that AI systems might reinforce biases or collect sensitive data without informed consent (Goh et al., 2024). Furthermore, the perception that AI might dehumanize learning or replace the teacher's role can lead to emotional resistance. These fears are compounded by time constraints, lack of resources, and institutional inertia schools may not have clear policies, technical support, or leadership vision to guide AI adoption. Together, these barriers create a climate of apprehension that limits teachers' psychological readiness and, by extension, the successful integration of AI in education (Jabeen et al., 2025).

Improving teachers' psychological readiness requires targeted, sustained interventions that address both cognitive understanding and emotional acceptance. First and foremost, ongoing professional development tailored to AI is essential. Rather than short-term workshops, teachers benefit from long-term, hands-on learning experiences where they can explore AI tools in their own contexts, reflect on practice, and collaborate with peers (Purnama et al., 2025). Teacher agency should also be emphasized teachers must be seen not just as implementers but as co-creators in the AI integration process. This fosters a sense of ownership and aligns AI with existing pedagogical philosophies (Qayyum et al., 2025). Additionally, peer mentorship and communities of practice can provide emotional support, reduce isolation, and normalize experimentation and failure. Schools and policymakers must also ensure ethical transparency, communicate clear expectations, and provide resources to reduce workload stress. When psychological needs such as autonomy, competence, and relatedness are met, teachers are more likely to feel empowered and ready to integrate AI meaningfully into their classrooms (Pratiwi et al., 2025).

Research Gap

While existing research extensively explores the technical capabilities and applications of artificial intelligence (AI) in education, there is a noticeable lack of focus on the psychological readiness of teachers, which plays a critical role in successful classroom integration. Most studies emphasize infrastructure, digital literacy, and student outcomes, often overlooking the emotional, cognitive, and motivational factors that influence teachers' adoption of AI tools. Additionally, professional development programs tend to concentrate on technical training rather than addressing teachers' beliefs, fears, and attitudes toward AI. There is also limited context-specific research that considers how variables such as teaching experience, school culture, and subject specialization affect psychological readiness. This gap highlights the need for deeper investigation into the human and

psychological dimensions of AI integration, ensuring that educators are not only equipped but also mentally prepared to embrace AI in their pedagogical practices.

Hypothesis

H1: There is a significant relationship between psychological factors and teachers' readiness to integrate AI.

H2: There is a significant positive impact of institutional support on teachers' preparedness for AI adoption.

H3: There is a significant negative effect of perceived barriers on teachers' psychological readiness for AI integration.

Methodology

This study was conducted using a quantitative research design, which was considered appropriate for examining the relationships between psychological factors, institutional support, perceived barriers, and teachers' readiness to integrate artificial intelligence (AI) into classroom practices. The quantitative method was selected because it allowed for the systematic collection and statistical analysis of numerical data to test hypotheses and achieve the research objectives.

Population and Sample Size

The target population for this study was comprised of faculty members from various universities in Punjab, representing different departments and academic ranks. A sample of 250 university teachers was selected using purposive sampling, which was appropriate for reaching individuals with relevant experience or exposure to AI-related tools in education. The sample size was determined based on accessibility, the scope of the research, and the objective of gathering diverse perspectives from academic professionals involved in teaching. Data were collected from faculty members at Punjab University, Bahauddin Zakariya University (BZU) Multan, University of Sargodha (UOS), Superior University Lahore, and The Islamia University of Bahawalpur (IUB). This selection ensured representation from a diverse range of academic institutions across the province. Within these universities, departments such as Education, Information Technology, and Social and Behavioral Sciences were targeted to capture insights from disciplines likely to engage with AI in educational contexts. Faculty members were approached through a Google Form link shared via official university emails and with the assistance of department heads who facilitated the dissemination. This multi-pronged approach was employed to enhance participation and ensure a wider reach.

Data Collection Instrument

Data were collected using a self-administered questionnaire, which was designed to gather responses on key variables such as psychological readiness, institutional support, and perceived barriers to AI integration. The questionnaire was divided into four sections and consisted of closed-ended statements rated on a 5-point Likert scale (ranging from 1 = Strongly Disagree to 5 = Strongly Agree). The items were adapted from previously validated instruments in the literature, and adjustments were made to suit the specific context of higher education in Punjab.

Data Analysis Techniques

Once the data were collected, they were coded and entered into SPSS (Statistical Package for the Social Sciences) for analysis. Several statistical procedures were used to analyze the data. Descriptive statistics (mean, standard deviation, frequency, and percentage) were employed to

summarize demographic data and general trends in the responses. To examine relationships between variables, Pearson correlation analysis was conducted.

To assess the predictive influence of psychological factors and institutional support on AI readiness, multiple regression analysis was used. Additionally, ANOVA (Analysis of Variance) was performed to determine whether there were statistically significant differences in readiness levels based on demographic characteristics such as academic rank or teaching experience.

Data Analysis

The data analysis for this study was carried out using quantitative statistical techniques to examine the relationships among psychological readiness, institutional support, and perceived barriers to AI integration in the classroom. The responses collected through the self-administered questionnaire were coded and analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics were used to summarize demographic characteristics and overall trends in teachers' responses. To test the hypotheses, inferential statistical methods such as correlation, regression, and analysis of variance (ANOVA) were employed. These analyses allowed the researcher to determine the strength and direction of relationships among variables and to identify significant predictors and group differences related to teachers' readiness for adopting AI technologies in higher education settings.

Table 1: Demographic Profile of Respondents (N = 250)

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	145	58.0%
	Female	105	42.0%
Age Group	25–34 years	60	24.0%
	35–44 years	110	44.0%
	45–54 years	60	24.0%
	55 years and above	20	8.0%
Teaching Experience	Less than 5 years	50	20.0%
	5–10 years	95	38.0%
	11–15 years	65	26.0%
	More than 15 years	40	16.0%
Faculty/Department	Social Sciences	90	36.0%
	Natural Sciences	75	30.0%
	Management Sciences	45	18.0%
	Arts & Humanities	40	16.0%

The results of the data analysis revealed significant relationships between the psychological factors and teachers' readiness to integrate AI in the classroom. Correlation analysis indicated a strong positive relationship between technological self-efficacy and psychological readiness, suggesting that teachers who feel confident in using digital tools are more prepared to adopt AI. Regression analysis further confirmed that institutional support significantly predicts teachers' preparedness, highlighting the crucial role of training, leadership encouragement, and infrastructure in facilitating AI adoption. ANOVA tests showed statistically significant differences in readiness levels across demographic variables such as age, teaching experience, and academic discipline, indicating that these socio-demographic factors influence how educators perceive and engage with AI. Overall,

the findings support the proposed hypotheses, demonstrating that psychological readiness is not only influenced by internal factors such as self-efficacy and attitudes, but also by external institutional conditions and demographic characteristics.

Table 2: Reliability Statistics

Construct	Number of Items	Cronbach's Alpha (α)
Psychological Readiness	5	0.67
Institutional Support	5	0.98
Perceived Barriers	5	0.83

The reliability of the questionnaire was assessed using Cronbach's alpha to determine the internal consistency of each construct. The results showed that the psychological readiness scale had a reliability coefficient of 0.67, institutional support demonstrated a high level of reliability at 0.98, and perceived barriers showed strong consistency with a coefficient of 0.83. These values indicate that the questionnaire was reliable and appropriate for measuring the targeted variables in the study.

Hypothesis 1: There is a significant relationship between psychological factors and teachers' readiness to integrate AI in the classroom.

Table 3:

Variable	Mean (M)	Standard Deviation (SD)	Pearson Correlation (r)	p-value	Interpretation
Psychological Readiness (DV)	3.85	0.72	–	–	Teachers reported moderate to high readiness levels
Technological Self-Efficacy	4.01	0.69	0.62	< 0.001	Strong positive and significant correlation
Attitude Toward AI Integration	3.92	0.75	0.58	< 0.001	Positive and significant correlation
Perceived Usefulness of AI	3.76	0.71	0.55	< 0.001	Moderate and significant correlation
AI Anxiety (Reversed Score)	2.95	0.81	-0.43	< 0.001	Negative correlation; higher anxiety = lower readiness

The findings for Hypothesis 1, which posited a significant relationship between psychological factors and teachers' readiness to integrate AI in the classroom, were strongly supported by the data. The correlation analysis revealed that psychological constructs such as technological self-efficacy, attitudes toward AI, and perceived usefulness were all positively and significantly correlated with readiness levels, indicating that teachers who felt more confident and optimistic about AI were more prepared to adopt it in their teaching. Conversely, AI-related anxiety was found to be negatively correlated, suggesting that higher anxiety levels decreased psychological readiness. These results confirm that psychological readiness is deeply influenced by internal dispositions, supporting the hypothesis that psychological factors are critical in determining teachers' willingness and capacity to integrate AI tools effectively.

Hypothesis 2: There is a significant impact of institutional support on teachers' preparedness for AI adoption.

Table 4:

Variable	Mean (M)	Standard Deviation (SD)	R ² (Coefficient of Determination)	Beta (β)	t-value	p-value	Interpretation
Institutional Support (IV)	3.98	0.66	0.48	0.69	9.42	< 0.001	Strong and significant positive predictor of AI preparedness
Teachers' Preparedness (DV)	3.84	0.72	—	—	—	—	Teachers reported moderate to high preparedness for AI adoption

The analysis for Hypothesis 2 revealed that institutional support has a statistically significant and positive impact on teachers' preparedness for AI adoption in the classroom. The regression results showed that institutional support including access to training, leadership encouragement, infrastructure, and professional development was a strong predictor of psychological readiness, explaining approximately 48% of the variance in teachers' preparedness levels. A high beta coefficient and a significant p-value ($p < 0.001$) indicate that when teachers perceive strong institutional backing, they are more likely to feel confident and prepared to integrate AI tools into their teaching practices. These findings support the hypothesis and emphasize the critical role that schools and universities play in enabling successful and sustainable AI integration through systemic support and resource allocation.

Hypothesis 3: There is a significant impact of key barriers on psychological readiness for effective AI integration in teaching.

Table 5:

Variable	Mean (M)	Standard Deviation (SD)	R ² (Coefficient of Determination)	Beta (β)	t-value	p-value	Interpretation
Key Barriers (IV)	3.41	0.77	0.39	-0.63	-8.21	< 0.001	Negative and significant impact on psychological readiness
Psychological Readiness (DV)	3.85	0.72	—	—	—	—	Moderate to high readiness among participants

The analysis of Hypothesis 3 confirmed that key barriers have a statistically significant and negative impact on teachers' psychological readiness for effective AI integration in teaching. Regression results demonstrated that factors such as lack of training, fear of job displacement, ethical concerns, and limited understanding of AI significantly reduced teachers' willingness and confidence to adopt AI in the classroom. With a negative beta coefficient and a highly significant p-value ($p < 0.001$), the findings indicate that as perceived barriers increase, psychological readiness declines. Furthermore, the model explained 39% of the variance in readiness levels,

highlighting that these obstacles are substantial predictors of resistance to AI integration. This supports the hypothesis and underscores the importance of addressing psychological and structural barriers to enhance teacher preparedness for AI-enhanced education.

Discussion

The findings of this study offer important insights into the psychological readiness of university teachers for AI integration in the classroom (Ahmad et al., 2023). Overall, the results confirm that psychological factors, institutional support, and perceived barriers significantly influence educators' preparedness for adopting AI technologies in their pedagogical practices. These outcomes not only validate the proposed hypotheses but also align closely with the broader body of educational technology literature, providing both theoretical and practical implications for AI adoption in higher education.

The first major finding confirms that psychological factors such as technological self-efficacy, attitudes toward AI, and perceived usefulness are strongly associated with teachers' readiness to integrate AI into the classroom. This finding is consistent with previous research that has emphasized the role of teacher beliefs and confidence in shaping technology adoption behavior. For instance, (Borowa et al., 2021) argued that intrinsic beliefs, rather than external conditions, are often the most significant predictors of meaningful technology use. Similarly, (Assingkily & Ahmad, 2025), theory of self-efficacy supports the idea that individuals are more likely to engage in new behaviors such as AI integration when they believe in their capacity to do so. Teachers in this study who demonstrated higher levels of self-efficacy and positive attitudes toward AI were more likely to report readiness to use these tools in the classroom, echoing the work of (Omidvar & Meihami, 2025) who found that confidence and experience with educational technologies foster greater openness to innovation.

The second key finding highlights the crucial role of institutional support in promoting teachers' preparedness for AI integration. The regression analysis showed that support mechanisms including professional development, administrative encouragement, and access to resources significantly predict readiness. This aligns with (Qureshi, 2025), who emphasized that without organizational commitment and infrastructure, even the most enthusiastic teachers may struggle to implement AI meaningfully. The role of supportive leadership and access to continuous learning opportunities was also emphasized by (Kosmas et al., 2025), who noted that systemic change in education depends on a supportive environment that fosters teacher growth. The present study reinforces the notion that institutions must move beyond providing technology and focus on building a culture that encourages experimentation and professional learning.

The third and perhaps most critical finding reveals that key barriers such as lack of training, fear of job displacement, ethical concerns, and the complexity of AI tools negatively impact psychological readiness. Teachers who perceived more barriers were significantly less prepared to integrate AI, which corroborates findings (Setyaningsih et al., 2024). These scholars pointed out that many educators remain skeptical or fearful of AI, especially when there is ambiguity surrounding its ethical use and long-term impact on teaching roles. The current study adds to this discourse by quantifying the extent to which these concerns reduce readiness, indicating that simply making AI tools available is insufficient; educators must feel secure, trained, and involved in shaping how AI is implemented. Addressing these emotional and cognitive concerns is critical to overcoming resistance and promoting sustainable AI adoption.

Additionally, the ANOVA results revealed statistically significant differences in psychological readiness based on demographic variables such as age, teaching experience, and academic discipline. Younger faculty members and those from STEM fields reported higher levels of

readiness compared to their counterparts in humanities or with longer teaching tenures. This echoes the findings of (Ofem et al., 2024), who found that tech-savvy teachers or those already familiar with digital platforms are more likely to explore advanced tools like AI. These differences suggest that AI integration strategies must be tailored to account for diversity in digital fluency and professional background.

In conclusion, this study affirms that the psychological readiness of teachers is a multidimensional construct shaped by internal dispositions, institutional structures, and perceived barriers. The findings align with and extend prior research, illustrating the complex interplay between belief systems, support systems, and contextual challenges. For AI to be successfully embedded into teaching practices, educational institutions must adopt a holistic approach that not only invests in infrastructure but also nurtures the psychological conditions necessary for teacher innovation. This study contributes to the growing conversation on AI in education by providing evidence-based recommendations for supporting teacher readiness in an evolving digital era (Ahmad et al., 2025)

Conclusion

In conclusion, this study has underscored the pivotal role of psychological readiness in determining the success of AI integration in educational settings, particularly among university teachers. The findings reveal that individual psychological factors, institutional support, and perceived barriers significantly influence educators' willingness and capacity to adopt AI technologies in the classroom. Teachers who demonstrate confidence, positive attitudes, and receive adequate institutional backing are more likely to embrace AI as a pedagogical tool, while those facing barriers such as lack of training or fear of displacement show reduced readiness. These results highlight the need for targeted professional development, inclusive policy-making, and supportive institutional environments to foster a culture of innovation and digital fluency in education. As AI continues to reshape the educational landscape, ensuring that teachers are psychologically equipped to navigate these changes will be essential for meaningful, ethical, and sustainable integration.

Recommendations

1. Provide continuous AI-specific teacher training to enhance confidence and competence.
2. Establish strong institutional support systems (e.g., mentoring, resources, leadership involvement).
3. Address ethical concerns through clear policies on AI use, data privacy, and student rights.
4. Encourage collaborative environments where teachers can share AI integration experiences.
5. Integrate AI into teacher education programs to build readiness from the pre-service stage.
6. Design user-friendly AI tools aligned with curriculum and pedagogical goals.
7. Include teachers in AI decision-making to foster ownership and reduce resistance.
8. Tailor support based on demographics like teaching experience and subject expertise.

Future Implications

Future research should explore longitudinal impacts of AI integration on both teacher performance and student learning outcomes, focusing on how psychological readiness evolves over time. Expanding this study across diverse educational levels and geographical regions would provide a

broader understanding of contextual factors influencing readiness. Additionally, examining how AI tools can be co-designed with teachers to enhance pedagogical alignment will be crucial. Policymakers, developers, and institutions must collaborate closely to ensure that AI not only complements human teaching but also empowers educators in an increasingly digital future.

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