

Relationship between Awareness, Anxiety, and Readiness to Integrate AI in Education among Primary School Teachers in Selangor

Ermelinda A/P Wilson Felix, Nor Aniza Ahmad

Faculty of Educational Studies, Universiti Putra Malaysia, Serdang, Malaysia

Corresponding Author Email: nor_aniza@upm.edu.my

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Abstract

The rapid advancement of Artificial Intelligence (AI) has transformed various sectors, including education. With the growing incorporation of AI technologies into educational practices, the preparedness of teachers to adopt and use AI effectively has emerged as a vital element for successful implementation. Therefore, understanding the relationship between teachers' awareness, anxiety, and readiness towards AI integration is essential. This study aimed to examine the relationship between AI Awareness, Anxiety, and Readiness to integrate AI in education among primary school teachers in Selangor. This study used a quantitative correlational research design. A structured questionnaire measuring Awareness, Anxiety, and Readiness to integrate AI in education was used to collect data from 401 primary school teachers in Selangor. The data were analysed using descriptive statistics, Pearson correlation analysis, and multiple regression analysis. The results showed that teachers exhibited a high level of Awareness ($M = 3.88$, $SD = 0.64$) and a readiness to incorporate AI into education ($M = 3.69$, $SD = 0.65$), whereas their Anxiety was at a moderate level ($M = 2.80$, $SD = 0.87$). The results of the Pearson correlation analysis showed a significant positive correlation between Awareness and Teacher Readiness ($r = .686$, $p < .001$), as well as a significant negative correlation between Anxiety and Teacher readiness ($r = -.304$, $p < .001$). Further analysis through multiple regression showed that Awareness and Anxiety were significant predictors of Teacher Readiness to incorporate AI in education, explaining 48.5% of the variance in readiness ($R^2 = .485$, $F(2,398) = 187.226$, $p < .001$). Teacher readiness was found to be most strongly predicted by Awareness. The study highlights the importance of enhancing teachers' awareness and understanding of AI while addressing concerns and anxieties associated with AI adoption. The findings provide valuable insights for policymakers, educational administrators, and professional development providers in designing targeted interventions and training programmes to support effective AI integration in primary schools.

Keywords: Artificial Intelligence, Ai Awareness, Ai Anxiety, Teacher Readiness, Ai Integration, Primary School Teachers, Selangor

Introduction

One of the most revolutionary technologies affecting education in the twenty-first century is artificial intelligence (AI) (Wang et al., 2024). Innovative tools that can improve teaching,

learning, evaluation, and educational administration have been made possible by the quick development of AI. In order to personalise learning experiences, increase instructional efficiency, and support evidence-based educational decision-making, technologies like intelligent tutoring systems, adaptive learning platforms, automated assessment, predictive learning analytics, and generative AI applications are being incorporated into educational settings more and more. AI is now seen as a crucial part of future-ready education rather than just an emerging technology as educational systems continue to embrace digital transformation (Yildiz, 2025).

In Malaysia, the government's commitment to digital transformation has accelerated the integration of emerging technologies into education through initiatives such as the Malaysia Education Blueprint (2013–2025), MyDIGITAL, and the National Artificial Intelligence Roadmap (Jabar & Sani, 2026). These programs focus on enhancing teachers' digital competencies and getting schools ready to use AI technologies to raise student learning outcomes and educational quality. The success of AI implementation, however, ultimately rests on teachers' readiness and willingness to incorporate new technologies into their regular teaching methods, even while infrastructure and policy support continue to advance.

The successful implementation of educational innovations is significantly influenced by teacher readiness (Ngongpah & Omolara, 2025). It includes educators' expertise, confidence, attitudes, and willingness to use new technologies in the classroom. In the context of integrating AI, preparation goes beyond technical proficiency to encompass educators' comprehension of AI principles, critical evaluation of AI applications, and responsible use of these technologies to improve learning. While inadequate preparation may lead to opposition to technological change and limited classroom deployment, well-prepared teachers are more likely to embrace AI as a helpful instructional resource.

Among the factors influencing teachers' readiness, AI awareness has emerged as an important cognitive determinant (Ayanwale et al., 2022). Teachers' understanding of AI ideas, educational applications, ethical issues, and the possible advantages and drawbacks of AI technologies is referred to as AI awareness. More knowledgeable educators are typically more comfortable choosing the right AI technologies and incorporating them into their teaching methods. Conversely, AI anxiety reflects teachers' feelings of uncertainty, fear, or apprehension regarding AI technologies. This kind of anxiety can be brought on by worries about data privacy, ethical dilemmas, technological complexity, or the possibility that AI will eventually take over some aspects of teachers' jobs (Chen et al., 2025). Despite acknowledging AI's potential educational benefits, these worries may make teachers less confident and inclined to use it.

Despite the growing body of research on artificial intelligence (AI) in education, empirical evidence on the factors influencing teachers' readiness to integrate AI remains limited, particularly within the Malaysian primary school context (Rajandran & Zaini, 2026; Ling & Yunus, 2025). Existing studies have predominantly focused on teachers' AI literacy, technology acceptance, perceived usefulness, and readiness to adopt AI, (Ching & Jamaludin, 2025) while comparatively fewer studies have examined the combined roles of AI awareness and AI anxiety in shaping teachers' readiness to integrate AI. Furthermore, most existing studies have been conducted in higher education or among secondary school teachers, with relatively

limited attention given to primary school teachers. Primary school teachers play a critical role in shaping pupils' early learning experiences and developing foundational digital competencies. As AI technologies become increasingly integrated into teaching and learning, understanding the psychological factors that influence primary school teachers' readiness to integrate AI is essential for informing effective professional development and educational policy (Saravanan & Kamrozzaman, 2025).

Therefore, this study aims to examine the relationship between AI awareness, AI anxiety, and teachers' readiness to integrate AI in education among primary school teachers in Selangor. Specifically, the study seeks to

- i. To examine the level of awareness to integrate AI in education among primary school teachers in Selangor.
- ii. To examine the level of anxiety to integrate AI in education among primary school teachers in Selangor.
- iii. To determine the level of readiness to integrate AI in education among primary school teachers in Selangor.
- iv. To examine the relationship between awareness and readiness to integrate AI among primary school teachers in Selangor.
- v. To examine the relationship between anxiety and readiness to integrate AI among primary school teachers in Selangor.
- vi. To examine the dominant factor that influence readiness to integrate AI among primary school teachers in Selangor.

Literature

Teaching, learning, evaluation, and educational administration are all being transformed by artificial intelligence (AI). AI technologies, including intelligent tutoring systems, adaptive learning platforms, automated grading, learning analytics, and generative AI applications, enable more personalised and efficient learning experiences by adapting instructional content to students' individual needs and providing real-time feedback (Fortuna et al., 2025). AI helps teachers make data-driven pedagogical decisions, track student achievement, and lessen administrative workload in addition to improving teaching techniques. The increasing use of AI in classrooms is indicative of a larger trend in education toward digital transformation. Because AI fosters innovation, enhances learning outcomes, and equips students with the skills needed for the digital age, governments and educational institutions throughout the world are beginning to recognise it as a crucial part of future-ready education (Alhaif et al., 2025). However, teachers' readiness and willingness to successfully integrate AI into their teaching methods are just as important to the successful integration of AI as the technology infrastructure. As a result, understanding the elements that affect teachers' acceptance of AI has emerged as a crucial field of study in education.

According to (Iddrisu & Iddrisu, 2025) teacher readiness is the state in which educators are ready to embrace and employ new technologies by integrating knowledge, skills, confidence, attitudes, and willingness to use these technologies effectively in teaching and learning. Teachers' understanding of AI applications, ethical considerations, pedagogical decision-making, and confidence in utilising AI to improve student learning are all aspects of preparedness that go beyond technical proficiency in the context of AI integration. Instructors that exhibit greater levels of preparedness are typically more inclined to investigate novel

teaching strategies and include AI into their lesson plans. Previous research has repeatedly shown that a variety of factors, such as technological proficiency, institutional support, professional development, perceived utility, and attitudes toward technology, affect teachers' preparedness (Ofem et al., 2025; Mbona et al., 2026). Despite the fact that many educators are aware of AI's instructional potential, classroom adoption is still hampered by a lack of training, a lack of understanding of AI, and ambiguity about its ethical and practical application. These results imply that improving teachers' preparedness necessitates both ongoing professional development that tackles the pedagogical use of AI and technological capacity building.

AI awareness has received increasing attention in educational research because it influences teachers' understanding, acceptance, and effective use of AI technologies in teaching and learning. According to earlier research, educators who are more aware of AI are more confident when choosing the right AI tools, assessing content created by AI, and incorporating AI into their teaching methods (Bulut, 2026). Raising awareness also makes it possible for educators to identify the advantages and disadvantages of AI, facilitating more ethical and well-informed decision-making in learning environments. Additionally, recent research indicates that teachers' attitudes, behavioural intentions, and preparedness to use AI technologies are all positively impacted by AI knowledge (Prachagool et al., 2026). Instructors who take part in AI-related professional development programs typically report feeling more confident and eager to try out AI in the classroom. Teachers are more inclined to view AI as a useful teaching tool rather than a disruptive technology as they gain more training and hands-on experience. These results suggest that a key cognitive component that influences teachers' preparedness to incorporate AI into the classroom is AI awareness.

One significant psychological element affecting instructors' use of AI in classrooms is AI anxiety. According to earlier research, educators who have greater levels of AI anxiety are typically less comfortable utilising AI tools and more reluctant to integrate them into their lesson plans (Zhang & Cao, 2025). problems about technological complexity, privacy and ethical problems, insufficient AI understanding, and ambiguity about the evolving roles of educators in AI-supported learning settings can all contribute to this anxiety. Teachers may be less inclined to incorporate AI into teaching and learning if these worries deter them from investigating AI applications. Teachers' acceptability and preparedness to incorporate AI into the classroom are adversely correlated with AI worry, according to numerous empirical studies. Teachers that are less anxiety are typically more open to investigating AI technologies, see AI as a valuable teaching tool, and show more assurance when integrating AI into their teaching methods. On the other hand, instructors' behavioural desire to accept AI may be hampered by elevated AI anxiety, which would impede the successful use of AI-supported teaching and learning. These results underscore the significance of professional development initiatives that not only enhance educators' AI expertise but also tackle psychological obstacles that could hinder the adoption of AI.

According to earlier studies, teachers' readiness to incorporate AI into their teaching practices is strongly correlated with their level of awareness of the technology. Teachers may be able to identify AI's pedagogical value, assess suitable applications, and gain more confidence when integrating AI supported tools into classroom instruction if they have more exposure to and knowledge of the technology. On the other hand, teachers' readiness to use AI may be

hampered by a lack of knowledge about its applications and instructional value. Additionally, empirical research has shown that greater familiarity and knowledge of AI are linked to more positive views and greater intentions to use AI in the classroom. All of these results point to the possibility that AI awareness plays a significant cognitive role in enhancing instructors' preparedness to incorporate AI into the classroom.

Teachers' willingness to integrate AI may be psychologically hampered by AI worry, as opposed to AI awareness. Teachers who are more anxious about AI may be unwilling to experiment with new applications, believe that AI technologies are challenging to utilise, or lack confidence in their capacity to successfully integrate them into classroom education. Higher levels of anxiety related to AI have been linked in the past to fewer positive attitudes and lower willingness to utilise AI technologies. On the other hand, more familiarity, real-world experience, and institutional backing might make teachers feel less unsure and more confident when utilising AI. These results suggest that instructors' preparedness may be adversely affected by AI concern, underscoring the significance of looking at both emotional and cognitive aspects when researching AI integration in education.

The Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT), which offer theoretical viewpoints for understanding people's acceptance and adoption of developing technology, serve as the foundation for this study. According to TAM, people's attitudes and behavioural intentions about the adoption of technology are influenced by perceived utility and perceived ease of use. Teachers are more willing to interact with technology developments in educational settings if they believe they can enhance instruction and are sufficiently manageable to integrate into their professional practice.

By highlighting performance expectancy, effort expectancy, social influence, and facilitating conditions as significant factors of behavioural intention and technology use, UTAUT broadens our understanding of technology adoption. Teachers' adoption decisions may be influenced not only by their opinions on AI but also by institutional support, resources that are readily available, professional expectations, and opportunities to acquire pertinent abilities, which makes these variables especially pertinent to AI integration.

In the current study, TAM and UTAUT offer a theoretical foundation for comprehending how instructors' psychological and cognitive reactions to AI can be linked to their preparedness to incorporate it into their teaching methods. While AI anxiety is an emotional barrier that can deter teachers from using AI technology, AI awareness indicates teachers' familiarity and comprehension of AI and its educational applications. Therefore, a more comprehensive understanding of the circumstances that may help or impede AI integration among primary school teachers can be obtained by looking at these characteristics in addition to teacher preparation.

Methodology

This study employed a quantitative correlational research design to examine the relationships among AI awareness, AI anxiety, and teachers' readiness to integrate artificial intelligence into education. A correlational design was considered appropriate because the study sought to determine the direction and strength of the relationships among the variables without

manipulating them. The design also enabled the use of multiple regression analysis to determine the extent to which AI awareness and AI anxiety predicted teachers' readiness to integrate AI into educational practice.

Population and Sampling

The target population comprised primary school teachers in Selangor, Malaysia, who were actively involved in classroom teaching during the data collection period. According to the Selangor State Education Department (JPN Selangor), the total population of primary school teachers in the state was 36,581. Simple random sampling was used to select respondents from the target population. This probability-based sampling approach was adopted to provide members of the target population with an opportunity to participate while reducing potential selection bias. Participation was restricted to teachers who were actively teaching in primary schools in Selangor during the study period, and responses were obtained from teachers across different districts and school settings within the state. The minimum sample size was determined using the Krejcie and Morgan (1970) sample size determination method. Based on a population of 36,581 primary school teachers, the minimum required sample was 380 respondents. At the end of the data collection period, 401 valid responses were obtained and included in the final analysis, exceeding the minimum sample size requirement.

Research Instrument

Data were collected using a structured questionnaire developed from previously validated instruments. The questionnaire consisted of four sections: Section A, demographic information; Section B, AI awareness; Section C, AI anxiety; and Section D, teachers' readiness to integrate AI into education. The questionnaire contained 32 items and employed a five-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Section A collected respondents' demographic information, including gender, age, academic qualifications, and teaching experience. Section B measured AI awareness using the Artificial Intelligence Software Awareness and Usability of Secondary School Teachers Questionnaire (AISAUSSTQ). The scale assessed teachers' awareness, understanding, and familiarity with AI and its educational applications and was used without modification in the present study (ADEKUNLE Adekemi Olanike et al., 2024). Section C assessed AI anxiety using 16 items adopted from the *Artificial Intelligence Anxiety Scale* (AIAS) developed by Wang and Wang (2019) and subsequently validated by Akkaya et al. (2021). The scale was designed to capture emotional responses associated with AI, including anxiety, uneasiness, and apprehension when interacting with AI technologies. Section D measured teachers' readiness using 6 items to integrate AI into education using six items adapted from previous research on teachers' readiness for AI and technology integration Granström and Oppi (2025). Teacher readiness was operationalised as the extent to which teachers perceived themselves as prepared, confident, and willing to integrate AI technologies into teaching and learning.

Validity and Reliability

Prior to the main data collection, the research instrument underwent expert validation and pilot testing to establish its suitability for the study. A pilot study was conducted with 30 primary school teachers in Selangor who were not included in the final sample. The pilot study assessed the clarity, appropriateness, and reliability of the questionnaire items. The overall instrument produced a Cronbach's alpha coefficient of 0.836 for the 32 items, exceeding the commonly accepted threshold of .70 and demonstrating satisfactory internal consistency.

Data Collection Procedure

Ethical approval was obtained from the Universiti Putra Malaysia Ethics Committee for Research Involving Human Subjects (JKEUPM) before data collection commenced. Research approval was subsequently obtained through the Educational Research Application System (ERAS) of the Malaysian Ministry of Education, followed by permission from the Selangor State Education Department (JPN Selangor) to conduct the study in primary schools within the state. Data were collected over a one-month period using an online questionnaire administered through Google Forms. The questionnaire included an informed consent statement and a brief explanation of the purpose of the study. Participants were informed of their rights, the confidentiality of their responses, and their right to withdraw from the study at any time without penalty. Follow-up reminders were provided during the data collection period to improve the response rate, and completed responses were electronically recorded and securely stored for subsequent analysis.

Data Analysis

The collected data were analysed using IBM SPSS Statistics Version 29. Prior to inferential analysis, data screening was conducted to identify missing values, incomplete responses, and potential outliers. Normality was also assessed to determine the suitability of the data for parametric statistical analysis. Descriptive statistics were used to determine the levels of Awareness, Anxiety, and teachers' readiness to integrate AI. Pearson correlation analysis was subsequently conducted to determine the direction and strength of the relationships among the variables. Multiple regression analysis was used to determine the extent to which Awareness and Anxiety predicted teachers' readiness to integrate AI and to identify the stronger predictor of readiness.

Ethical Considerations

Participation in the study was voluntary, and informed consent was obtained electronically before respondents completed the questionnaire. No personally identifiable information, including names, identification numbers, or contact details, was collected. Responses were recorded anonymously and used solely for academic purposes. The research data were stored in password-protected files and were accessible only to the researcher and academic supervisor, thereby safeguarding participants' privacy and confidentiality throughout the research process.

Findings

Data from 401 primary school teachers in Selangor were included in the final analysis. Prior to the main analyses, the dataset was screened for missing values, incomplete responses, duplicate entries, outliers, and normality. All 401 responses were complete and retained for analysis. The data were considered suitable for subsequent descriptive statistics, Pearson correlation, and multiple regression analyses.

Demographic Profiles of Respondents

Table 1 presents the demographic characteristics of the respondents. The majority were female teachers (83.3%), while 16.7% were male. In terms of age, the largest proportion of respondents were aged between 41 and 50 years (29.9%). Most respondents held a bachelor's degree (78.1%), and 35.4% had 20 years or more of teaching experience.

Table 1

Demographic Profile of Respondents

Variable	Category	Frequency	Percentage (%)
Gender	Female	334	83.3
	Male	67	16.7
Age	21 – 30 years old	100	24.9
	31 – 40 years old	88	21.9
	41 – 50 years old	120	29.9
	51 – 60 years old	93	23.3
Academic Qualification	Diploma	18	4.5
	Bachelor degree	313	78.1
	Master's Degree	70	17.5
Teaching Experience	5 years and less	101	25.2
	6 – 10 years	46	11.5
	11 – 15 years	51	12.7
	16 – 20 years	61	15.2
	20 years and above	142	35.4

Reliability of the Measures

The internal consistency of the three study measures was assessed using Cronbach's alpha. All three constructs demonstrated high reliability. AI awareness recorded a Cronbach's alpha of 0.933, AI anxiety recorded 0.961, and teacher readiness recorded 0.917. These values indicate that the measures demonstrated strong internal consistency in the present sample.

Table 2

Reliability Analysis of Variable

Variable	No of Items	Cronbach's Alpha
Awareness	10	0.933
Anxiety	16	0.961
Teacher Readiness	6	0.917

Descriptive Statistics

Descriptive statistics were used to determine the levels of Awareness, Anxiety, and readiness to integrate AI in education. As shown in Table 3, teachers reported a high level of Awareness ($M = 3.88$, $SD = 0.64$) and a high level of readiness to integrate AI ($M = 3.69$, $SD = 0.65$). In contrast, AI anxiety was at a moderate level ($M = 2.80$, $SD = 0.87$).

Table 3

Descriptive Statistics for the Study Variables

Variable	N	Minimum	Maximum	Mean	Standard Deviation	Interpretation
Awareness	401	1.00	5.00	3.8758	0.64069	High
Anxiety	401	1.00	4.75	2.7980	0.86886	Moderate
Teacher Readiness	401	1.00	5.00	3.6862	0.64987	High

Pearson Correlation Analysis

Pearson correlation analysis was conducted to examine the relationships among the three study variables. AI awareness was significantly and positively associated with teacher readiness ($r = 0.686, p < 0.001$), indicating that teachers with higher AI awareness tended to report greater readiness to integrate AI. In contrast, AI anxiety was significantly and negatively associated with teacher readiness ($r = -0.304, p < 0.001$), indicating that higher AI anxiety was associated with lower readiness to integrate AI. AI awareness was also significantly negatively correlated with AI anxiety ($r = -0.277, p < 0.001$), suggesting that greater awareness was associated with lower levels of AI anxiety.

Table 4

Pearson Correlation Among the Study Variables

Variables	Awareness	Anxiety	Teacher Readiness
Awareness	1	-0.277**	0.686**
Anxiety	-0.277**	1	-0.304**
Teacher Readiness	0.686**	-0.304**	1

Multiple Regression Analysis

Multiple regression analysis was conducted to determine whether Awareness and Anxiety significantly predicted teachers' readiness to integrate AI in education. The overall regression model was statistically significant, $F(2, 398) = 187.226, p < 0.001$. The model produced an R value of .696 and an R^2 of .485, indicating that Awareness and Anxiety collectively explained 48.5% of the variance in teacher readiness. The adjusted R^2 was 0.482.

Table 5

Shows Models Summary for Multiple Regression Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.696	0.485	0.482	0.46765

Examination of the individual predictors showed that Awareness significantly and positively predicted teacher readiness ($\beta = 0.652, t = 17.403, p < 0.001$). Anxiety also significantly predicted teacher readiness, but in a negative direction ($\beta = -0.124, t = -3.318, p < 0.001$).

Based on the standardized beta coefficients, Awareness emerged as the stronger predictor of teachers' readiness to integrate AI.

Table 6

Shows the ANNOVA Result for Multiple Regression Analysis

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	81.890	2	40.945	187.226	< 0.001
Residual	87.040	398	0.219		
Total	168.930	400			

Taken together, the findings demonstrate that teachers with greater Awareness tended to exhibit higher readiness to integrate AI, whereas greater Anxiety was associated with lower readiness. Both variables significantly contributed to the prediction of teacher readiness; however, Awareness made the substantially stronger contribution.

Discussion

This study examined the relationship between Awareness, Anxiety, and teachers' readiness to integrate AI in education among primary school teachers in Selangor. The findings showed that teachers had high levels of Awareness and readiness to integrate AI, while their level of Anxiety was moderate. Awareness was positively related to teacher readiness, whereas Anxiety showed a negative relationship with readiness. Furthermore, both variables significantly predicted teacher readiness, with Awareness emerging as the stronger predictor.

The high level of Awareness suggests that primary school teachers were generally familiar with AI technologies and their potential applications in education. This finding is consistent with Saravanan and (Waseem et al., 2025) and (Khambari et al., 2025), who highlighted increasing awareness of AI and emerging technologies among educators. Teachers' growing exposure to AI applications and digital technologies may have contributed to their understanding of how AI can support teaching and learning. Similarly, the high level of teacher readiness indicates that respondents were generally willing and prepared to incorporate AI into their teaching practices. This finding is consistent with previous studies reporting positive readiness among educators toward emerging educational technologies (Yasok & Mahmud, 2026; N et al., 2025).

In contrast, teachers reported a moderate level of AI anxiety, suggesting that although they recognised the potential benefits of AI, some concerns remained regarding its use. Previous studies have similarly identified concerns related to limited practical experience, technological competence, ethical issues, data privacy, and changes in teachers' professional roles (Jekri et al., 2026; Darancik et al., 2025). These concerns may explain why teachers experienced some degree of anxiety despite demonstrating high awareness and readiness toward AI integration.

A strong positive relationship was found between Awareness and teacher readiness ($r = 0.686$, $p < 0.001$), indicating that teachers with greater awareness of AI were more likely to be ready to integrate it into their teaching practices. This finding is consistent with Sholikhah

et al. (2025), who emphasised the importance of AI knowledge and familiarity in encouraging engagement with AI technologies. Greater awareness may help teachers understand the educational value of AI, identify suitable applications, and develop greater confidence in using AI-supported tools.

Conversely, Anxiety was negatively associated with teacher readiness ($r = -0.304, p < 0.001$). Teachers experiencing greater anxiety were therefore less likely to report being ready to integrate AI. Anxiety arising from unfamiliarity, perceived complexity, or uncertainty surrounding AI may reduce teachers' confidence and willingness to experiment with AI technologies. This finding suggests that psychological concerns should be considered alongside technological knowledge when preparing teachers for AI integration.

Finally, the multiple regression analysis revealed that Awareness and Anxiety jointly accounted for 48.5% of the variance in teachers' readiness to integrate AI into education. Awareness was the stronger positive statistical predictor ($\beta = 0.652$), whereas Anxiety demonstrated a smaller negative association with readiness after accounting for awareness ($\beta = -0.124$). These findings suggest that teachers with greater Awareness tended to report higher levels of readiness, while those experiencing greater Anxiety tended to report lower readiness. From a practical perspective, the findings highlight the relevance of providing teachers with opportunities to develop their AI knowledge and practical skills while addressing concerns associated with AI integration. However, given the cross-sectional correlational design of this study, the observed relationships should not be interpreted as causal. Further longitudinal and experimental research is needed to determine whether changes in AI awareness or anxiety lead to changes in teachers' readiness to integrate AI.

Research Implications and Recommendations

The findings of this study have practical implications for teachers, school administrators, and educational policymakers. Strengthening teachers' knowledge and practical understanding of AI should be prioritised since Awareness was found to be the biggest predictor of teachers' preparedness to integrate AI. Teachers should have practical opportunity to investigate AI tools, comprehend their pedagogical uses, and acquire the skills necessary to utilise AI in the classroom in an ethical and successful manner through professional development programs.

At the same time, the negative relationship between AI anxiety and teacher readiness highlights the importance of addressing teachers' psychological concerns regarding AI integration. Therefore, training programs should offer guidance on ethical problems, data protection, responsible AI use, and the evolving role of teachers in AI-supported education in addition to technical competencies. By offering sufficient technology tools, ongoing professional assistance, and chances for group learning and information exchange, schools can help instructors even more.

To increase the generalisability of the results, future research could expand on this study by looking at instructors from different states and educational levels. Longitudinal or mixed-method studies may also provide a deeper understanding of how teachers' Awareness, Anxiety, and readiness change as they gain greater exposure to AI technologies. Future studies may additionally examine other factors that could influence teacher readiness, such

as AI self-efficacy, institutional support, digital competence, perceived usefulness, and access to professional development.

Conclusion

This study examined the relationships among Awareness, Anxiety, and teachers' readiness to integrate AI into education among 401 primary school teachers in Selangor. The findings revealed high levels of Awareness and teacher readiness, alongside a moderate level of Anxiety. Awareness was significantly and positively associated with teacher readiness, whereas Anxiety demonstrated a significant negative association. Multiple regression analysis showed that awareness and anxiety collectively explained 48.5% of the variance in readiness, with awareness emerging as the stronger statistical predictor.

These findings contribute empirical evidence to the growing literature on AI integration in primary education and highlight the importance of considering both cognitive and psychological factors when developing teacher professional development programmes. Nevertheless, the cross-sectional correlational design does not establish causal relationships among the variables. Furthermore, the sample consisted predominantly of female teachers (83.3%), while 35.4% of respondents had 20 years or more of teaching experience. This sample composition should be considered when generalising the findings to primary school teachers with different demographic characteristics or levels of professional experience, as well as those working in other Malaysian states. Future studies involving more demographically diverse samples and longitudinal or experimental designs could provide further insight into these relationships and how teachers' readiness changes over time.

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