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Self-Reported Preparedness and Factors Influencing Ai Tools Integration in Teaching Among Master's Degree Students in a Selected Teachers Education College

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Abstract

Against the backdrop of the transformative potential of artificial intelligence (AI) in various sectors, its increasing integration in the field of education has garnered attention for its potential to enhance teaching effectiveness and overall academic quality (Rosales et al., 2020; Wartman, 2018; Chassignol et al., 2018; Chen et al., 2020). This study focuses on the self-preparedness of Master's degree students and the factors influencing the integration of AI tools in teaching practices within a selected Teacher Education college, recognizing the critical role of AI in shaping the future of education (Fitria, 2021). The findings revealed a positive correlation between self-preparedness and various factors, emphasizing Ai's transformative potential in education. Recommendations include inclusive professional development, gender-responsive training, and ongoing support for educators. Collaborative networks, research and development, policy guidelines for ethical AI use are suggested. The study underscores the need for ongoing research on AI's long-term impact and cultural influences in education, prioritizing diversity and ethical considerations for effective implementation.

Keywords: Artificial Intelligence (AI), Digital Competence, Artificial Intelligence in Education (AIED), Self-Reported Preparedness, Digital Transformation, Information and Communication Technologies (ICTs)

Chapter 1
THE PROBLEM AND ITS BACKGROUND

Introduction

The tremendous capability of computer programs to learn and think autonomously is known as artificial intelligence, or AI. Artificial intelligence (AI) refers to any tasks related to human intelligence that a program can execute (Mitchell, 2019). Artificial intelligence (AI) technology adoption in the Philippines has resulted in significant integration across a variety of sectors, including industry, agriculture, medical education, and services (Rosales et al., 2020; Wartman, 2018). In the education industry, there has been a noteworthy increase in the use of AI, resulting in significant gains in teaching effectiveness, efficiency, and overall academic quality. The advent, integration, and widespread use of

advanced technology, such as AI, has considerably improved educators' capacities, allowing them to carry out their responsibilities more effectively and efficiently (for example, lesson planning or instruction). One notable area of influence is the provision of curriculum-aligned content that is precisely personalized to fit the specific requirements and competencies of individual learners (Chassignol et al., 2018; Chen et al., 2020).

On top of that, the growth and integration of artificial intelligence in education, notably through online and web-based learning platforms, has resulted in substantial advances to educational approaches. AI has assisted the creation and implementation of increasingly complex pedagogical tools for these platforms (Pokrivcakova, 2019). To prepare for the upcoming digital transformation, the education sector must perform a thorough analysis of the changing landscape and create relevant curricula. As the Asian integration process progresses, the promise of enhanced productivity through the application of AI appears as an important opportunity. Adopting AI technology has the ability to eliminate existing gaps while also reestablishing the country's competitiveness, both locally and worldwide (Concepcion et al., 2019).

Background of the Study

As AI becomes more incorporated into education, integrating both instructional and learning components, it is projected that this development will have far-reaching implications (Limna et al., 2022). Teachers play a critical role in the successful use of AI in education. They are expected to not only get a thorough understanding of AI, but also to become skilled users and educators of this technology. The extent to which instructors are taught and equipped to use the potential of AI is important to the success of AI-driven education (Wang et al., 2023). As a result, the successful integration of AI into education is contingent on teachers' thorough understanding, competency, and adeptness in using this technology, underlining educators' vital role in ensuring the success of AI-based education.

However, many AI tools are unfamiliar to educators, leaving them with little technical knowledge in using AI-based educational applications to improve their teaching techniques and develop their students' AI digital proficiency. As a result, there is a growing demand for teachers to proactively acquire the digital competencies required to effectively apply and disseminate AI knowledge in educational contexts (Malinka et al., 2023; Pokrivcakova, 2019). As a result, educators struggle to adapt to AI tools due to a lack of technical competence, underlining the significance of proactive efforts to develop digital competencies in order to effectively integrate and impart AI knowledge in educational environments.

The application and utilization of AI in education is critical and requires careful consideration. In the light of the complex and continuous process of integrating digital technologies in schools, it is essential to examine teacher preparedness and multifaceted factors influencing the quality and effectiveness of lesson planning when AI tools are integrated. This study seeks to provide practical recommendations for using AI tools in lesson planning and teaching practices. It also aims to provide useful insights into the various factors influencing the quality and effectiveness of lesson planning. By understanding the interplay among these factors, this study will contribute significantly to the comprehension of digital transformation and its role in the education process. Furthermore, it will shed light on the vital contributions of teachers and information and communication technologies (ICTs) while emphasizing the specific factors that schools should consider in order to effect meaningful, efficient changes in their educational approach. In essence, this study aspires to provide invaluable guidelines for educational institutions seeking to navigate the digital transformation journey effectively and efficiently.

Literature Review

Artificial Intelligence in Education (AIED)

The evolving setting of AI technology is redefining the roles of educators in educational contexts. Teachers can now choose appropriate AI teaching technologies that allow them to monitor learners' knowledge acquisition processes and provide targeted and timely support (Edwards et al., 2018). Researchers propose that the development of a virtual laboratory, an intelligent teaching platform, or an AI-powered learning tool can assist a variety of learning approaches. These technologies can provide tailored guidance, prompts, and feedback to learners, encouraging the development of advanced cognitive skills (Hwang & Tu, 2021; Lin et al., 2021). Furthermore, as communication and computing technologies advance, the importance of Artificial Intelligence in Education (AIED) has expanded dramatically in the educational environment (Hwang et al., 2020; Chen et al., 2020). AIED, as a field, is strongly reliant on technology and encompasses many disciplines. Despite the introduction of AI technology into education, their application in the classroom presents obstacles. For example, researchers may struggle to effectively incorporate AIED applications and activities unless they have a thorough understanding of the role of AI in education and the functionalities of AI technologies (Hwang et al., 2020). In addition, educators who understand the purposes and characteristics of AI technologies can use appropriate AI applications in their classrooms to improve student motivation, engagement, and academic accomplishment (Chen et al., 2020; Hwang et al., 2021; Popenici and Kerr, 2017). In this context, it is critical to understand teachers' perspectives on the integration of AI in the classroom, including elements like their views toward AI and the intent to use it. This is significant because teachers' acceptance or rejection of AI influences how AI is integrated into the educational process.

It can provide individualized learning interfaces and materials by analyzing students' individual learning characteristics and current progress. Furthermore, it can select teaching tactics and approaches based on students' current state, offering suitable support and timely coaching to improve learning effectiveness (Huang & Chen, 2016). Other than that, adaptive and intelligent web-based educational systems, which take into account both individual learners' affective and cognitive status, have the potential to improve learning outcomes and assist underperforming students in effectively completing learning activities. Some academics have investigated the building of user learning models using substantial big data analysis on large-scale data sources from learning systems and educational environments (Li et al., 20202).

On top of that, Artificial Intelligence in Education (AIE) analyzes interaction data to aid students and provide vital feedback on their development. This data can serve as a mentor, assisting teachers in providing timely support. However, the successful implementation of AIE is strongly dependent on aspects such as learning content, pedagogy, and the general learning environment. Researchers emphasize the importance of instructors' acceptance of AI technologies in affecting the seamless integration of AIE into instructional activities, which poses a challenge to its widespread adoption (Tsai et al., 2020; Ifinedo et al., 2020; Zawacki-Richter et al., 2019). As a result, researching teachers' acceptability levels and affecting factors becomes an important research topic.

Teachers' perception of Integrating AI Tools in Teaching

AI technologies provide educators with creative ways to improve their instructional approaches, such as tailored support, seamless communication, and learning analytics (Ng et al., 2023). Teachers who include AI-based tools can improve their efficacy, develop student self-regulation, and create meaningful

dialogue and interaction (Healy & Blade, 2020; Seo et al., 2021; Torda, 2020). Despite the benefits, many educators have yet to adopt AI-enabled gadgets. As a result, it is critical to understand the problems they may face when implementing such technologies and provide them with the digital capabilities required to improve students' learning experiences.

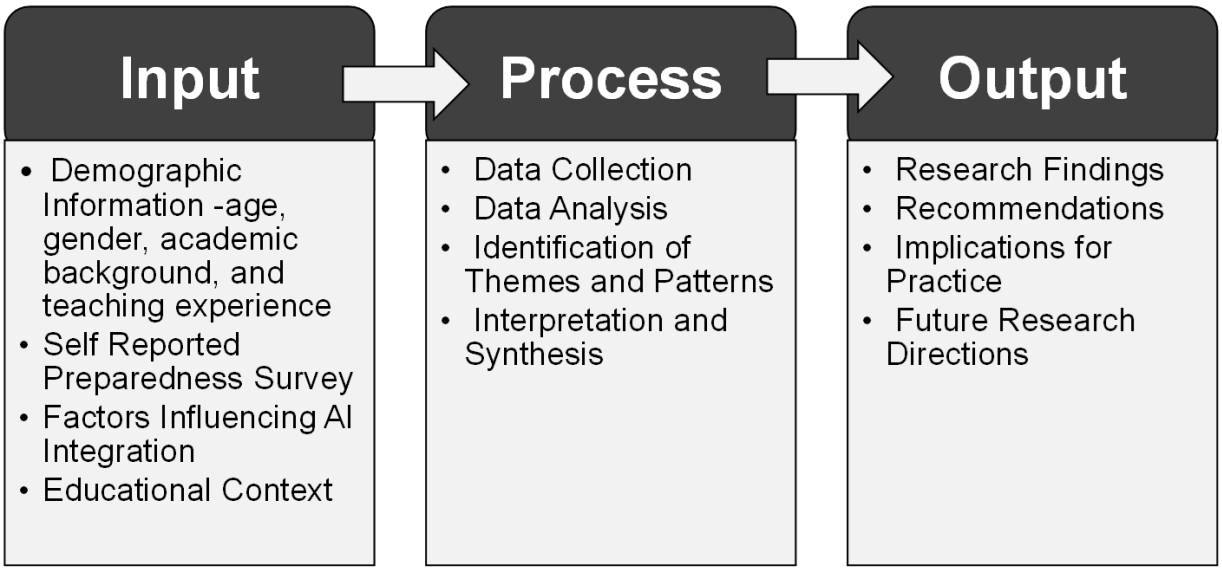
Educators have varying perspectives and misgivings about the integration of AI in education (AIED). Some are concerned about potential job displacement, fearing that AI may weaken their professional duties (Holmes & Tuomi, 2022). This anxiety can lead to a reluctance to accept AI technology, since teachers may not fully understand how AI might function as a complement rather than a replacement. In an era marked by increased awareness of technology's ethical implications, educators may be hesitant to employ AI-powered technologies without a clear grasp of how student data will be protected and prejudices minimized. Furthermore, in many educational contexts, a lack of infrastructure, money, and support hinders the mainstream deployment of AI (Sharma et al., 2022). Finally, teachers may lack the technical or pedagogical knowledge and competence required to properly integrate AI-powered tools into their classrooms, leading to sentiments of dread and uncertainty.

Factors that Influence Teachers' Integration of AI in Teaching

AI tools implemented in classrooms may not always be thoroughly considered and scrutinized by the academic community. As a result, there is increased concern about identifying the elements that drive adoption and determining how well these characteristics predict instructors' engagement with adaptive learning platforms. While teachers' expertise, confidence, and product quality are important, they may not be the only, or even the most important, elements impacting teachers' engagement with AI platforms in schools (Cukurova et al., 2023). AI has the ability to revolutionize learning and teaching by providing tailored learning experiences and enhanced efficiency (Pokrivcakova, 2019). However, this potential will only be fulfilled if teachers are properly prepared.

Teacher trust in a platform is likely to be increased when educators really believe in its potential and it effectively answers their individual demands (Holstein et al., 2019). Furthermore, the extent to which individual teachers receive guidance, professional development, and support in using AI tools, as well as increased opportunities for collaboration and the formation of learning communities to share and exchange experiences with the platform, has a significant impact on their likelihood of engaging with AI. Offering professional development opportunities, such as workshops, courses, or seminars, may help instructors learn about various AI-powered tools and strategies, as well as how to successfully incorporate them into their teaching practices. Veteran educators may share their knowledge and skills with their mentees, leading them through the integration of AI-powered technologies into their teaching methods. Furthermore, providing instructors with on-demand support, such as online lessons or webinars, allows them to study independently and easily at their own speed. Finally, giving ongoing support and direction to instructors as they integrate AI-powered technologies into their teaching initiatives is critical for guaranteeing success and resolving any issues or problems that may arise. This support may include technical help, answering questions, and offering feedback and instruction on how to utilize AI-powered technologies effectively.

Conceptual Framework



This figure presents the conceptual framework of the study. It consists of variables, AI tools integration as an independent variable and Masters degree student as the dependent variable.

Figure 1 The conceptual framework for this study focuses on examining the relationship between Self-Reportedness preparedness and factors Influencing AI tools Integration among Masters degree students in a selected teachers Education College, AI tools integration refers to artificial intelligence (AI) is rapidly influencing our education system.It is apparent that the students of today are mostly attached with their smart mobile phones, tablets, laptop, and various other forms of technologies for their quality of learning. factors influencing the quality and effectiveness of lesson planning by Master's degree students in a selected teachers education college when AI tools are integrated into their teaching such as Training, Support, Technology access, Prior experience.

In this variable, It also includes the level of self-preparedness among Master's degree students in a selected teachers education college for integrating AI tools into their teaching practices such as. Sex, Age, Educational level, years of employment and task assignment.The relationship between Self-Reported preparedness Influencing AI tools integration and Masters degree students. It has become an urgent necessity for school students. Understanding the wide potential impact of AI, The present study has attempted to explore the promise and potentiality of AI in school education and provide a comprehensive overview of the current status and development of trends of AI in school, the initiatives, planning, and strategies.

To gather data, a mixed-methods approach will be used, including surveys, interviews, and questionnaires.The research aims to provide valuable insights into understanding the factors Influencing AI tools integration in teaching among Master's degree students in a selected schools

Overall, this conceptual framework serves as a guide for investigating the complex relationship between Self- Reported preparedness and factors Influencing the AI tools integration among Masters degree students to improve the quality of education in a selected school.

Statement of the Problem

The purpose of this study is to assess the self-reported readiness of Master's degree students of a selected teachers education college to integrate AI tools into their teaching practices, as well as to explore

the various factors that influence the integration of AI tools in teaching. Specifically, this study will address the following key research questions:

1. What is the level of self-preparedness among Master's degree students in a selected teachers education college for integrating AI tools into their teaching practices in terms of:
   1.1 Sex
   1.2 Age
   1.3 Educational level (e.g., primary level, secondary level, and tertiary level)
   1.4 Years of employment
   1.5 Task assignment
2. What are the key factors influencing the quality and effectiveness of teaching and lesson planning by Master's degree students in a selected teachers education college when AI tools are integrated into their teaching in terms of:
   2.1 Training
   2.2 Support
   2.3 Technology access
   2.4 Prior experience
   2.5 Teaching strategies
3. Is there a correlation between self-reported preparedness and factors influencing AI tools in teaching and lesson planning quality where AI tools are integrated?

Hypotheses

H0: There is no significant correlation between the self-reported preparedness of Master's degree students in a selected teachers education college and the factors influencing AI tools in teaching and lesson planning quality when AI tools are integrated.

H1: There is a significant correlation between the self-reported preparedness of Master's degree students in a selected teachers education college and the factors influencing AI tools in teaching and lesson planning quality when AI tools are integrated.

Significance of the Study

The findings of this study will assess the readiness of the Master's degree students in using AI tools into their teaching practice at a selected teacher education college. The findings will help teachers assess their preparedness based on the key factors influencing the quality and effectiveness of teaching and lesson planning and characteristics such as gender, age, educational level, years of experience, and task assignment. Students will benefit from practical recommendations based on the association between self-reported readiness and factors impacting the effectiveness of AI-integrated teaching and lesson design. The community, represented by educational institutions, receives vital guidance for successfully navigating the digital transformation.

This study makes a significant contribution to understanding the difficulties of digital transformation in education, emphasizing the critical roles of teachers and ICTs while also identifying particular aspects that schools should consider when creating meaningful, effective changes to their instructional approach. Furthermore, the study provides the groundwork for future research, allowing for further investigation into various factors, emerging AI technology, and long-term outcome in education. Finally, it aims to improve the quality and effectiveness of teaching and lesson planning by closing the gap between AI integration and teacher readiness.

Scope and Limitation of the Study

This study aims to assess Master's degree students' readiness at a selected teacher education college to integrate AI technologies into their teaching practices, with an emphasis on important key factors influencing teaching quality and effectiveness, as well as lesson planning. Demographic data such as gender, age, educational level, years of experience, and task assignment are also evaluated. The geographical scope of this study is limited to the selected teacher college, and its purpose is to provide recommendations based on the identified issues.

However, the findings are specific to the selected institution and may not have universal applicability. The reliance on teachers' self-reported experiences introduces the possibility of variations in perceptions affecting result accuracy. Additionally, given that the research is confined to a specific time frame, it runs the risk of neglecting long-term changes. Furthermore, the study's focus on specific factors may constrain a comprehensive investigation of other potentially significant aspects.

Definition of Terms

For a better understanding of this study, the following terms are defined in the context of this research study.

AI - Artificial Intelligence. The capability of computer programs to learn and think autonomously.
AI Technology Adoption. The integration of AI across various sectors, including education.
AI Integration in Education. The incorporation of AI tools into educational practices.
Digital Competencies. The skills and knowledge required to effectively use AI-based educational applications.
AIED - Artificial Intelligence in Education. The field focuses on the application of AI technology in education.
Teacher Perception of AI Integration. Educators' views and attitudes towards the integration of AI in education.
Factors Influencing Teachers' Integration of AI. Elements impacting teachers' engagement with AI platforms in schools.
Self-Reported Preparedness. Teachers' self-assessment of their readiness to integrate AI tools.
Digital Transformation. The integration of digital technologies into various aspects of education.
ICTs - Information and Communication Technologies. Technologies that provide access to information through telecommunications.

Chapter 2
METHODOLOGY

Introduction

The methodology section of the study outlines the systematic inquiry into Master's degree students' self-reported readiness for incorporating artificial intelligence (AI) tools in their teaching practices. The primary aim is to assess their level of preparation and primary factors influencing effective lesson planning and instruction when integrating AI technologies.

This chapter shows how this quantitative study was conducted, providing a full overview of the methodology utilized to gather results. This includes the research design, population selection, participants involved, data gathering procedure, research instruments, and data analysis.

Research Design

To collect the necessary data for this study, a quantitative research design was used. According to Babbie (2010), quantitative research is a method based on objective measurements and employs statistical, mathematical, or numerical analysis. This method involves gathering numerical data through polling, survey questionnaires, and the modification of existing statistical data using computational tools. It is oriented towards collecting numerical data to make generalizations across diverse groups or to explain phenomena, as highlighted by Creswell (2013).

The selected research design sought to assess the self-preparedness of Master's degree students in a selected teacher education college. This assessment focused on key factors influencing the quality and effectiveness of teaching and lesson planning. This study took into account variables such as gender, age, educational level, years of experience, and task assignments to provide comprehensive analysis.

Population and Sampling

The researcher utilized a purposive sampling method, which is a non-probability sampling technique chosen based on specific characteristics of a population and the purpose of the study. This approach, also referred to as judgemental, selective or subjective sampling, is beneficial when the goal is to quickly reach a targeted sample, and achieving proportionality in sampling is not primary consideration

The participants in the study are Master's degree students from a selected teacher education college. This study comprised 40 participants, selected to ensure diversity in terms of gender, age, educational level, years of employment, and task assignment.

Respondents of the Study

The respondents of the study are selected Master's degree students carefully chosen from a selected teacher education college, totalling 40 respondents. The selection criteria encompass a diverse range of factors including gender, age, educational backgrounds, work experience, and job responsibilities. These criteria ensure that the participants possess the capability to integrate AI technologies into their teaching practices and are actively engaged in educational activities.

Research Instrument

To assess participants' readiness for integrating AI and gather insights into their perspectives on factors influencing teaching effectiveness and lesson planning with AI, a well-structured questionnaire was developed. This survey instrument was administered to a targeted group of Master's degrees students from a selected teacher education college. The questionnaire comprised two sections: (1) Self-Preparedness for AI integration, containing 5 questions for each demographic category, and (2) Factors Influencing Lesson Planning with AI Integration, featuring 7 questions for each key factors, including training, support, technology access, prior experience, and teaching strategies.

A 5-point Likert-type scale, presenting response choices ranging from "Strongly Agree" to "Strongly Disagree," was employed. The questions focused on the integration of AI into the teaching practices of the selected students, aiming to determine whether respondents shared similar or contrasting factors influencing their self-preparedness in sample size of 40 valid responses was set to accommodate any missing or incomplete data, as advised by Lehmann & Romano (2006). This ensures that the study adhered to literature recommendations and university requirements.

Data Gathering Procedure

The data collection process adheres to a well-organized procedure. In the initial phase, planning involves outlining the research strategy and identifying the target population. The instrument is then validated using a carefully designed questionnaire. Upon approval, the questionnaire is distributed to Master's degree students of a selected teacher education college through Google Forms to collect data. The survey comprises Liker-scale questions aimed at evaluating both self-preparedness levels and perceptions of various factors influencing their integration of AI into teaching practices. Subsequently, the compilation of responses and computation of results enable the quantitative analysis of the collected data. This data gathering procedure provides a systematic approach to assess the self-preparedness of the selected respondents in integrating AI into their teaching practices.

Data Analysis

To examine the data and verify the hypotheses, statistical methods such as descriptive statistics, and correlation analysis will be utilized.

Chapter 3
RESULTS AND DISCUSSION

Introduction

This chapter presents the data, with analysis and interpretation, gathered to discuss the answers to the research problems of the study. The discussion followed the statements of the problem which were presented in the first chapter.

FEMALE									
Q1		Q2		Q3		Q4		Q5	
Mean	3.708333	Mean	4.208333	Mean	3.708333	Mean	3.25	Mean	3.916667
Standard E	0.23682	Standard E	0.216855	Standard E	0.164616	Standard E	0.227223	Standard E	0.169362
Median	4	Median	4.5	Median	4	Median	3	Median	4
Mode	4	Mode	5	Mode	4	Mode	4	Mode	4
Standard D	1.160179	Standard D	1.062367	Standard D	0.80645	Standard D	1.113162	Standard D	0.829702
Sample Va	1.346014	Sample Va	1.128623	Sample Va	0.650362	Sample Va	1.23913	Sample Va	0.688406
MALE									
Q1		Q2		Q3		Q4		Q5	
Mean	4.1875	Mean	4.125	Mean	4.1875	Mean	2.5	Mean	3.3125
Standard E	0.261705	Standard E	0.201556	Standard E	0.1875	Standard E	0.353553	Standard E	0.3125
Median	5	Median	4	Median	4	Median	2	Median	3
Mode	5	Mode	5	Mode	4	Mode	1	Mode	3
Standard D	1.046821	Standard D	0.806226	Standard D	0.75	Standard D	1.414214	Standard D	1.25
Sample Va	1.095833	Sample Va	0.65	Sample Va	0.5625	Sample Va	2	Sample Va	1.5625

Men generally exhibit marginally greater trust in AI incorporation and are comparatively at ease while using technology, which includes tools powered by artificial intelligence.

AI skill enhancement is actively sought after by both genders with comparable levels of response variability.

Overall, women tend to have a stronger conviction that their gender plays a role in how prepared they are for AI integration and exhibit more diverse viewpoints.

Overall, the level of agreement regarding institutional support for gender diversity and AI integration is moderate, with females exhibiting a slightly greater degree of concurrence and less variability.

Young Adults Ages 20-25									
Q1		Q2		Q3		Q4		Q5	
Mean	4.1875	Mean	4	Mean	4.125	Mean	4.125	Mean	3.75
Standard E	0.208542	Standard E	0.223607	Standard E	0.179699	Standard E	0.239357	Standard E	0.232737
Median	4	Median	4	Median	4	Median	4.5	Median	4
Mode	5	Mode	3	Mode	4	Mode	5	Mode	4
Standard D	0.834166	Standard D	0.894427	Standard D	0.718795	Standard D	0.957427	Standard D	0.930949
Sample Va	0.695833	Sample Va	0.8	Sample Va	0.516667	Sample Va	0.916667	Sample Va	0.866667

Early Professionals: Ages 26-30									
Q1		Q2		Q3		Q4		Q5	
Mean	3.647059	Mean	4.176471	Mean	4.117647	Mean	3.529412	Mean	3.411765
Standard E	0.308473	Standard E	0.260589	Standard E	0.307771	Standard E	0.298497	Standard E	0.297771
Median	4	Median	4	Median	5	Median	4	Median	3
Mode	4	Mode	5	Mode	5	Mode	4	Mode	3
Standard D	1.271868	Standard D	1.074436	Standard D	1.268974	Standard D	1.230734	Standard D	1.227743
Sample Va	1.617647	Sample Va	1.154412	Sample Va	1.610294	Sample Va	1.514706	Sample Va	1.507353

Mid-Career Professionals: Ages: 31-35									
Q1		Q2		Q3		Q4		Q5	
Mean	4.571429	Mean	4.428571	Mean	4.857143	Mean	4.428571	Mean	4
Standard E	0.202031	Standard E	0.202031	Standard E	0.142857	Standard E	0.202031	Standard E	0.218218
Median	5	Median	4	Median	5	Median	4	Median	4
Mode	5	Mode	4	Mode	5	Mode	4	Mode	4
Standard D	0.534522	Standard D	0.534522	Standard D	0.377964	Standard D	0.534522	Standard D	0.57735
Sample Va	0.285714	Sample Va	0.285714	Sample Va	0.142857	Sample Va	0.285714	Sample Va	0.333333

In general, people of all age groups exhibit a positive disposition towards incorporating AI in education. There exists a high degree of receptiveness and enthusiasm in both young adults as well as mid-career professionals, with minimal fluctuations in their reactions.

Young professionals display moderate levels of receptiveness and enthusiasm, exhibiting greater diversity in their reactions.

All groups are willing to invest their time and effort in acquiring knowledge of AI tools, with varying levels of diversity.

The way different age groups perceive the impact of both age and institutional culture on preparedness for AI integration tends to differ.

BACHELORS DEGREE									
Q1		Q2		Q3		Q4		Q5	
Mean	4.025	Mean	4.125	Mean	3.9	Mean	3.975	Mean	3.85
Standard E	0.140911	Standard E	0.139539	Standard E	0.142325	Standard E	0.136285	Standard E	0.121687
Median	4	Median	4	Median	4	Median	4	Median	4
Mode	4	Mode	4	Mode	4	Mode	4	Mode	4
Standard D	0.891196	Standard D	0.882523	Standard D	0.900142	Standard D	0.861945	Standard D	0.769615
Sample Va	0.794231	Sample Va	0.778846	Sample Va	0.810256	Sample Va	0.742949	Sample Va	0.592308

Individuals possessing college degrees typically exhibit affirmative mindsets and preparedness regarding the implementation of AI in education.

They are of the opinion that their academic qualifications have equipped them adequately for assimilating AI, and they believe themselves to have undergone sufficient preparation.

College graduates hold a belief that AI tools can improve the learning experience for students across various educational levels.

Positive reports on the use of AI tools across different educational levels indicate a growing confidence in their adaptability.

The perceived impact of institutional focus on promoting educational diversity towards AI integration readiness is moderate.

Novice Educators:1 to 3 years of teaching experience									
Q1		Q2		Q3		Q4		Q5	
Mean	4.285714	Mean	4.357143	Mean	4	Mean	4.142857	Mean	4.214286
Standard E	0.220603	Standard E	0.199095	Standard E	0.234404	Standard E	0.274505	Standard E	0.280865
Median	4.5	Median	4.5	Median	4	Median	4	Median	4.5
Mode	5	Mode	5	Mode	3	Mode	5	Mode	5
Standard D	0.82542	Standard D	0.744946	Standard D	0.877058	Standard D	1.027105	Standard D	1.050902
Sample Va	0.681319	Sample Va	0.554945	Sample Va	0.769231	Sample Va	1.054945	Sample Va	1.104396

Intermediate Educators:4 to 7 years of teaching experience									
Q1		Q2		Q3		Q4		Q5	
Mean	3.692308	Mean	4.538462	Mean	4.153846	Mean	4.461538	Mean	3.846154
Standard E	0.327864	Standard E	0.243252	Standard E	0.273771	Standard E	0.243252	Standard E	0.222058
Median	4	Median	5	Median	4	Median	5	Median	4
Mode	4	Mode	5	Mode	5	Mode	5	Mode	4
Standard D	1.182132	Standard D	0.877058	Standard D	0.987096	Standard D	0.877058	Standard D	0.800641
Sample Va	1.397436	Sample Va	0.769231	Sample Va	0.974359	Sample Va	0.769231	Sample Va	0.641026

Experienced Educators:8 years or more of teaching experience									
Q1		Q2		Q3		Q4		Q5	
Mean	3.461538	Mean	4.461538	Mean	3.846154	Mean	4	Mean	3.769231
Standard E	0.215293	Standard E	0.14391	Standard E	0.191021	Standard E	0.160128	Standard E	0.280883
Median	4	Median	4	Median	4	Median	4	Median	4
Mode	4	Mode	4	Mode	4	Mode	4	Mode	4
Standard D	0.77625	Standard D	0.518875	Standard D	0.688737	Standard D	0.57735	Standard D	1.012739
Sample Va	0.602564	Sample Va	0.269231	Sample Va	0.474359	Sample Va	0.333333	Sample Va	1.025641

AI integration is often positively perceived by novice educators, although some may exhibit more reluctance towards adopting new technologies.

Educators at the intermediate level are dedicated to modernizing their teaching techniques and hold a moderate stance on the favorable implications of AI integration.

Educators with ample experience hold moderate beliefs when it comes to the favorable impact of AI integration, yet they display a resolute dedication towards implementing teaching techniques that exhibit less deviation.

TRAINING												
Q1		Q2		Q3		Q4		Q5		Q6		Q7	
Mean	4.05	Mean	3.85	Mean	4.15	Mean	4	Mean	3.925	Mean	3.75	Mean	4.075
Standard Error	0.159928	Standard Error	0.091637525	Standard Error	0.12685	Standard Error	0.147631	Standard Error	0.12082781	Standard Error	0.1508523	Standard Error	0.1404548
Median	4	Median	4	Median	4	Median	4	Median	4	Median	4	Median	4
Mode	5	Mode	4	Mode	4	Mode	4	Mode	4	Mode	4	Mode	4
Standard Deviation	1.011473	Standard Deviation	0.579566593	Standard Deviation	0.80224	Standard Deviation	0.9337	Standard Deviation	0.76418215	Standard Deviation	0.9540736	Standard Deviation	0.8883145
Sample Variance	1.023077	Sample Variance	0.335897436	Sample Variance	0.64359	Sample Variance	0.871795	Sample Variance	0.58397436	Sample Variance	0.9102564	Sample Variance	0.7891026

In general, educators have a favorable outlook towards their AI tool training experiences.

Although there is a consensus regarding the sufficiency of training and its observed influence on teaching, the responses show moderate fluctuations signifying differences in viewpoints among teachers.

The significance of continuous professional growth in AI tools is underscored by educators.

Teachers share the belief that practical applications have a positive impact on teaching.

Demonstrating a proactive approach towards improving their AI integration skills, teachers actively pursue additional training opportunities.

SUPPORT

Q1		Q2		Q3		Q4		Q5		Q6		Q7	
Mean	4.05	Mean	4	Mean	4.25	Mean	4.175	Mean	4.15	Mean	4.05	Mean	4.175
Standard Error	0.142999	Standard Error	0.124034735	Standard Error	0.12785	Standard Error	0.133433	Standard Error	0.1318021	Standard Error	0.1288509	Standard Error	0.112589
Median	4	Median	4	Median	4	Median	4	Median	4	Median	4	Median	4
Mode	5	Mode	4	Mode	5	Mode	4	Mode	5	Mode	4	Mode	4
Standard Deviation	0.904405	Standard Deviation	0.784464541	Standard Deviation	0.80861	Standard Deviation	0.843907	Standard Deviation	0.8335897	Standard Deviation	0.8149249	Standard Deviation	0.7120753
Sample Variance	0.817949	Sample Variance	0.615384615	Sample Variance	0.65385	Sample Variance	0.712179	Sample Variance	0.69487179	Sample Variance	0.6641026	Sample Variance	0.5070513

The commonly held view among teachers at every level is that their interests and strengths are in sync with the utilization of AI tools.

The responses of Junior High School teachers exhibit greater variation on average, suggesting a wide range of perspectives within this category.

In general, all groups view their roles as essential for the successful integration of AI with differing degrees of consensus.

On average, Junior High School teachers exhibit greater motivation towards self-preparation for AI integration. However, their responses show a higher degree of variability.

There is a consensus among all levels of teachers that institutional acknowledgment has an impact on the readiness for AI integration, but there are some discrepancies in their perspectives.

TECHNOLOGY ACCESS

Q1		Q2		Q3		Q4		Q5		Q6		Q7	
Mean	4.15	Mean	3.975	Mean	4.175	Mean	4.2	Mean	4.325	Mean	4.2	Mean	4.1
Standard Error	0.126845	Standard Error	0.121357176	Standard Error	0.14272	Standard Error	0.134926	Standard Error	0.12082781	Standard Error	0.1349264	Standard Error	0.1281025
Median	4	Median	4	Median	4	Median	4	Median	4	Median	4	Median	4
Mode	4	Mode	4	Mode	5	Mode	4	Mode	5	Mode	4	Mode	4
Standard Deviation	0.80224	Standard Deviation	0.767530171	Standard Deviation	0.90263	Standard Deviation	0.853349	Standard Deviation	0.76418215	Standard Deviation	0.8533494	Standard Deviation	0.8101915
Sample Variance	0.64359	Sample Variance	0.589102564	Sample Variance	0.81474	Sample Variance	0.728205	Sample Variance	0.58397436	Sample Variance	0.7282051	Sample Variance	0.6564103

In general, educators display a favorable attitude towards their technological resources for incorporating AI tools.

Moderate variability is detected in responses, suggesting that teachers have different perspectives particularly regarding the dependability of technical assistance and the impact of technology on their teaching approaches.

Efficient integration of AI tools requires teachers to stress the significance of having consistent and dependable access to them.

Overall, technology's perceived influence on the selection of AI tools has a positive impact on both the quality and effectiveness of AI integration.

PRIOR EXPERIENCE

Q1		Q2		Q3		Q4		Q5		Q6		Q7	
Mean	4.35	Mean	4.375	Mean	4.4	Mean	4.3	Mean	4.025	Mean	4.175	Mean	4.1
Standard Error	0.126845	Standard Error	0.117055214	Standard Error	0.11767	Standard Error	0.144115	Standard Error	0.1580632	Standard Error	0.1471416	Standard Error	0.1229968
Median	5	Median	4.5	Median	5	Median	5	Median	4	Median	4	Median	4
Mode	5	Mode	5	Mode	5	Mode	5	Mode	4	Mode	5	Mode	4
Standard Deviation	0.80224	Standard Deviation	0.740322175	Standard Deviation	0.74421	Standard Deviation	0.911465	Standard Deviation	0.99967944	Standard Deviation	0.930605	Standard Deviation	0.7778999
Sample Variance	0.64359	Sample Variance	0.548076923	Sample Variance	0.55385	Sample Variance	0.830769	Sample Variance	0.99935897	Sample Variance	0.8660256	Sample Variance	0.6051282

Teachers generally have a positive perception of their past encounters with AI tools, which in turn enhances their confidence and capacity to utilize such resources for teaching purposes.
Responses exhibit moderate to high variability, particularly regarding the correlation between past experiences and creativity as well as the influence of negative experiences on present approach.
To achieve progress in utilizing AI tools, educators highlight the significance of ongoing introspection regarding prior experiences.

TEACHING STRATEGIES

Q1		Q2		Q3		Q4		Q5		Q6		Q7	
Mean	4.35	Mean	4.225	Mean	4.375	Mean	4.225	Mean	4.225	Mean	4.4	Mean	4.4
Standard Error	0.121687	Standard Error	0.126529109	Standard Error	0.11144	Standard Error	0.136285	Standard Error	0.11595479	Standard Error	0.1120897	Standard Error	0.1120897
Median	4.5	Median	4	Median	4	Median	4	Median	4	Median	4.5	Median	4.5
Mode	5	Mode	5	Mode	5	Mode	4	Mode	4	Mode	5	Mode	5
Standard Deviation	0.769615	Standard Deviation	0.800240349	Standard Deviation	0.70484	Standard Deviation	0.861945	Standard Deviation	0.73336247	Standard Deviation	0.7089176	Standard Deviation	0.7089176
Sample Variance	0.592308	Sample Variance	0.640384615	Sample Variance	0.49679	Sample Variance	0.742949	Sample Variance	0.53782051	Sample Variance	0.5025641	Sample Variance	0.5025641

Gender Disparities in AI Preparedness

This emphasizes the differences in AI preparedness based on sex, recognizing variations that may exist between male and female Master's degree students in their readiness to integrate AI tools into teaching practices. There is a significant variation in the self-preparedness of Master's degree students for Integrating AI tools into teaching practices based on gender, this leads to unequal participation and proficiency in AI-driven education. In this research, understanding and addressing gender disparities challenges in AI integration are crucial for promoting inclusivity and ensuring that all 222

Age-Related Challenges in AI Integration Readiness

Age differences among Master's degree students contribute to varying levels of self-preparedness for AI tool integration, potentially impacting the adoption and effectiveness of AI in teaching practices. Recognizing age-related differences in preparedness is essential for tailoring support and training programs that consider the diverse needs of students across different age groups.

Influence of Prior Experience on AI Integration

The prior experience of Master's degree students with AI technologies may significantly affect their readiness to integrate AI tools into teaching, potentially creating disparities in preparedness levels. Acknowledging the influence of prior experience is crucial for designing targeted training and support interventions, ensuring that students with varying degrees of experience can effectively utilize AI tools in their teaching practices.

Chapter 4
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS
Summary

Master's degree students in a teacher education college show varying attitudes towards integrating AI tools in teaching. Men generally trust AI more and are comfortable with technology. Both genders seek to enhance AI skills equally, but women feel gender influences their preparedness more. People of all ages are positive about AI in education, with young professionals showing moderate enthusiasm. College graduates feel prepared for AI integration and believe it improves learning. Novice educators are positive about AI, while experienced educators are more dedicated to traditional methods but open to AI. Teachers

value training in AI tools and believe it positively impacts teaching. They recognize the importance of institutional support and consistent access to technology. Past experiences with AI tools affect teachers' confidence and willingness to adapt teaching methods. Overall, educators are open to integrating AI tools but vary in their approaches and perspectives, emphasizing the need for ongoing reflection and flexibility in teaching strategies.

Findings

On average, teachers demonstrate a significant degree of openness towards modifying their teaching techniques to effectively integrate AI tools. Teachers recognize the perceived compatibility and improvement of AI tools with current teaching strategies, although there is a moderate range in their responses. While educators actively search for cutting-edge approaches to teaching with AI tools, the range of responses tends to be somewhat limited. The extent to which teachers align AI tools with established teaching strategies and incorporate student feedback into adaptations exhibits greater diversity. Teachers with lower variability tend to hold similar beliefs regarding the importance of flexible and dynamic teaching strategies for effective integration of AI tools, as evidenced by their experimentation with various instructional approaches.

Conclusions

AI has been increasingly propagated as having strategic value for education, suggesting that AI could be an effective learning tool that lessens the burdens of both teachers and students and offers effective learning experiences among students. Based on the data gathered from the study, It is clear that Self-Reported preparedness has been a big factor influencing the AI tools integration in teaching among the Master's degree students in a selected Teacher Education college. This study provided a content analysis of studies aiming to disclose how the AI tools integration has been applied to the education sector and explore the potential research trends and challenges of AI in Education. AI intelligence is becoming increasingly crucial in education. Understanding AI's ethical and social implications is paramount to its successful implementation. The use of chatbots, particularly in flipped classrooms, exemplifies AI's potential in enhancing distance learning. Chatbots, simulating human conversations, have proven effective in increasing student engagement and learning outcomes (Abbas et al., Citation2022; Baskara, Citation2023; Hew et al., Citation2022). In flipped learning environments, they facilitate group discussions, offer personalized feedback, and promote active learning (Diwanji et al., Citation2018; Gonda & Chu, Citation2019). While increasing student autonomy, chatbots should complement, not replace, human interactions, necessitating educators' proficiency in utilizing these technologies effectively.

Recommendations

The findings indicated a significantly positive high correlation between the self-preparedness among Master's degree students, Sex, Age, Educational level, years of employment, task assignment, training, support,technology access, prior experiences, and teaching experiences. Moreover, the result emphasizes that within the educational field, A.I. has proven to be a tool with immense potential to transform teaching and learning processes, from elementary education to higher education. In essence, A.I. has become a valuable resource, significantly positive impact of A.I. tools on student academic experiences, including enhanced comprehension, creativity, and productivity.

In summary, the study highlights the positive impact of AI tools in education particularly among

Master's degree students, emphasizing the crucial role of self-preparedness in integrating AI into teaching practices (Fitria, 2021). For schools and teacher education programs, it is recommended to implement inclusive professional development initiatives that address diverse backgrounds and preferences, integrating AI-related content into the curriculum (Lee et al., 2022). Gender-responsive training approaches and ongoing support, including technology access and resources, are essential (Pokrivcakova, 2019). Collaborative networks should be encouraged for sharing insights and best practices. Additionally, institutions should invest in research and development, promoting a pedagogical shift towards innovative teaching methods that leverage AI for improved student experiences (Pedro et al., 2019). Policy makers should work on clear guidelines for the ethical use of AI in education, and public awareness campaigns can help build broader understanding and acceptance of AI's potential in education settings (Borenstein & Howard, 2021). Lastly, future research should study the long-term impact and cultural influences of AI in education, while improvements should prioritize diversity, ethics, and practical implementation insights.

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Appendices

A. Letter of Request to the Respondents

Subject:

Request for Permission to Administer Online Surveys for Master's Degree Students

Dear Participant,

I trust this letter finds you well. We, the Masters in Education students at the National Teachers College, are conducting an action research project titled *"Self-Reported Preparedness and Factors Influencing AI Tools Integration in Teaching Among Master's Degree Students in a Selected Teachers Education College."*

The primary objective of our research is to explore the self-reported preparedness and factors influencing the integration of AI tools in teaching practices. We assure you that all data collected will be treated with the utmost confidentiality. Personal identifiers will be removed to guarantee participant anonymity, and the findings will be exclusively utilized for research purposes.

The insights gained from this study will not only contribute to our academic pursuits but will also provide valuable information to our esteemed teachers and the wider school community.

Your consent to proceed with our research activities is of paramount importance, and we are committed to conducting this study with the utmost integrity and respect for privacy. We kindly request your favorable response to this request.

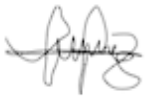
Thank you for considering our proposal. We look forward to your positive response.

Sincerely,

Ro Anne Mejia

Mariel Medina

Dorothy Mayo Mejes



Marivic Bustamante

Noted By:

Doc. Bam Bernal
Educational Research and Ethical Standards
National Teachers College

B. Survey Questionnaire

Self-Reported Preparedness and Factors Influencing AI Tools Integration in Teaching Among Master's Degree Students in a Selected Teachers Education College

The purpose of this research is to assess the self-reported readiness of first-year Master's degree students of a selected teachers education college to integrate AI tools into their teaching practices, as well as to explore the various factors that influence the integration of AI tools in teaching.

Your participation in this study involves completing a questionnaire that will take approximately 10 minutes.

Your participation in this study is entirely voluntary. Your responses will be kept confidential, and your identity will be protected throughout the study. The information gathered will be used for research purposes only.

Name

Your answer

Sex *

- ◯ Male
- ◯ Female

Age *

Your answer

Educational level *

Your answer

Years of Employment *

Your answer

Task Assignment/ Position *

Your answer

Self-Preparedness for AI Integration

Instructions: Please indicate your level of agreement with each statement by selecting the appropriate response on the 5-point Likert scale:

5 – Strongly Agree

4 – Agree

3 – Undecided

2 – Disagree

1 – Strongly Disagree

What is the level of self-preparedness among Master's degree students in a selected teachers education college for integrating AI tools into their teaching practices in terms of:

1.1 Sex

I am confident in my ability to integrate AI tools into my teaching practices. *

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

I actively seek opportunities to enhance my skills in using AI tools for teaching. *

	1	2	3	4	5	
Strongly Disagree	◯	◯	◯	◯	◯	Strongly Agree

I feel comfortable using technology in my teaching, including AI tools. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

I believe that my gender influences my readiness to adapt AI tools in teaching. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

The institutional support for gender diversity affects my self-preparedness for AI integration. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

What is the level of self-preparedness among Master's degree students in a selected teachers education college for integrating AI tools into their teaching practices in terms of:
1.2 Age

I am open to adapting new teaching methods that involve AI tools. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

I am excited about the potential benefits of integrating AI tools into my teaching. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

I am willing to invest time and effort in learning how to use AI tools effectively. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

My age has positively influenced my openness to embracing technological innovations. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

The institutional culture regarding age diversity impacts my readiness for AI integration. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

What is the level of self-preparedness among Master's degree students in a selected teachers education college for integrating AI tools into their teaching practices in terms of:
1.3 Educational Level

My educational background has prepared me to integrate AI tools into my teaching. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

I have received adequate training in incorporating AI tools into teaching practices. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

I believe AI tools can enhance the learning experience for students at different educational levels. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

I feel confident in adapting AI tools for various educational levels. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

The institutional emphasis on educational diversity affects my self-preparedness for AI integration. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

What is the level of self-preparedness among Master's degree students in a selected teachers education college for integrating AI tools into their teaching practices in terms of:
1.4 Years of Employment

My years of teaching experience positively influence my ability to integrate AI tools. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

I continuously update my teaching methods to stay current with technological advancements. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

I have witnessed positive outcomes in student learning through the integration of AI tools. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

My teaching experience has created resistance to adopting new technologies like AI. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

Institutional recognition of the experience-technology balance influences my AI integration readiness. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

What is the level of self-preparedness among Master's degree students in a selected teachers education college for integrating AI tools into their teaching practices in terms of:
1.5 Task Assignment

The responsibilities associated with my role align with my interests and strengths in using AI tools. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

The alignment of my role with AI integration positively influences my perception of its importance. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

My assigned role plays a crucial part in determining the success of AI integration efforts in the school. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

The specific responsibilities of my role motivate me to self-prepare for effective AI integration. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

The institutional recognition of different roles and their contributions affects my collaborative readiness for AI integration. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

II. Factors Influencing Lesson Planning with AI Integration

Instructions: Please indicate your level of agreement with each statement by selecting the appropriate response on the 5-point Likert scale:

5 – Strongly Agree

4 – Agree

3 – Undecided

2 – Disagree

1 – Strongly Disagree

What are the key factors influencing the quality and effectiveness of teaching and lesson planning by Master's degree students in a selected teachers education college when AI tools are integrated into their teaching in terms of:

2.1 Training

I have received adequate training on integrating AI tools into teaching and lesson planning. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

The training provided has equipped me with the necessary skills to effectively use AI tools. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

I feel confident in applying the knowledge gained from training to my teaching and lesson planning. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

Ongoing professional development in AI tools is crucial for effective teaching and lesson planning. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

Training sessions that include practical applications positively impact my teaching and lesson planning. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

My training experience influences my perception of the value of AI in teaching and lesson planning. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

I actively seek additional training opportunities to enhance my AI integration skills. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

What are the key factors influencing the quality and effectiveness of teaching and lesson planning by Master's degree students in a selected teachers education college when AI tools are integrated into their teaching in terms of:

2.2 Support

I receive sufficient support from the educational institution in integrating AI tools. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

Colleagues and peers provide valuable support and collaboration in using AI tools. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

The institution encourages a supportive environment for integrating AI tools into teaching. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

Support from colleagues enhances my confidence in implementing AI tools in teaching and lesson planning. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

Institutional recognition and reward systems positively influence my AI integration efforts. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

Supportive feedback from supervisors and peers impacts my continuous improvement in AI integration. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

Collaborative support in designing AI-infused teaching and lesson plans enhances their effectiveness. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

What are the key factors influencing the quality and effectiveness of teaching and lesson planning by Master's degree students in a selected teachers education college when AI tools are integrated into their teaching in terms of:
2.3 Technology Access

I have access to the necessary technology and infrastructure to integrate AI tools. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

The institution provides reliable technical support for using AI tools in teaching. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

Access to AI tools is consistent and reliable. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

The accessibility of technology influences my choice of AI tools for teaching and lesson planning. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

The quality of technology access affects the efficiency of AI integration in teaching and lesson planning. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

Adequate technology access contributes to the innovation of teaching strategies and lesson plans using AI tools. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

The availability of cutting-edge technology positively influences my teaching and lesson planning. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

What are the key factors influencing the quality and effectiveness of teaching and lesson planning by Master's degree students in a selected teachers education college when AI tools are integrated into their teaching in terms of:
2.4 Prior Experience

My prior experience with technology positively influences my use of AI tools in teaching and lesson planning. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

Past experiences with AI tools have contributed to my confidence in their integration. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

I can leverage my prior experiences to enhance the quality of teaching and lessons with AI tools. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

My past experiences with AI tools affect my creativity in teaching and lesson planning. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

Negative experiences with AI tools in the past impact my current approach to teaching and lesson planning. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

Reflecting on past experiences with AI tools is an integral part of my continuous improvement. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

I actively share my positive experiences with AI tools to motivate others in teaching and lesson planning. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

What is the level of self-preparedness among Master's degree students in a selected teachers education college for integrating AI tools into their teaching practices in terms of:
2.5 Teaching Strategies

I am open to adapting my teaching strategies to effectively incorporate AI tools. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

AI tools complement and enhance my existing teaching strategies. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

I actively seek innovative teaching strategies that involve the integration of AI tools. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

The alignment of AI tools with established teaching strategies positively influences my teaching and lesson planning. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

I incorporate student feedback into adjusting my teaching strategies with AI tools. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

Experimenting with various teaching strategies involving AI tools is part of my approach to lesson planning. *

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree

*

I believe that effective teaching and lesson planning with AI tools requires a flexible and dynamic teaching strategy.

	1	2	3	4	5	
Strongly Disagree	○	○	○	○	○	Strongly Agree