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Exploring Teachers' Perceived Opportunities and Challenges of Using Artificial Intelligence to Enhance Teaching Effectiveness: A Qualitative Study

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ABSTRACT

The key aim of the present research was to explore teachers' perceptions and issues of using artificial intelligence (AI) in improving teaching effectiveness in higher education. The research had an interpretivist design of a qualitative exploratory type. The sample size comprised the faculty members of the Faculty of Education at the University of Sindh. The sample size was seven teachers who were sampled using convenience sampling. Data were collected by using semi-structured interviews. Recordings and a transcription of the interviews were performed, and the analysis of the data was conducted through thematic analysis. The predominant results demonstrated that teachers are overall positive about AI being a supportive implementation to enhance teaching efficiency, specifically, lesson planning, content development and supporting learning. Nevertheless, several challenges were mentioned, including the issue of accuracy, academic dishonesty, excessive reliance on technology, inadequate training, and a lack of corporate policy. Legitimacy was also discovered to be applied rather than extensively implemented in the teaching methods by teachers. The research proposed that effective and responsible application of AI in education needs to be protected with the help of correct institutional policies, training programmes, and proper ethical guidelines.

Keywords: *Artificial Intelligence, Teaching Effectiveness, Teachers' Perceptions, Higher Education, Technology Acceptance Model (TAM)*

INTRODUCTION

Artificial intelligence (AI) has quickly reshaped the world of education, especially with the creation of generative technologies that use natural language processing (AI) to generate responses in natural language and assist with numerous academic activities, including ChatGPT. These changes have altered the traditional teaching as it made it possible to automate the process of lesson planning, content creation, and feedback and revise the role of teachers in classrooms (Dempere et al., 2023). Generative AI provides both interactive and adaptive features, unlike previous digital tools, and, in this particular instance, may benefit teaching quality through personalized instructions and offloading routine administrative tasks (Montenegro-Rueda et al., 2023). Nonetheless, the adoption of AI in education is not unanimously approved, as it brings pedagogical potential and some serious concerns about its influence on the quality of teaching.

Current studies emphasize that AI has the potential to enhance the effectiveness of instruction by helping teachers to create learning materials and engage, but they tend to give up not only critical thinking but also over-dependence on technology (İpek et al., 2023). Although other experts insist on the idea that AI can make teaching processes innovative and flexible, others warn that it may lead to the collapse of the core skills and professional judgement of the so-called teacher in the case of uncritical use (Lo et al., 2024). Such a dual approach has placed AI as a two-sided device with its potential relying much on the perception and application of it by teachers in their teaching practises (Beege et al., 2024). Moreover, the issues of academic honesty, reliability of the data, and its use in the most ethical way are also problematic in its integration into the educational process (Cetin et al., 2024).

Although the presence of AI in education is a growing trend in the literature, the available studies are mostly quantitative or involve experiences of students, which restricts the insights into the teachers' views in actual classroom settings (Espartinez, 2024). The studies which do look at teachers usually focus on readiness and attitudes, instead of discussing their lived experiences and real-life challenges thoroughly and qualitatively (Ayanwale et al., 2022). This leads to a big discrepancy, especially in the developing nations, where the institutional backing, technological foundation, and professional preparation might not match those of the more developed situations (Fteiha et al., 2024).

The application of AI tools at the University of Sindh, which is more specific, is in its infancy, and the staff at this University is grappling to identify the opportunities and constraints associated with AI application. Some other issues that local educational contexts might have to grapple with include inadequate resources, absence of planned training, and a cloudy policy, which could impact perception and implementation of AI in the teaching practices (Gayed, 2025). These contextual factors make an important difference in determining whether AI can actually positively influence teaching performance, or it presents an array of new issues that make the quality of pedagogy harder than ever. Hence, the current research aims at analyzing how teachers perceive AI to bring a deeper understanding of various aspects of AI application in modern education as more context-specific.

Research Aim and Objectives

The objective of the research is to study the perceived opportunities and challenges of artificial intelligence (AI) use by teachers in improving teaching effectiveness in higher education. The research targets in particular the way in which teachers understand the role of AI in their teaching methods, in which it facilitates or restricts the process of teaching, and how background aspects impact the implementation of AI in the Faculty of Education at the University of Sindh.

- To determine the current usage of artificial intelligence tools by teachers in their teaching practice.
- To investigate the perceived opportunities of AI by teachers to enhance the efficacy of teaching.
- To explore the problems and obstacles that teachers experience when implementing AI in the learning environment.

LITERATURE REVIEW

AI in Education

Artificial intelligence (AI) in education is the concept that implies the use of smart systems in the teaching and learning processes to generate content, adaptive learning, and support of decisions. The recent advancements in generative AI and, specifically, ChatGPT have broadened the scope of AI to do more than automation and increase the possibility of interactive and context-sensitive assistance to educators (Dempere et al., 2023). The tools are based on natural language processing to produce responses, help with academic

writing, and teaching, which is what sets them apart from the previous rule-based educational systems (İpek et al., 2023).

Researchers state that AI is transforming the educational process by providing individual learning opportunities and dynamic feedback systems that react to the needs of students in real time (Montenegro-Rueda et al., 2023). Nevertheless, this change is not perceived in all ways positively, and the inclusion of AI also makes one wonder how the role of teachers changes and how the human contact in the classroom becomes more limited (Holmes and Miao, 2023). Although policy-oriented research points to the potential of AI to enhance access and efficiency in education systems, it tends to ignore the practicalities of the implementation issue in the eyes of teachers (Vidal et al., 2023).

Besides, the usage of AI is also subject to the level of familiarity and confidence that teachers have with technologies, implying that technological innovation does not necessarily lead to success in education (Zhang et al., 2023). It means that AI in education cannot be discussed as a simple technological change, but as an educational change that has to be incorporated in the teaching process with particular care.

AI and Teaching Effectiveness

Effectiveness in teaching is usually perceived as how teachers design, present, and evaluate learning in a manner that improves student learning and interest. The application of AI has become more and more associated with the enhancement of teaching, specifically teachers planning lessons, being in the classroom, and evaluating students (Kim et al., 2022). To illustrate, AI could help teachers organize lessons more effectively, as it can produce instructional content and propose the relevant information, which saves time preparing the lesson (Moundridou et al., 2024).

Regarding student engagement, AI can be used to enhance more interactive learning by responding instantly and being supportive to students and motivating them to participate in the classroom, which may improve student engagement (Lo et al., 2024). Nevertheless, other scholars maintain that this interaction can be shallow in case students get extremely involved in AI-generated answers instead of participating in the learning process itself (Beege et al., 2024). The question of whether AI does indeed boost teaching quality or merely shifts the format of interaction, but not the quality of learning, emerges.

The AI also affects assessment and feedback, since automated systems could have timely and detailed feedback on students, thereby enabling teachers to work on higher-level instructional tasks (Collie et al., 2024). However, the credibility and correctness of AI-created feedback is a rather debatable question, and certain studies indicate the possibility of mistaken or biased results (Wang and Li, 2026). Thus, although AI may increase various aspects of teaching efficiency, its effects will be determined by both critical and responsible utilization in the educational process.

Opportunities of AI for Teachers

AI has a number of opportunities in the eyes of teachers with regard to efficiency, better design of instruction and commitment to individual learning. Time efficiency is among the greatest benefits since AI tools have an opportunity to automate repetitive tasks of content creation, grading, and administration, and teachers can devote more time to teaching and communication with students (Ayanwale et al., 2022). This paradigm change could possibly enhance the quality of teaching as teachers will have more time to do more constructive teaching work.

The other opportunity lies in the fact that AI can be used to facilitate personalized learning, as individual student needs can be accommodated in terms of instructional resources and feedback (Espartinez, 2024). It is especially useful in differentiated classes with different learning capacities and styles of students. The AI

may also help to create instructional materials, including the lesson plan and practice questions, which may increase the creative decisions of instructions and cut down on the amount of work (Moorhouse, 2024).

The more efficient feedback mechanisms are also facilitated with the help of AI, which gives immediate answers to queries raised by the students and detects areas of improvement which can aid in continuous learning (Moorhouse et al., 2024). Nevertheless, other researchers warn that such advantages can contribute to over-reliance on AI applications and, as a result, the autonomy and critical decision-making skills of teachers can be restricted (Gayed, 2025). Nevertheless, the possibilities provided by AI indicate that, in case they are used properly, AI can serve as a support mechanism that will allow educators to become more effective in their work instead of taking away their responsibilities.

Challenges of AI in Teaching

Although this could be advantageous, there are a number of challenges when using AI in teaching that could restrain it. The precision of the AI-generated material is one of the primary issues because inaccurate or misleading information can be generated by these tools, and when teaching, these tools can harm quality when unscrupulously checked (Montenegro-Rueda et al., 2023). This creates concerns regarding the effectiveness of the use of AI as a teaching aid, especially in the field of education, where there are high stakes for accuracy.

Another major problem is academic integrity because AI tools can also be used to promote plagiarism since they allow learners to produce assignments without making the effort to achieve good grades, thus causing damage to the learning experience (Bateman, 2025). This difficulty applies specifically to higher education, where originality and critical thinking are requirements. Moreover, excessive use of AI can also decrease the motivation of teachers and learners to engage in active learning and, as a result, decrease the acquisition of the necessary cognitive skills (Munaye et al., 2025).

Other issues occurring during interaction with AI technologies in education are ethical issues that are reflected around data privacy, bias, and responsible use of these technologies (Daher, 2025). All these factors underscore the importance of having clear guidelines and regulations that govern the use of AI in learning institutions. Moreover, teachers are not yet provided with training and professional growth, which restricts their possibilities to implement AI into their classroom activities (Fteiha et al., 2024). Teachers could be unable to effectively utilize AI tools without proper support, and it can negatively affect teaching when they do not know how to use them efficiently.

Research Gap

Though current literature has brought up valuable information about the role of AI in education, there is still a considerable lack of information about the experience of teachers in particular situations. A large majority of the research that has been done so far is quantitative, whereby the results are aimed at measuring attitudes, rates of adoption, or helping to gauge the profound experiences of teachers (Bergdahl and Sjöberg, 2025). Moreover, a significant number of studies focus on student voices, which does not allow learning how teachers perceive AI and how they treat it in the case of professional practice (Shen et al., 2025).

The context-based studies are also lacking in developing countries, and namely in the regions of developing nations like Pakistan, where educational systems face some special imposing problems in terms of infrastructure, training, and policy making. The available literature tends to apply the results of the developed situations, and they might not include the local truths (Yim and Wegerif, 2024). Thus, the unequivocal requirement is qualitative research that would encompass the perceptions of the teachers at a given educational center, including the University of Sindh, that would give a more accurate and contextually sensitive response as to the role of AI in instruction.

THEORETICAL FRAMEWORK

The Technology Acceptance Model (TAM) can help to comprehend how teachers can implement the tools of artificial intelligence (AI) in educational contexts. According to TAM, the choice of technology adoption hinges on two major factors: perceived usefulness and perceived ease of use. Perceived usefulness is a concept keeping track of how teachers think that AI can bring improvement in their teaching experience, including lesson planning, assessment, and classroom engagement (Ayanwale et al., 2022). Meanwhile, the perceived ease of use is associated with how easy and convenient teachers perceive AI tools, and this factor can affect their readiness to implement such technologies in their daily educational activities (Zhang et al., 2023).

The two factors influence the attitude of teachers towards AI and, in turn, influence their behavioural intention and actual use of AI. Studies can indicate that teachers are more prone to positive attitudes toward AI tools, as well as the thought that these tools may be useful and easy to implement in the classroom (Fteiha et al., 2024). Nonetheless, the perceptions of the complexity or lack of usefulness may create resistance or low usage of AI tools (Yim and Wegerif, 2024).

Also, recent research explains that TAM is used to study AI not only in the educational context, but the acceptance of AI depends on issues of perceived usefulness and ease of use, but also on the confidence of teachers about the use of technology and their concept about the value of AI in education (Bergdahl and Sjöberg, 2025). Just like that, studies have found that the adoption of AI in teaching is conditional on its capacity to solve the objectives of teaching and the requirements of educators working with this technology, not just the strength of the interaction capabilities (Shen et al., 2025). Besides, the willingness among teachers to use AI can be frequently determined by the background experience of working with technology and the extent of institutional support provided to it, which may identify the perceptions of usefulness and usability of AI (Ayanwale et al., 2022).

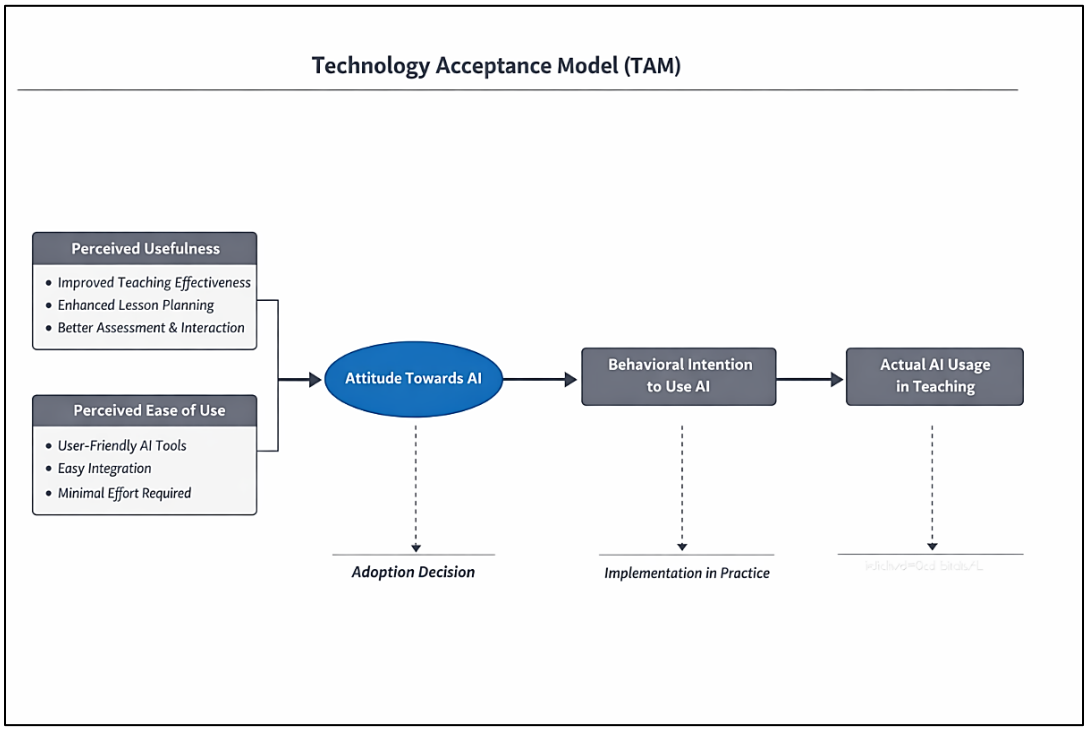

Figure 1: Technology Acceptance Model (TAM) Applied to AI in Teaching

TAM is especially applicable in the conditions of this work since it can justify why certain teachers in higher education readily accept AI platforms like ChatGPT, whereas others appear apprehensive. It can also be helpful in the framework of analysing the impact of the perception of usefulness and ease on the introduction of AI by teachers on improving the effectiveness of teaching. Thus, TAM helps to investigate opportunities and challenges, and the relationship between the attitudes of teachers and their use of AI in the educational process can be established.

METHODOLOGY

In this study, the qualitative exploratory research design based on the paradigm of interpretivism was used by viewing the views of the teachers on the concept of artificial intelligence (AI) to improve their teaching performance. The qualitative approach was deemed suitable because the research tried to investigate subject values, implications, and meanings instead of quantifying predetermined variables (Espartinez, 2024). In contrast to quantitative design that utilizes generalisation, qualitative research enables one to understand how individuals build their assumptions about new technologies in actual educational settings (Bergdahl and Sjöberg, 2025). The interpretivist approach was especially helpful, since it presupposes the construction and influence of knowledge by individuals based on their experience, which also fits the study, and views teachers in the specific study.

The study applied semi-structured interviews as its method of data collection to get rich and flexible information about the study participants. Semi-structured interviews are common whenever carrying out research in a field related to education due to the balance offered both to direct the interview and to allow the participants to develop their opinions based on their preference (Cetin et al., 2024). This approach made it possible to investigate the expected as well as the new themes connected to the opportunities and the challenges of AI in teaching. Semi-structured interviews are also better than structured ones, as they enable probing more into the answers of participants, which is critical to explaining complicated phenomena like technology adoption in the educational field (Fteiha et al., 2024).

The study population was the faculty of the University of Sindh in the Faculty of Education. Participants were selected using a convenience sample strategy, because it enabled one to get those individuals who are easily accessible and would accept taking part in the research. Even though convenience sampling can impair its generalisability, we believe convenience sampling is suitable in any case of qualitative research that requires in-depth knowledge, but does not involve finding statistics that are representative (Yim & Wegerif, 2024). As with qualitative studies, which emphasise depth more than sample size, seven teachers were picked as participants.

Data were gathered by way of a face-to-face interview lasting about 20 to 30 minutes. Individuals were interviewed and allowed to record with their consent, and these interviews were later transcribed to guarantee any errors in the information obtained. It was as a result of this that able attention could be given to what the participants said and that there was a lessening of the potentiality of interpretation error (Moorhouse, 2024). Thematic analysis according to the framework of Braun and Clarke was used to analyse the obtained data and generate propositions based on the data through familiarisation, generating initial thematic codes, evolving these codes to themes, and interpreting the results (Lo et al., 2024). This approach has been chosen because it is a flexible one, appropriate to characterize patterns in qualitative data.

Ethical issues were observed to stick to, and it was single-handedly withheld. The subjects were told the aim of the study, and their consent was got before the study was conducted. Anonymity and confidentiality were maintained by non-disclosure of participants' identities in the study. These steps provide necessary security in qualitative research to safeguard the participants and preserve the integrity of the research process (Gayed, 2025).

FINDINGS / DATA ANALYSIS

Theme 1: AI as a Tool for Enhancing Teaching Efficiency

According to the results, the perception of artificial intelligence (AI) is that it functions, in many aspects, to increase the efficiency in the teaching practice, especially with regard to lesson planning, content development, and time management. The majority of participants noted that AI assistants, including ChatGPT, helped shorten the amount of time spent on writing teaching resources, thus enabling them to concentrate more on the relationship with learners. As participant 3 admitted, "AI assists me in creating lecture material fast, particularly when limited by time, and provides me with a place to start my lessons." It will imply that AI does not have to take up the tasks of teachers overly, but exists as a belt of productivity.

Similarly, participant 1 also used and remarked that it made him plan lessons easier as he could get the ideas and then modify them as per the needs of his classes. It is the first step of a major trend because teachers do not rely entirely on the results of AI but use them as a base to enhance and correct through their expert knowledge. This selectiveness is an indication that there is a certain degree of professional judgement, that the teachers remain active in decision making and are not consumers of technology. This, however, also puts the issue of the degree to which AI can be implemented in influencing pedagogical judgement over the long-term period.

The second factor of importance in terms of efficiency was linked to the development of content and academic writing instructions. Participant 5 explained that he occasionally asked the AI to generate examples of things or descriptions, but more in situations that lack clarity, since it simplifies life. It is a sign of how useful AI was perceived in terms of facilitating teaching resources to be more dynamic and open. However, the fact that one might overlook the depth of content due to the application of AI as a means to streamline content may also be a risk unless the trend undergoes a review.

Although these are the advantages, not all the participants shared positive attitudes towards AI. Participant 7 replied, it is convenient, however, I always emphasize the information as it is not always completely true. It means that although AI will lead to efficiency, it necessitates further checks and will be devoid of the time-saving benefits to some extent.

On the whole, the results indicate that AI is considered a viable instrument that can help to improve the efficiency of the teaching process, especially in preparation and content development. Nonetheless, its success lies in the severity with which the teachers analyze the created outputs. The application of AI seems to aid teaching as opposed to completely reshaping the technological aspect, whereby the teachers have control over the use of such technology in their practice.

Theme 2: AI for Student Engagement and Personalised Learning

People also viewed AI as an aid to student engagement and personalised learning, although they had ambivalent opinions about the actual effect. Some teachers pointed out that AI allows a more interactive teaching process and offers immediate feedback, specific answers, and explanations that can accommodate the needs of different students. According to participant 2, AI-based examples are more appealing to the students since they relate better and can easily understand them. This implies that AI would be able to increase engagement by making learning both accessible and dynamic.

Participant 4 went on to elaborate, "AI assists in providing various forms of explanation of the same subject, which can be helpful to those learners who have varying speeds." This indicates the possibility of AI in promoting differentiated instruction, especially where the learning ability of pupils is diverse. Personalisation of content was regarded as one of the main strengths, and it gave teachers an opportunity to change their teaching strategies more effectively.

This was not viewed positively by all the participants, though. Participant 6 was concerned and said, Sometimes, students use AI excessively and do not even make an attempt to think independently. This brings out an important conflict between engagement and dependency, where there could be diminished interest of students taking initiative in the learning process with increased usage of the AI. Although AI can simplify the learning process, the lack of intense thinking can be encouraged by the overwhelming use of the tool.

The other concern was the superficiality of engagement. Participant 1 observed, "Students appear to be interested, and in some cases, they simply reproduce AI without realizing that." Rather, it can produce a sense of being involved without having a real understanding.

These results suggest the idea that, although AI can improve engagement and facilitate individual learning, its effect is not maximum. Educators realised that it was useful in meeting a wide range of learning requirements, but said they must balance AI implementation with conventional pedagogy. The ability of AI to facilitate engagement seems to rely on the manner in which it is incorporated in the education processes and whether it offers active learning as opposed to acting as a passively consumed product.

Theme 3: Challenges and Ethical Concerns in AI Adoption

The results showed that there were a number of difficulties and ethical issues related to the application of AI in instruction, specifically, the accuracy, integrity in academia, and excessive dependence on technology. One of the most popular fears of the participants was the credibility of AI-produced information. Participant 7 explained that the information, in some cases, can be incorrect and not fully applicable to be believed in. This is an expression of a wider problem in which educators should carefully consider the results of AI prior to utilizing them in the learning environment.

Another significant issue is academic integrity. Participant 5 elaborated that students rely on AI to work on assignments, and it is hard to tell whether it is their work. This shows the difficulty of being original and fair in evaluation in the case of AI tools being readily available. The teachers revealed that they have trouble differentiating between student and AI-generated work, which in turn brings up the question of the validity of academic assessment.

Reliance on AI was also said to be overused. Participant 6 observed that both teachers and students can be addicted to AI, thus lacking creativity and critical thinking. It is indicated that although AI is convenient, it can also hamper the acquisition of vital cognitive abilities when applied in large amounts. The objection was not only to students but also to teachers who may overuse AI in making instructional choices.

The problems related to morality were carried to the concerns about the responsible usage and the deficiency of absolute rules. According to participant 2, there ought to be proper regulations on how AI should be used in education since, at the moment, there is no clear guideline. This demonstrates that the institutional policies and support systems are not in place, and this affects the approach of AI integration among teachers.

DISCUSSION

The findings of this study provide a faint glimpse of how the teachers perceive the opportunities and threats of artificial intelligence (AI) to enhance the efficiency of teaching, and the outcomes can be evaluated critically through the perspective of the Technology Acceptance Model (TAM). The results show that perceived usefulness and perceived ease of use are the key variables of TAM that predetermine the adoption of AI among teachers. The outcomes of the high perceived usefulness are directly signified through the positive perception of AI as a tool to improve lesson planning and content development since teachers have realised that AI could optimise the processing of teaching activities. This relies on the previous research, which suggests that teachers are willing to accept AI technologies as soon as they notice that their teaching practises will benefit absolutely (Ayanwale et al., 2022).

The results of Theme 1 prove that teachers utilized AI more as an aiding tool than as a substitution for pedagogical choice, which suggests a selective and constrained use of technology. This contributes to the statement that perceived usefulness is not defined by functionality only but rather by the extent to which the technology meets the professional needs and practices of teachers (Kim et al., 2022). The necessity, however, to constantly verify AI-generated content, as pointed out by the participants, implies perceived usefulness is conditional, and not absolute. In part, it contradicts upbeat views in the literature suggesting that AI is a completely dependable teaching tool, which means that usefulness is mediated by credibility and critical analysis (Montenegro-Rueda et al., 2023).

The perceived ease of use was also observed in the results, as teachers found the AI tools easy to use because of the ease of access. This confirms the TAM assumption according to which the ease of use has a positive impact on attitudes towards the technology adoption (Zhang et al., 2023). Nevertheless, the results also demonstrate that simplicity is not enough to ensure long-term usage because accuracy and misuse issues may restrict the readiness of teachers to trust AI. This implies that the ease of use should be taken into consideration along with the perceived risks, which are not clearly stated in the original TAM framework. Past research has also raised similar issues with teachers reporting apprehension even when they acknowledged the applicability of AI tools (Fteiha et al., 2024).

Perception of usefulness and ease of using the AI also had a correlation with the intelligence of the teacher to AI, another important variable in TAM. The results of Theme 2 indicate that teachers were ambivalent, especially concerning student engagement and personalised learning. Although it was viewed that AI would be used to facilitate various learning requirements, it was also feared that AI might result in surface-level learning and poor critical thinking. Such a twofold perception is indicative of the complicated attitude formation process, as both positive and negative experiences influence teacher perceptions of AI (Beege et al., 2024). These results align with earlier studies according to which AI in learning is a two-sided resource, with both opportunities and threats regarding its use (Lo et al., 2024).

The intention to use AI was seen through the behavioural use of AI, as the participants cautiously but continuously used AI tools. Educators expressed readiness to incorporate AI in their practice, but this was determined by issues related to reliability, ethical application and student reliance. This proves the TAM assumption that behavioural intention is influenced by both perceived benefits and perceived barriers (Yim and Wegerif, 2024). The results imply that although teachers are willing to adopt AI, their willingness to do so is context-dependent, with institutional support and clarity of policy being moderating factors. This goes further to elucidate TAM by attributing the significance of the external variables, which determine the way in which the perceptions are developed and converted to action.

The last variable in TAM was the actual system use, which was expressed through a selective and cautious usage of AI in teaching practises. According to the teachers, they used AI particularly to prepare the lessons and explain some complex concepts, but did not include it in every part of teaching. It means that it is adoption that is partial and context-sensitive, which is contrary to the articles that propose a ubiquitous application of AI in education (Moundridou et al., 2024). The results thus refute the belief that positive perceptions necessarily result in intensive use, rather pointing to continuous consideration and professional judgement being influential on adoption.

Theme 3 underlines the prominent difficulties and ethical issues related to the use of AI, which serves as a deeper understanding of the shortcomings of TAM in explaining the use of technology. The problems with academic integrity, over-reliance, and insufficient guidelines reveal that the choice of the teachers is affected not only by the sense of practicality and convenience but also by general ethical and pedagogical implications (Bateman, 2025). These issues imply that TAM lacks the complexity needed to understand the adoption of technology in education, as it does not specifically take into consideration ethical aspects and the influence

of institutional policies. The same restrictions have been identified in past studies, in which TAM application in education has been criticised as a limited area of study based on individual perceptions (Daher, 2025).

In addition to that, the aspects of training and institutional support that the results have indicated do not possess training and institutional support in influencing technology adoption. The setting of this study was a place where AI integration was new, and this affected how the teachers viewed it and used the technology. This helps make the case that contextual influences are a vital determinant of the adoption of AI in practise (Gayed, 2025). It also adds weight to the necessity to revise theoretical frameworks like TAM in terms of their applicability to the reality of the education setting, especially in developing nations.

On the whole, the results partially identify the TAM assumptions because the dominant influence on the adoption of AI by teachers was their perceptions of usefulness, ease of use, and attitudes. Nevertheless, the paper also notes that these variables are influenced by further variables of ethical issues, trust and institutional context, which are beyond the model itself. Thus, although TAM is a valuable framework to explain the adoption of AI, it needs to be contextualised to ensure that its contexts cover the intricacies of the use of technology in higher education.

CONCLUSION AND RECOMMENDATIONS

This paper attempts to understand perceived opportunities and challenges posited by the application of artificial intelligence (AI) in improving the effectiveness of teaching in higher education. By the outcomes, it was revealed that AI is widely perceived as a supportive tool that enhances the process of teaching, especially in lesson planning and content creation, with potential opportunities for personalised learning and higher engagement among students. Such advantages are, however, followed by a lot of concerns concerning accuracy, academic dishonesty, over-reliance and incoherent institutional guidance. It was also shown that teachers are cautious in using AI, making selective use, not integrating its use in all aspects of teaching practise.

On the basis of these results, it is possible to suggest some recommendations. First, schools ought to offer systems like training programmes to assist teachers in learning how to utilise AI in a beneficial, accountable way. Second, it should be equipped with clear policies and a set of ethical rules that control the use of AI, especially academic integrity and assessment. Third, AI should be used in a moderate way such that it aids and does not eliminate critical thinking and pedagogical judgment. Lastly, the institutional support and availability of reliable sources of technology should be enhanced so that teachers can comfortably embrace the use of AI in their practise.

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