AWARENESS AND UTILISATION OF ARTIFICIAL INTELLIGENCE IN TEACHING AND LEARNING OF BUSINESS EDUCATION: KWARA STATE COLLEGE OF EDUCATION MODEL

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Abstract
This study examined awareness, utilisation, and challenges of Artificial Intelligence (AI) in teaching and learning of business education among lecturers and students in public Colleges of Education in Kwara State, Nigeria. The study addressed the concern that, despite the growing relevance of AI in education, its level of awareness, extent of utilisation, and the challenges hindering effective adoption in business education remain indistinguishable. Consequently, the objective was to examine these aspects among lecturers and students. A descriptive survey design was employed, covering a population of 457 respondents (35 lecturers and 422 students), from which 183 responses (26 lecturers and 157 students) were retrieved through a structured, expert-validated questionnaire. Reliability of the instrument was established through a pilot test, yielding a Cronbach's alpha of 0.871, while the retrieved data were analysed using frequency counts, percentages, mean, and standard deviation. Findings revealed a high level of AI awareness among respondents, with 82.5% indicating they clearly understood AI concepts and applications relevant to business education. Utilisation of AI tools was uneven; 74.2% reported regular use of basic AI applications such as ChatGPT, Gemini, and virtual learning assistants, whereas advanced tools such as simulations and virtual laboratories were used by only 38.4% of respondents. Key challenges included inadequate infrastructural facilities (71.6%), lack of technical skills (68.9%), unstable internet connectivity (64.3%), and absence of institutional policies (59.1%). Based on these findings, the study concludes that although awareness and basic utilisation of AI are encouraging, effective integration remains constrained by infrastructural and institutional limitations. It recommends stronger infrastructural support from the Federal Government, NCCE, and NUC, enhanced staff and student capacity-building, and clear institutional policies to foster meaningful AI adoption in business education.

***Keywords*:** Artificial Intelligence, Awareness, Utilisation, Business Education, Colleges of Education

Introduction
The proliferation of artificial intelligence in contemporary educational systems has fundamentally transformed how institutions structure pedagogy, support learners, and manage academic operations. Artificial intelligence refers to a computer system's ability to perform tasks that traditionally require human intelligence, such as reasoning, analysis, interpretation, and decision-making, providing a foundation for advanced instructional tools that enhance engagement and productivity (Nguyen et al., 2023). A broad spectrum of artificial intelligence applications now supports contemporary educational practices. These include conversational agents such as ChatGPT and Gemini; content generation tools like QuillBot; automated assessment systems, including Gradescope; intelligent tutoring systems such as Querium; and adaptive learning platforms exemplified by Knewton, Smart Sparrow, and Carnegie Learning. These tools enable personalised feedback, interactive content

delivery, simulation-based learning, and adaptive instructional pathways, which are particularly relevant for programs emphasising analytical thinking, practical skills, and decision-making competencies (Afolabi & Okediran, 2022; Li, Hu, & Wang, 2024). The effectiveness of these innovations, however, depends mainly on the awareness and active engagement of both educators and learners in educational settings.

Empirical studies indicate gaps in practical knowledge and utilisation. For instance, lecturers at the University of Ibadan held positive perceptions of AI but were limited in their familiarity with its tools, constraining practical adoption (Ezekiel & Akinyemi, 2022). Similarly, research across Nigerian higher education institutions shows that students demonstrate moderate awareness and willingness to use AI, yet infrastructural challenges, insufficient training, and limited institutional support hinder widespread implementation (Ibrahim et al., 2024; Hamzat & Ansah, 2025). However, a study by Aluko et al. (2025) found that lecturers exhibit low awareness despite high readiness to adopt AI, highlighting the need for focused sensitisation and capacity-building programs.

Statement of the Problem

Artificial Intelligence (AI) is increasingly recognised as a transformative agent in educational systems, offering opportunities for personalised learning, enhanced pedagogical approaches, and administrative efficiency (Mahuta & Abubakar, 2022). Despite these prospects, empirical evidence indicates that awareness and utilisation of AI among educators and students in Nigeria remain uneven. For example, Ezekiel and Akinyemi (2022) observed that lecturers at the University of Ibadan generally held favourable perceptions of AI, yet practical adoption was constrained by limited familiarity with AI tools. Although these lecturers expressed willingness to integrate AI into teaching, insufficient training and inadequate infrastructural support impeded effective implementation. Similarly, student teachers at Ekiti State University demonstrated a growing awareness of AI technologies, but actual utilisation was inconsistent; some students displayed competence in applying AI tools, whereas others were constrained by limited resources and confirmed that there was no training at all or that training was inadequate (Adeniran et al., 2022).

Evidence from secondary education contexts further underscores this challenge. Musa et al. (2022) reported low awareness and utilisation of AI applications, including ChatGPT and Quillionz, among biology students, revealing systemic gaps in exposure and access to emerging technologies. Structural barriers such as deficient digital infrastructure, scarcity of skilled personnel, resistance to change, and the absence of comprehensive institutional policies have been identified as persistent inhibitors of AI adoption in Nigerian higher education (Mahuta & Abubakar, 2022).

Given the pivotal role of Colleges of Education in preparing future business educators, inadequate awareness and utilisation of AI among lecturers and students may limit the development of modern pedagogical competencies and compromise students' readiness for technologically advanced workplaces. This study, therefore, aims to investigate the current levels of awareness, utilisation, and barriers to AI integration in teaching and learning Business Education within Kwara State Colleges of Education, generating evidence to inform targeted training programs, institutional policies, and infrastructural investments.

Research Questions

1. What is the level of awareness of AI in teaching and learning of Business Education among lecturers and students in Kwara State Public Colleges of Education?
2. What is the level of utilisation of AI in the teaching and learning of Business Education among lecturers and students in Kwara State Public Colleges of Education?
3. What challenges hinder AI adoption among lecturers and students in Kwara State Public Colleges of Education?

Literature Review

AI in Education

Artificial intelligence (AI) is rapidly transforming educational systems worldwide by reshaping instructional processes and learning experiences. AI refers to computer-based systems capable of performing tasks that typically require human intelligence, such as reasoning, decision-making, language processing, and problem-solving, using technologies like machine learning and natural language processing (Nguyen et al., 2023). In the educational sector,

Artificial Intelligence is manifested through a variety of educational tools, including conversational agents such as ChatGPT and Gemini; adaptive learning platforms like Knewton and Carnegie Learning; assessment technologies such as Gradescope; intelligent virtual tutoring systems exemplified by Querium; and content generation applications such as Quillionz.

Artificial Intelligence is manifested through a variety of educational tools, including conversational agents (e.g., ChatGPT, Gemini, Google Bard, IBM Watson Classroom), adaptive learning platforms (e.g., Knewton, Carnegie Learning), assessment technologies (e.g., Gradescope), virtual tutoring systems (e.g., Querium), and content-generation tools (e.g., Quillionz), among others, illustrating its broad applicability in enhancing teaching and learning processes. These innovations support personalised instruction, streamline administrative processes, and enhance pedagogical effectiveness across institutions (Nna Kue & Waghara, 2024). One of the most significant changes brought by AI lies in personalised and adaptive learning, with intelligent tutors and assistants that study how students interact with content and adjust lessons to match each learner's pace and needs. Ramteja et al. (2023) demonstrated this with an AI-enabled assistant that generates tailored learning paths, quizzes, and feedback using natural language processing, enabling learners to engage with the material in ways that reduce cognitive strain and support more profound understanding.

At a broader institutional level, AI contributes to both proactive planning and daily teaching activities, as most universities use AI systems to support admissions, scheduling, and resource allocation while also relying on AI-driven tools for content delivery, automated grading, and real-time feedback. Mallik and Gangopadhyay (2023) observed that proper integration requires both sides of this process to work together. However, yet issues such as data privacy, algorithmic fairness, and unequal access continue to limit the full realization of AI's potential. In Nigeria, several studies show that although interest in AI is rising within tertiary institutions, adoption remains slow. For instance, a study found that students and lecturers report moderate awareness, limited technical exposure, and concerns about infrastructure and institutional readiness (Abubakar et al., 2024). These challenges are particularly noticeable in teacher training environments where AI could strengthen professional development, yet progress is restricted by inadequate support and unclear policy direction (Suleiman, 2024).

Awareness and Readiness

Awareness and readiness are pivotal precursors for the effective integration of Artificial Intelligence (AI) in educational ecosystems. Awareness refers to the depth of knowledge that educators and learners possess regarding AI technologies and their potential applications. Readiness, on the other hand, encompasses the attitudinal, cognitive, and operational preparedness needed to successfully adopt such innovations. Empirical investigations within Nigeria reveal a nuanced landscape characterised by both optimism and constraints. Samaila et al. (2024) observed that while lecturers in Kwara State demonstrated a conceptual understanding of AI-driven assessment modalities, their practical proficiency remained circumscribed. However, a pronounced willingness to engage with these systems existed contingent upon adequate training and institutional facilitation. Similarly, Eke (2024) reported that teacher educators exhibited elevated readiness and favourable dispositions toward AI tools such as automated grading systems and virtual tutors; yet, infrastructural inadequacies, such as unreliable internet connectivity and limited avenues for professional development, substantially mitigated their capacity for full adoption.

Utilisation of AI

The use of artificial intelligence in higher education reflects the extent to which lecturers and students meaningfully adopt AI-driven systems to enhance instruction, improve assessment precision, and improve administrative efficiency. Current empirical evidence illustrates that although enthusiasm toward AI is gradually intensifying across Nigerian tertiary institutions, its substantive deployment remains embryonic. Ezekiel and Akinyemi (2022) observed that lecturers at the University of Ibadan possessed remarkably affirmative dispositions toward AI's pedagogical value. Yet, their actual engagement was constrained by infrastructural inadequacies, insufficient capacity-building, and uncertainties surrounding operational integration. Correspondingly, Okoro et al. (2024), examining business education lecturers in Cross River State, reported a generally hesitant utilisation pattern, noting that while educators recognised AI's potential to enhance instructional delivery in accounting, deficits in competence and weak institutional support continued to impede full adoption. Ibrahim et al. (2024) further demonstrated that universities employ AI modestly in assessment processes through automated grading and analytic tools, although progress is stifled by limited access to advanced technologies. Among learners, Ezeanya et al. (2024) identified that although AI-driven platforms such as chatbots and adaptive learning systems enhance cognitive engagement, only a minority of students report substantive usage. Collectively, these studies suggest that AI utilisation in Nigerian higher education is advancing slowly, primarily constrained by infrastructural fragility, inadequate training, and the absence of comprehensive institutional frameworks.

Challenges Facing the Use of AI

Many institutions continue to encounter substantial obstacles in their efforts to integrate artificial intelligence into academic processes, and these difficulties generally span structural, technical, ethical, and financial domains. A central challenge is the persistent absence of adequate infrastructure because meaningful AI deployment requires dependable internet connectivity, contemporary computing devices or smartphones, steady electricity, and operational data servers, yet many Nigerian institutions still fall short of these essential technological prerequisites, making it difficult for sophisticated real time systems such as adaptive learning environments, automated evaluation tools, and intelligent tutoring platforms to function as intended. The shortage of technical expertise further complicates adoption because many institutions lack personnel who possess a deep understanding of AI operations or the pedagogical competence needed to embed these tools into classroom activities, and even educators who express interest often do not receive sufficient training to use or manage these technologies effectively. Financial limitations present another major barrier since AI solutions demand considerable investment in software, equipment, and continuous system

upkeep, costs that many public tertiary institutions struggle to meet. Ethical and privacy issues, particularly those related to data protection, bias in algorithms, and concerns about academic integrity, also contribute to hesitation among users. Meanwhile, anxieties that AI may disrupt long-established teaching roles create additional resistance that slows institutional readiness for meaningful innovation.

Methodology

This study adopted a descriptive survey research design, which is suitable for investigating the awareness and utilisation of Artificial Intelligence (AI) in the teaching and learning of Business Education, as it enables the collection of data from a representative population without manipulating variables. The population consisted of 35 business education lecturers and 422 NCE 3 students from the three public Colleges of Education in Kwara State, namely, College of Education, Ilorin; College of Education, Oro; and College of Education, Lafiagi, amounting to a total of 457 individuals. Given the manageable size of the population, the entire population was used for the study, with 183 valid responses retrieved from 26 lecturers and 157 students, in line with Nworgu (2022), who emphasized that the full population may be studied when feasible to ensure comprehensive data collection. The major instrument for data collection was a structured questionnaire, developed by the researcher and validated by two experts in the Faculty of Education, Al-Hikmah University. The questionnaire was designed to elicit information on demographic characteristics, awareness, utilization, and challenges facing the implementation of AI adoption in business education. Responses were measured using a four-point Likert scale ranging from Strongly Agree (4) to Strongly Disagree (1), and a pilot study involving 20 respondents at Osun State College of Education yielded a Cronbach's alpha of 0.871, indicating high reliability. Data collection was conducted both physically and online through a form, with respondents completing the questionnaire independently while the data retrieved were analyzed using descriptive statistics such as frequency, percentage, mean, and standard deviation in addressing research questions.

Results

Demographic Distribution

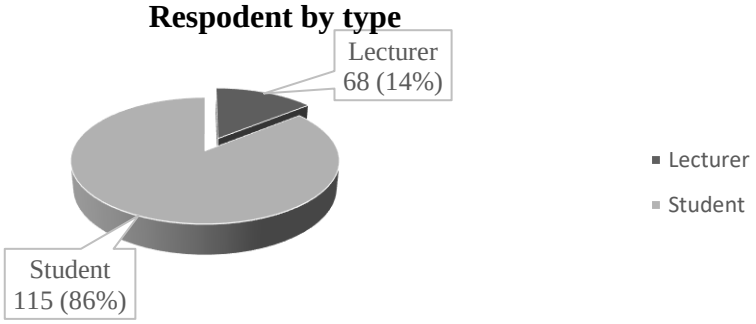

Fig. 1: Distribution of respondents by type
***Source**: Field survey, 2025*

The figure above shows that out of the total 183 participants in this study, 26 (14.2%), approximated to 14%, were lecturers while 157 (85.8%) approximated to 86%, were students.

Research Question One: What is the level of awareness of AI in the teaching and learning of Business Education among lecturers and students in Kwara State Colleges of Education?

Table 1: Respondents' Perceptions on Awareness of AI

S/N	Statement	Frq.	SA	A	D	SD	Mean	Std. D.	Remark
1.	I am aware of what Artificial Intelligence (AI) means in the context of education.	183	41 (22.4%)	100 (54.6%)	40 (21.9%)	2 (1.1%)	2.98	0.699	Agreed
2.	I have heard about the use of AI tools (e.g., ChatGPT, Jasper AI, Gemini AI, Meta AI, Quillionz, automated grading systems, virtual tutors, adaptive learning platforms) in the teaching and learning of Business Education.	183	52 (28.4%)	82 (44.8%)	46 (25.1%)	3 (1.6%)	3.00	0.777	Agreed
3.	I am familiar with examples of AI applications relevant to Business Education.	183	39 (21.3%)	102 (55.7%)	41 (22.4%)	1 (0.5%)	2.98	0.679	Agreed
4.	Most people in my department (lecturers and students) are aware of how AI can be used in Business Education.	183	37 (20.2%)	95 (51.9%)	51 (27.9%)	0 (0.0%)	2.92	0.691	Agreed
5.	I regularly come across publications or online articles discussing AI in education.	183	24 (13.1%)	106 (57.9%)	52 (28.4%)	1 (0.5%)	2.84	0.642	Agreed
6.	I believe that AI can improve the quality and efficiency of teaching and learning in Business Education.	183	34 (18.6%)	91 (49.7%)	55 (30.1%)	3 (1.6%)	2.85	0.730	Agreed
	Total / Average	1098	227 (19.7%)	576 (49.7%)	285 (24.6%)	10 (0.9%)	2.93	0.703	Agreed

***Source**: Author's Field survey, 2025*

In Table 1 above, the findings indicated a high level of agreement towards the awareness of AI among lecturers and students. Specifically, 77.0% (141) of respondents agreed or strongly agreed that they are aware of what AI means in the context of education, while 22.9% (42) were not aware. Awareness of AI tools or platform, such as ChatGPT, Jasper AI, and automated grading systems, was slightly higher, with 73.2% (134) of respondents acknowledging familiarity, compared to 26.7% (49) who were not aware. Additionally, 77.0% (141) of respondents reported being familiar with examples of AI applications relevant to business education, indicating that practical exposure complements general awareness. Also, regarding the perception of peers, 72.1% (132) of respondents agreed that most people in their departments are aware of how AI can be used in teaching and learning, suggesting a moderate diffusion of knowledge across the academic environment. However, regular engagement with publications or online articles discussing AI was reported by 71.0% (130) of respondents, revealing a slightly lower proactive pursuit of updated AI knowledge. Furthermore, 68.3% (125) of respondents believed that AI can enhance the quality and efficiency of teaching and learning, highlighting positive attitudes toward its potential benefits.

Research Question Two: What is the level of the utilisation of AI in the teaching and learning of business education among lecturers and students in Kwara State Colleges of Education?

Table 2: Perceptions of respondent on AI Utilisation

S/N	Statement	Frq.	SA	A	D	SD	Mean	Std. D.	Remark
1.	I use or engage with AI tools (such as ChatGPT, Jasper AI, Gemini AI, Meta AI, Quillionz, automated grading systems, virtual tutors, adaptive learning platforms) in teaching or learning Business Education.	183	36 (19.7 %)	100 (54.6%)	45 (24.6%)	2 (1.1 %)	2.93	0.69 6	Agreed
2.	The Business Education department in my college employs AI to support instructional delivery and learning activities.	183	37 (20.2 %)	100 (54.6%)	45 (24.6%)	1 (0.5 %)	2.95	0.68 5	Agreed
3.	I participate in or design assignments and activities that	183	16 (8.7%)	107 (58.5%)	51 (27.9%)	9 (4.9 %)	2.71	0.69 4	Agreed

S/N	Statement	Frq.	SA	A	D	SD	Mean	Std. D.	Remark
	involve interacting with AI applications.								
4.	AI-powered software is used to customize learning experiences for Business Education students in my college.	183	25 (13.7 %)	104 (56.8%)	52 (28.4%)	2 (1.1 %)	2.83	0.662	Agreed
5.	Overall, AI is actively utilised in the teaching and learning of Business Education in my college.	183	30 (16.4 %)	96 (52.5%)	50 (27.3%)	7 (3.8 %)	2.81	0.747	Agreed
6.	I engage with or utilize AI-assisted simulations, virtual laboratories, or case studies in Business Education.	183	24 (13.1 %)	90 (49.2%)	61 (33.3%)	8 (4.4 %)	2.71	0.747	Agreed
	Total / Average	1098	168 (18.3 %)	597 (51.6%)	304 (26.3%)	29 (2.5 %)	2.82	0.713	Agreed

***Source**: Author's Field survey, 2025*

From Table 2 above, 74.3% (136) of the respondents agree that they personally use or engage with AI tools, such as ChatGPT, Jasper AI, Gemini AI, Meta AI, QuillBot, automated grading systems, virtual tutors, and adaptive learning platforms, in teaching or learning business education, whereas 25.7% (47) of the respondents disagreed. In terms of institutional support, 74.8% (137) of respondents reported that the business education department in their colleges employs AI to support instructional delivery and learning activities, while 25.2% (46) indicated otherwise. Likewise, 67.2% (123) of respondents reported participating in using or designing assignments and activities involving AI applications, compared to 32.8% (60) who did not participate or denied using AI for assignment or learning activities. Additionally, 70.5% (129) of respondents agreed that AI-powered software is used to customise learning experiences for business education students, while 29.5% (54) disagreed. Overall, 68.9% (126) of respondents affirmed that AI is actively used in the teaching and learning of business education in their colleges, while 31.1% (57) indicated otherwise. Finally, engagement with AI-assisted simulations, virtual laboratories, or case studies was acknowledged by 62.4% (114) of respondents, while 37.6% (69) did not engage with these applications. These findings collectively

suggest that although the utilisation of AI in teaching and learning is widespread among both lecturers and students, its application and uses vary across different tools and activities.

Research Question Three: What challenges hinder AI adoption among lecturers and students in Kwara State Colleges of Education?

Table 3: Perceptions of respondent on Challenges facing the use of AI

S/N	Statement	Frq.	SA	A	D	SD	Mean	Std. D.	Remark
1.	Lack of technical skills among lecturers and students is a significant challenge to the use of AI in Business Education.	183	34 (18.6%)	114 (62.3%)	34 (18.6%)	1 (0.5%)	2.99	0.629	Agreed
2.	Insufficient infrastructure (such as internet access, computers, stable electricity, the cost of data subscriptions, and other digital devices) hinders the effective use of AI in my college.	183	28 (15.3%)	115 (62.8%)	39 (21.3%)	1 (0.5%)	2.93	0.621	Agreed
3.	There is inadequate funding to support the adoption of AI technologies in Business Education.	183	26 (14.2%)	108 (59.0%)	49 (26.8%)	0 (0.0%)	2.87	0.629	Agreed
4.	Resistance to change among lecturers and students makes it challenging to implement AI in teaching and learning Business Education.	183	22 (12.0%)	109 (59.6%)	50 (27.3%)	2 (1.1%)	2.83	0.639	Agreed

S/N	Statement	Frq.	SA	A	D	SD	Mean	Std. D.	Remark
5.	Data privacy and security concerns discourage the use of AI in Business Education in my college.	183	30 (16.4%)	98 (53.6%)	53 (29.0%)	2 (1.1%)	2.85	0.691	Agreed
6.	My college does not have a clear institutional policy on integrating AI into Business Education.	183	25 (13.7%)	98 (53.6%)	55 (30.1%)	5 (2.7%)	2.78	0.708	Agreed
	Total / Average	1098	165 (16.0%)	642 (55.5%)	280 (24.2%)	11 (1.3%)	2.87	0.653	Agreed

***Source**: Author's Field survey, 2025*

Also, from Table 3 above, 80.9% (148) of the respondents agree that lack of technical skills among lecturers and students is a significant challenge facing the use of AI in business education in their colleges, whereas 19.1% (35) of the respondents disagreed. Similarly, 78.1% (143) of the respondents agree that insufficient infrastructure, such as internet access, lack of stable electricity, hikes in data tariff plans, and a shortage of computers and other digital devices, hinders the effective use of AI in their colleges. In comparison, 21.9% (40) of the respondents disagreed. Inadequate funding to support the adoption of AI technologies was also identified as a significant barrier, with 73.2% (134) of the respondents agreeing and 26.8% (49) disagreeing. Furthermore, resistance to change among lecturers and students was reported by 71.6% (131) of the respondents as a factor that makes it challenging to implement AI in teaching and learning, while 28.4% (52) disagreed. Data privacy and security concerns were highlighted by 70.2% (128) of respondents as discouraging the use of AI, compared to 29.8% (55) who did not see it as a challenge. Finally, 67.3% (123) of respondents agreed that their colleges do not have a clear institutional policy on integrating AI into business education, whereas 32.7% (60) disagreed.

Discussion of Findings

The findings from Table 1 indicate a generally high level of awareness of Artificial Intelligence (AI) among lecturers and students in Kwara State Colleges of Education. Specifically, 77.0% of respondents reported awareness of AI in the context of education, while 22.9% indicated low awareness. This finding aligns with prior research by Adeyemi and Fakolujo (2023) and Nwankwo and Ojo (2023), who reported that a significant proportion of Nigerian educators have incorporated AI tools into their teaching practices and feel confident in their ability to integrate these technologies. Similarly, 73.2% of respondents acknowledged familiarity with AI tools such as ChatGPT, automated grading systems, and virtual tutors, and 77.0% were familiar with practical AI applications relevant to business education, reflecting both conceptual and applied knowledge. Also, the perception that 72.1% of respondents believed most colleagues are aware of AI suggests moderate diffusion of knowledge within departments, corroborating findings by Roseline (2022), who noted that business educators generally hold positive views toward AI integration, but awareness across

peers may be uneven. The 71.0% of respondents actively engaging with AI-related publications indicates a proactive interest in AI knowledge. However, the slightly lower engagement compared to general awareness highlights areas for continued professional development. Furthermore, the finding that 68.3% believe AI can enhance the quality and efficiency of teaching aligns with the conclusions of Jubril (2024), who observed that AI can personalise learning, improve instructional efficiency, and promote innovation in educational delivery.

The findings presented in Table 2 show that 74.3% of respondents actively engage with AI tools such as ChatGPT, Jasper AI, Gemini AI, automated grading systems, etc. Similarly, 74.8% acknowledged that their departments employ AI to support instructional delivery. Participation in AI-driven assignments and learning activities was reported by 67.2% of respondents. In comparison, 70.5% indicated that AI-powered software is used to customise learning experiences, and 62.4% engaged with AI-assisted simulations or virtual laboratories. Collectively, these findings reflect a high level of agreement on AI utilisation in business education, though engagement varies across tools and instructional activities. These results are consistent with prior studies, such as Ajayi and Olanrewaju (2022), who reported that 65% of Nigerian educators experienced increased teaching efficiency due to AI, while Okon and Afolabi (2023) highlighted that 77% of teachers proactively seek out AI tools to enhance educational practices. Similarly, Nurein (2024) observed that while specific AI tools, such as facial recognition systems and administrative applications, are used, overall adoption remains uneven. The variability in engagement across activities, particularly in AI-assisted simulations, underscores the need for expanded access to advanced AI applications, capacity-building programs, and consistent departmental support to foster uniform utilisation (Amesi, 2022; Jubril, 2024).

Table 3 highlights several challenges affecting AI adoption in teaching and learning activities in business education. Lack of technical skills emerged as the most significant barrier, with 80.9% of respondents reporting insufficient proficiency. Similarly, inadequate infrastructure was identified by 78.1%, insufficient funding by 73.2%, and resistance to change among lecturers and students by 71.6%. Data privacy and security concerns were acknowledged by 70.2%, while 67.3% reported the absence of clear institutional policies guiding AI integration. These findings underscore the multifaceted nature of barriers, encompassing human, technical, financial, and institutional dimensions. The observed challenges resonate with prior research such as Adebayo and Olatunji (2023), who reported insufficient training as a critical obstacle; Eze and Musa (2023), who highlighted high costs as a barrier in using AI; and Nwankwo and Okoro (2023) that emphasized on technical and resource limitations faced by educators as one of the challenges facing the full adoption of AI. Resistance to change and ethical concerns, including data privacy, mirror the findings of Eziechine (2023) and Njuko and Nwosu (2024), who suggest that apprehension about ethical implications can limit AI adoption even when awareness exists. The lack of institutional policies reflects the gap noted by Olaniyi (2024), which underscores the need for structured frameworks to guide AI integration into Business Education programs.

Conclusion

Based on the results, awareness of AI among lecturers and students is generally high, with many demonstrating both conceptual understanding and practical familiarity with AI tools relevant to Business Education. Utilisation is notable for ChatGPT, Jasper AI, and automated grading systems, etc., even though engagement with simulations and virtual laboratories is limited. Despite this awareness and utilisation, its integration is constrained by inadequate technical skills, poor

infrastructure, limited funding, resistance to change, and unclear institutional policies, indicating that targeted training, investment, and policy development are essential for effective integration.

Recommendations

Based on the findings of this study, the following recommendations were proposed.

1. Colleges of Education and other tertiary institutions should organise regular training and workshops to enhance lecturers' and students' skills in effectively using AI tools.
2. Colleges of Education and other tertiary institutions should invest in reliable infrastructure, including internet access, modern computers, and AI software, to support teaching and learning.
3. Government, regulatory bodies (such as NUC and NCCE), and tertiary institutions should develop clear policies and guidelines for AI integration in education and provide support to ensure widespread adoption and reduce resistance.

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