

# AI UTILIZATION AND INSTRUCTIONAL DELIVERY: EVIDENCE FROM BUSINESS EDUCATION LECTURERS IN SOUTH-WEST NIGERIAN UNIVERSITIES

EMMANUEL OLATUNBOSUN AJISAFE

DEPARTMENT OF BUSINESS EDUCATION, FACULTY OF VOCATIONAL AND TECHNICAL EDUCATION, ADEYEMI FEDERAL UNIVERSITY OF EDUCATION, ONDO STATE, NIGERIA

*Corresponding author:* [ajisafeoe@afued.edu.ng](mailto:ajisafeoe@afued.edu.ng)

To cite this article (APA): Ajisafe, E. O. (2025). AI utilization and instructional delivery: Evidence from business education lecturers in South-West Nigerian universities. *AAU Journal of Business Educators*, 5(2), 124-133.

## **Abstract**

*This study investigated AI utilization and instructional delivery in South-West Nigerian universities. A descriptive survey design was used with a population of 123 lecturers across the south-west geopolitical zone. A census sampling was adopted because of the population size. Data was collected with a questionnaire and was validated by three experts in ICT; while the reliability index yielded 0.78 coefficient using Cronbach alpha. Analysis was done using descriptive statistics, Pearson correlation, and regression techniques which revealed a low AI tools utilization, with AI-driven platforms like intelligent tutoring systems and virtual assistants being underused. A significant positive relationship was found between AI utilization and improved instructional outcomes, including feedback mechanisms, content delivery and student engagement. The study recommended professional training, policy support and infrastructural development to enhance AI integration in Business Education.*

*Keywords: Artificial Intelligence, Business Education, Instructional Delivery, Utilization, University Lecturers*

## **Introduction**

Instructional delivery is a central aspect of teaching and learning in higher education and plays a significant role in determining the quality of graduate outcomes. In Nigerian universities, where business education is designed to equip students with both theoretical knowledge and practical competencies, the concept of instructional delivery assumes a critical center of discussion. Effective instructional delivery is expected to bridge the gap between classroom knowledge and workplace requirements, ensuring that graduates are prepared for entrepreneurship, employment and lifelong learning. With the advent of digital technologies and the increasing emphasis on employability skills, instructional delivery in Nigerian universities has evolved beyond traditional lecture methods to incorporate modern, technology-enhanced and learner-centered strategies (Dikeocha, Efughi, Peters, & Eneremadu, 2023). Instructional delivery generally refers to the methods, strategies and technologies used by lecturers to facilitate learning and evaluate student performance in the teaching and learning process. In the Nigerian university context, instructional delivery in business education extends beyond the transmission of knowledge to include the acquisition of functional skills in areas such as entrepreneurship, information and communication technology (ICT), management and accounting. Business education lecturers are therefore expected not only to deliver content but also to create learning experiences that develop critical thinking, problem-solving, and digital competencies among students (Oguejiofor & Obigwe, 2023).

There is multidimensional view of instructional delivery rooted in the understanding that business education is a skill-oriented discipline; with the focus that instructional approaches must be practical, interactive and responsive to workplace demands. The emphasis, it is opined should not just be on what is taught, but how it is delivered to produce graduates capable of adapting to global changes in the business environment. In Nigerian universities, the integration of ICT into instructional delivery has become increasingly significant. Tools such as e-learning platforms, cloud-based applications and smart boards are now widely recognized as



enablers of effective teaching and learning. According to Wagbara (2023), business education lecturers in South-South Nigerian universities demonstrated strong competence in using internet networks and cloud-based tools but showed limited proficiency with interactive smart boards. This finding reflects a broader trend of uneven ICT adoption, where lecturers are comfortable with basic digital tools but less confident with advanced technologies. The integration of technology in instructional delivery is crucial for several reasons. First, it enhances interactivity and provides access to a wide range of instructional resources. Second, it supports blended and flexible learning, which is increasingly demanded by students. Third, it aligns business education in Nigeria with global standards, where technology-mediated learning has become the norm. Despite these advantages, ICT adoption in Nigerian universities is often constrained by inadequate infrastructure, poor internet connectivity, and inconsistent power supply (Falobi, Sansadeen, & Okuneye, 2023).

However, many business education lecturers in Nigerian universities continue to rely heavily on traditional lecture methods, which are teacher-centered and limit students' active engagement. This reliance is often attributed to limited training, institutional inertia, and the absence of adequate support systems for pedagogical innovation (Falobi et al., 2023). Consequently, while awareness of learner-centered methods is growing, their adoption remains uneven across Nigerian universities. Despite significant progress, instructional delivery in Nigerian universities faces a number of challenges. First, there is inadequate ICT infrastructure, including poor internet access, lack of modern teaching tools and unstable electricity supply. These infrastructural limitations often force lecturers to rely on traditional teaching methods rather than technology-driven approaches (Falobi et al., 2023). Second, there are gaps in lecturers' digital competencies. While many lecturers can effectively use basic online platforms, they lack confidence with more advanced instructional tools such as virtual learning management systems and smart boards (Wagbara, 2023).

Additionally, institutional policies and support structures for instructional innovation are often weak. Limited opportunities for professional development, coupled with insufficient funding for ICT facilities, undermine lecturers' ability to adopt modern instructional strategies. These challenges collectively limit the effectiveness of instructional delivery and hinder the achievement of business education objectives in Nigerian universities. The quality of instructional delivery in Nigerian universities has direct implications for graduate employability. Although, business education programmes are designed to prepare students with competencies that are relevant to the modern workplace, but, when instructional delivery is effective and unable to integrate ICT into its curriculum; adopting learner-centered methods and aligning with industry needs; the graduates won't be better positioned to succeed in the labor market (Dikeocha et al., 2023). Conversely, ineffective instructional delivery risks producing graduates who lack practical skills and adaptability. To address this, Nigerian universities must prioritize investment in ICT infrastructure, provide continuous training for lecturers and institutionalize innovative pedagogical approaches. By doing so, they can enhance the quality of business education and ensure that graduates are both knowledgeable and employable, especially in this era of artificial intelligence.

Artificial Intelligence (AI) refers to computer systems that can perform tasks typically with minimal human efforts. The modes of instructional delivery in Nigerian universities have diversified in recent years, particularly in the wake of the COVID-19 pandemic. Studies show that both synchronous (real-time, interactive) and asynchronous (self-paced) approaches are employed in the delivery of business education courses. For instance, Okeke-Ezeanyanwu, Makwe, and Ezenwaji (2023) reported that asynchronous instructional tools are used to a very high extent, while synchronous platforms are also widely applied. This shift reflects the growing acceptance of blended learning as a sustainable model in Nigerian higher education. Asynchronous delivery enables students to access course materials at their convenience, fostering independent learning and flexibility, while synchronous delivery ensures interaction between lecturers and students, promoting engagement and immediate feedback. The adoption of both modes demonstrates a progressive trend in instructional delivery in Nigerian universities, although their effectiveness is often dependent on the availability of ICT infrastructure and the competence of lecturers in handling digital platforms.

AI involvement of human intelligence in education without exception to business education includes adaptive learning systems, automated grading, chatbots, virtual assistants, and predictive analytics (Luckin et al., 2021). The new curriculum of Business Education and technology integration focuses on equipping students with knowledge and skills in business practices. According to Olawale & Salami, 2022, as business operations become digitized, integrating emerging technologies in instruction becomes imperative. Instructional delivery entails methods and techniques employed by educators to facilitate learning. AI tools can enhance delivery through personalization, real-time feedback, and learning analytics (Kebritchi et al., 2020). Previous studies



(Aina & Akinyemi, 2022; Yusuf & Balogun, 2023) have shown that while some Nigerian lecturers are aware of AI tools, actual usage remains low due to digital literacy gaps and infrastructural limitations; meanwhile, studies outside the country reveal that AI adoption leads to improved learner performance and teacher productivity.

The rapid evolution of technology, particularly AI, has revolutionized educational practices worldwide. In university settings, AI tools such as intelligent tutoring systems, automated grading, and adaptive learning platforms are reshaping how educators interact with students. In Business education, where digital skills are pivotal, the adoption of AI promises increased efficiency, flexibility and student-centered instruction (Ally et al., 2021). Despite these potential roles, evidence on the actual integration of AI tools among Business Education lecturers in Nigeria remains limited. AI tools for teaching and learning are technologies powered by machine learning and data-driven algorithms that enhance the educational experience for both teachers and students. These tools can support instruction, personalize learning, automate tasks and provide intelligent feedback. Some of the key AI tools used in teaching and learning include, but not limited to intelligent tutoring systems (ITS) which simulate one-on-one tutoring by adapting to students' learning pace and style with examples such as Carnegie Learning, Knewton and Squirrel AI; AI-powered learning management systems (LMS) which use AI to recommend content, monitor progress, and automate assessments with examples such as Canvas with AI features, Moodle with AI plugins and Google Classroom (with AI extensions); virtual teaching assistants that help to answer student questions, automate grading and support teachers with examples such as Jill Watson (developed by Georgia Tech), ChatGPT, IBM and Watson Assistant.

Others include AI for personalized learning that analyzes learners' behaviour and customizes content to suit their needs; AI-based content creation tools used to generate quizzes, lesson plans, or explanations based on curriculum inputs; speech and language tools which enhance literacy, translation and speech recognition; assessment and grading tools that can automatically grade essays, multiple-choice questions, or provide feedback; virtual reality (VR) and augmented reality (AR) with AI used for immersive learning experiences enhanced by AI; predictive analytics and early warning systems with specialization in identifying students at risk of failing or dropping out by analyzing performance data and AI-powered chatbots for education that support 24/7 learning and administrative tasks.

The rapid public rollout of generative large language models (LLMs) and other AI systems since 2022 has accelerated scholarly and institutional interest in how AI can be integrated into higher education, including business education in Nigeria. The period between 2022 and now has since saw a surge in empirical studies, institutional reports and policy discussions about AI's pedagogical applications, assessment implications and ethical challenges. The literature on Nigerian higher education reflects both considerable enthusiasm for AI's learning-support potential and serious concerns about academic integrity, infrastructure, and policy readiness (Ojo, 2024; Oladokun et al., 2024). Researchers have continued to identify several classes of AI tools being utilized in Nigerian universities for business education programs which includes among others, large language models and conversational agents; plagiarism/AI-detection services; learning management systems enhanced with analytics; chatbots/virtual assistants; automated assessment tools; intelligent tutoring/personalized practice systems; research-assistance AIs and media/image generation tools (Oladokun et al., 2024; Thomas, 2024; Liadi, 2025).

Large language models and conversational AI (LLMs) which include ChatGPT and Google Bard are the most visible and widely discussed AI tools in the literature. Nigerian students and lecturers report using LLMs for idea generation, drafting lecture notes, preparing assignment drafts and quick topic summaries. Studies using Technology Acceptance Model (TAM) variants show that perceived usefulness and ease of use heavily influence students' intention to adopt ChatGPT for learning tasks (Ojo, 2024; Oladokun et al., 2024). It has been reported that while LLMs can accelerate writing and ideation; they equally raise questions about accuracy, citation quality and the potential to circumvent learning objectives when used inappropriately (Ojo, 2024; Oladokun et al., 2024).

Plagiarism detection and AI-origin detection is another tool used by lecturers in business education which has assisted institutions to adopt it for plagiarism and AI-writing detection tools in order to help maintain academic integrity. Turnitin's suite of products and whitepapers describing its AI-writing detection model and testing protocol are widely referenced in institutional guidance and Nigerian studies discussing integrity responses. The literature emphasizes that detection tools are not foolproof and should form part of broader pedagogical and investigatory processes rather than acting as sole arbiters in misconduct cases (Turnitin, 2024). LMS analytics, chatbots and administrative virtual assistants is another tool that several studies had reported its integration with AI-enabled analytics into LMS platforms (for example, Moodle with analytic plugins) to track

engagement, flag at-risk students, and deliver adaptive quizzes. Chatbots—both simple rule-based and more sophisticated AI-driven assistants are also reported as being used for courses in order to scheduling reminders and routine administrative support. These applications are often framed as low-risk, high-value starting points for AI adoption in universities (Thomas, 2024; Ibrahim, 2025). Automated grading and intelligent tutoring systems assisted with the use of automated essay grading and intelligent tutoring systems (ITS) that have been proposed and piloted in some Nigerian contexts to reduce lecturers' marking load and to offer personalized practice in accounting, finance and spreadsheet modelling. Research highlights the promise of automated scoring for reliability and scalability but warns about contextual validity (e.g., fairness for non-native speakers, domain alignment, and transparency of scoring algorithms) before large-scale deployment (Yakubu, 2024; Liadi, 2025). Another tool is AI for research assistance and media generation has been used by faculty and postgraduate students who had increasingly use AI to aid literature summaries, data-cleaning scripts, and draft sections of academic writing. Separately, image-generation tools (e.g., DALL·E and equivalents) appear in niche use for lecture visuals and student projects, though their uptake is less widespread compared with LLMs

The literature suggests concrete instructional implications. First, LLMs can be integrated as scaffolding tools—e.g., to model problem-solving steps in accounting or to generate practice prompts for financial analysis—when instructors design learning activities that require students to critique and extend AI outputs rather than submit AI text unaltered (Oladokun et al., 2024; Liadi, 2025). Second, assessment should shift toward tasks that require artefacts which are harder for LLMs to fully produce without domain expertise, such as applied projects, oral defenses, and collaborative assignments (Thomas, 2024). Third, professional development for lecturers should target both pedagogical redesign and technical literacy so instructors can evaluate AI outputs and guide students on ethical use (Fasola, 2024). These steps help move institutions from reactionary policy to proactive instructional design. It is against this background that, this study attempts to carry out an assessment of artificial intelligence (AI) tools utilization among business education lecturers and their influence on instructional delivery in South-West Nigerian universities

### **Purpose of the Study**

The aim of the study was to investigate AI utilization and instructional delivery in South-West Nigerian universities. Specifically, the study seeks to examine:

1. the extent to which business education lecturers utilize AI tools for instructional delivery in South-West Nigerian universities;
2. the types of AI tools commonly used for instructional delivery by business education lecturers in South-West Nigerian universities
3. the influence of AI utilization on instructional delivery of business education programme in South-West Nigerian universities.

### **Research Questions**

The following research questions were raised to guide the study:

*Research Question 1:* To what extent does business education lecturers utilize AI tools for instructional delivery in South-West Nigerian universities?

*Research Question 2:* What are the types of AI tools commonly used for instructional delivery by business education lecturers in South-West Nigerian universities?

*Research Question 3:* To what extent does AI utilization influence instructional delivery of business education programme in South-West Nigerian universities?

### **Hypothesis**

The following null hypothesis were formed to guide the study:

*Research Hypothesis:* AI utilization does not significantly influence instructional delivery of business education programme in South-West Nigerian universities.

### **Method**

#### ***Research Design***

A descriptive survey design was adopted to collect data from a broad population in their natural setting.

**Population and Sample**

The population comprised 123 business education lecturers in universities within South-West Nigeria, which are presented as follows. A census sampling was adopted because of the population size.

**Table 1**

S/N	Name of Universities	No of Business Education Lecturers
1.	Adeyemi Federal University of Education, Ondo	17
2.	Bamidele Olumilua University of Education, Science and Technology, Ikere-Ekiti	7
3.	Ekiti State University, Ado-Ekiti	4
4.	Emmanuel Alayande University of Education, Oyo	11
5.	Federal University, Oye-Ekiti	9
6.	Lagos State University of Education, Lagos	31
7.	Lead City University, Ibadan	3
8.	Olabisi Onabanjo University, Ago-Iwoye	10
9.	Osun State University, Osogbo	2
10.	Tai Solarin University of Education	16
11.	University of Ilesa	6
12.	University of Lagos	7
<b>Total:</b>		<b>123</b>

*Source: Offices of the Heads of Departments, 2025*

**Instrument for Data Collection**

Data was collected with a structured questionnaire titled AI Utilization and Instructional Delivery among Business Education Lecturers Survey (AIUIDBELS). It covers three sections which include demographic information, types and extent of AI tools usage, influence on instructional delivery. The questionnaire comprises 30-items with responses set on a four likert scale of strongly agree, agree, disagree and strongly disagree.

**Validation and Reliability of Instrument**

The instrument was validated by three experts in ICT and business education with their suggestions used in the final draft of the instrument; while the reliability was carried out using Cronbach’s alpha statistics with a reliability index of 0.81 confirmed the internal consistencies of the items in the research instrument.

**Data Analysis**

The data analysis was performed using descriptive statistics (for example, Mean and Standard Deviation) and inferential statistics (for example, Pearson’s Product Moment Correlation Coefficient and ANOVA using SPSS v. 26).

**Results**

*Research Question 1:* To what extent does business education lecturers utilize AI tools for instructional delivery in South-West Nigerian universities?

**Table 1: Extent to which Business Education Lecturers Utilize AI Tools for Instructional Delivery in South-West Nigerian Universities.**

S/N	Item	Mean	SD	Remarks
1.	Use of AI-powered tools (e.g., ChatGPT, Grammarly, Quillbot) to prepare lecture notes and teaching materials.	2.39	.412	Low
2.	Utilization of AI tools for creating student assessments (e.g., quizzes, tests, or assignments).	2.25	.344	Low
3.	Use of AI-driven presentation tools (e.g., Canva AI, PowerPoint AI Designer) in classroom teaching.	2.45	.384	Low

4.	Application of AI tools for grading, feedback, or evaluation of students' work.	2.36	.407	Low
5.	Use of AI in conducting research and writing academic papers.	2.35	.425	Low
6.	Integration of AI-based learning platforms (e.g., Coursera AI features, Google Classroom AI add-ons) into teaching.	2.26	.433	Low
7.	Use of AI for improving communication and interaction with students (e.g., chatbots, automated emails).	2.18	.345	Low
8.	Application of AI tools for data analysis in academic or professional activities.	2.11	.321	Low
9.	Use of AI to personalize learning for students (e.g., adaptive learning platforms, AI recommendations).	2.08	.400	Low
10.	Reliance on AI for updating knowledge in Business Education and related fields.	2.46	.377	Low
<b>Cluster</b>		<b>2.28</b>	<b>0.29</b>	Low

Note. N=123, SD=Standard Deviation, N=Sample Size.

Table 1 showed the extent of business education lecturers' utilization of AI tools in South-West Nigerian Universities. However, items 1 to 10 show low extent of business education lecturers' utilization of AI tools in South-West Nigerian Universities with a mean rating ranging from 2.39 to 2.46; while the standard deviation also ranges from 0.329 to 0.433. With these results, the above mean score shows that the extent of business education lecturers' utilization of AI tools in South-West Nigerian Universities is low. Findings revealed that lecturers rarely used AI tools (Mean = 2.28 on a 5-point scale), with higher usage in updating knowledge in business education and related fields and lower usage in using AI to personalize learning for students (e.g., adaptive learning platforms and AI recommendations).

*Research Question 2:* What are the types of AI tools commonly used for instructional delivery by business education lecturers in South-West Nigerian universities?

**Table 2: Types of AI Tools Commonly Used for Instructional Delivery by Business Education Lecturers in South-West Nigerian Universities.**

S/N	Tools Item	Mean	SD	Remarks
1.	I use AI-powered Learning Management Systems (e.g., Moodle with AI plugins, Canvas AI tools) for course delivery and student assessment.	2.05	.312	Rarely
2.	I utilize AI-driven plagiarism detection software (e.g., Turnitin, Grammarly) in evaluating students' assignments and projects.	2.12	.314	Rarely
3.	I employ AI-based chatbots or virtual teaching assistants to respond to students' questions and provide guidance.	2.23	.234	Rarely
4.	I use AI-powered adaptive learning platforms that personalize instruction to meet individual student needs.	2.08	.207	Rarely
5.	I apply AI-enhanced data analytics tools to track and evaluate students' learning progress.	2.00	.225	Rarely
6.	I use AI tools for automated grading and feedback in quizzes, tests, or written assignments.	2.21	.223	Rarely
7.	I employ AI-assisted content creation tools (e.g., ChatGPT, Jasper, Quillbot) in preparing lecture notes and instructional materials.	2.15	.235	Rarely
8.	I use AI-powered presentation and visualization tools (e.g., Beautiful.ai, Canva AI) for teaching business education concepts.	2.13	.211	Rarely
9.	I utilize AI-based simulation and virtual reality tools for teaching practical aspects of business education.	2.04	.230	Rarely
10.	I apply AI translation and transcription tools (e.g., Google Translate AI, Otter.ai) to support multilingual learning and accessibility.	2.23	.247	Rarely

Cluster 2.12 0.19 Rarely

Note. N=123, SD=Standard Deviation, N=Sample Size.

Table 2 showed the types of AI tools commonly used for instructional delivery by business education lecturers in South-West Nigerian universities. The Table further showed that AI tools for instructional delivery (e.g., AI-powered Learning Management Systems, AI-driven plagiarism detection software such as Grammarly, Turnitin, and chatbot interfaces etcetera) were still the few common utilized tools for intelligent tutoring systems for instructional delivery by business education lecturers in South-West Nigerian Universities.

*Research Question 3:* To what extent does AI utilization influence instructional delivery of business education programme in South-West Nigerian universities?

**Table 3:** Extent to which AI Utilization Influence Instructional Delivery of Business Education Programme in South-West Nigerian Universities.

Variables	Mean	SD	r
AI Tools	2.8837	.52849	.621
Instructional Delivery	2.9454	.48710	

Note. N=123, SD=Standard Deviation, N=Sample Size, r=correlation.

Table 3 showed the influence of AI tools on instructional delivery in business education in South-West Nigerian Universities. A significant positive correlation ( $r = 0.621, p < 0.01$ ) was found between AI utilization and instructional effectiveness. The table displays a mean of 2.8837 and 2.9454, similarly a standard deviation of .52849 and .48710 for AI tools and instructional delivery effectiveness respectively. The coefficient value obtained for AI tools and instructional delivery effectiveness is .621 which means positive but high influence. It therefore means that the influence of AI tools on instructional delivery effectiveness in business education in South-West Nigerian Universities is positively high.

**Hypothesis Testing**

*Research Hypothesis:* AI utilization does not significantly influence instructional delivery of business education programme in South-West Nigerian universities.

**Table 4: Summary of ANOVA on the Influence of AI Utilization on Instructional Delivery of Business Education Programme in South-West Nigerian Universities.**

Model	SS	df	MS	F	Sig.
Regression	10.813	1	10.813	62.299	.000 <sup>b</sup>
Residual	28.811	121	.174		
Total	39.623	122			

Note. N=123, SS=Sum of Squares, df=Degree of Freedom, MS=Mean Square, Sig.=Significant.

Table 4 showed that the ANOVA summary of linear regression based on instructional delivery effectiveness as predicted by AI tools utilization among business education lecturers is statistically significant ( $F(1, 166) = 62.299, p = .000 < .05$ ). Thus, the null hypothesis is rejected. There is significant relationship between AI tools utilization and instructional delivery effectiveness among business education lecturers in South-West Nigerian Universities.

**Table 5: Summary of Linear Regression on The Influence of AI Utilization on Instructional Delivery of Business Education Programme in South-West Nigerian Universities.**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	SE	Beta		
(Constant)	1.815	.147		12.360	.000
AI Tools Utilization	.415	.053	.522	7.893	.000

Note. N=123, SE=Standard Error, Sig.=Significant, R=.522; R-square=.273; Adjusted R-square=.269;  $p < .05$ .

Table 5 showed that AI tools utilization predicting instructional delivery effectiveness among Business Education Lecturers was statistically significant such that AI tools utilization yielded a p-value of .000 with a beta value of .522 and t-value of 7.893. The adjusted R-square value is .269, which indicates that the 26.9% of the variance in instructional delivery effectiveness is explained by AI tools utilization. Regression analysis showed that AI tools explained 26% of the variance in instructional delivery outcomes. This value is a large effect, hence, from the overall model analysis, the null hypothesis is rejected.

## Discussions

Findings from research question 1 showed that there is low extent to which business education lecturers utilize AI tools in South-West Nigerian Universities with a mean rating ranging from 2.39 to 2.46. It was also revealed that lecturers rarely used AI tools in business education and related fields and this lower usage in using AI had resulted to inability to personalize learning for students. This is in agreement with the studies by Aina and Akinyemi (2022) and Yusuf and Balogun (2023) who posited that, though, some Nigerian lecturers are aware of AI tools, but, actual usage remains low due to digital literacy gaps and infrastructural limitations; whereas, studies in ICT inclined countries had continuously revealed that AI adoption and utilization lead to improved learner performance and teacher productivity.

Result from research question 2 showed AI tools for instructional delivery (e.g., AI-powered Learning Management Systems; AI-driven plagiarism detection software like Grammarly, Turnitin, and chatbot interfaces etcetera) were still fewer common tools used for intelligent tutoring systems employed in business education for instructional delivery by business education lecturers in South-West Nigerian Universities. This is at variance with the studies by Ojo (2024) and Oladokun et al. (2024) who concluded that Nigerian higher education reflects both considerable enthusiasm for AI's learning-support potential and serious concerns about academic integrity, infrastructure, and policy readiness. Researchers have continued to identify several classes of AI tools being utilized in Nigerian universities for business education programs which includes among others, large language models and conversational agents; plagiarism/AI-detection services; learning management systems enhanced with analytics; chatbots/virtual assistants; automated assessment tools; intelligent tutoring/personalized practice systems; research-assistance AIs and media/image generation tools (Oladokun et al., 2024; Thomas, 2024; Liadi, 2025).

The results in research question three revealed a significant positive correlation between AI utilization and instructional effectiveness in business education instructional delivery in southwest Nigerian universities. The coefficient value obtained for AI tools and instructional delivery effectiveness shows a positive and high influence which means that the influence of AI tools on instructional delivery effectiveness in business education in South-West Nigerian Universities is positively high. This result corroborates the findings from previous studies which revealed that as business operations become digitized, integrating emerging technologies in instruction becomes imperative (Olawale & Salami, 2022). Also, it agrees with the findings of Kebritchi et al., 2020 in their study which revealed that instructional delivery entails methods and techniques employed by educators to facilitate learning and that AI tools can enhance delivery through personalization, real-time feedback, and learning analytics.

Findings from the hypothesis showed that AI tools utilization predicting instructional delivery effectiveness among business education lecturers was statistically significant such that AI tools utilization yielded a p-value of .000 with a beta value of .522 and t-value of 7.893. Regression analysis showed that AI tools explained 26% of the variance in instructional delivery outcomes. This value is a large effect, hence, from the overall model analysis, the null hypothesis is rejected which means that, there is significant relationship between AI tools utilization and instructional delivery effectiveness among business education lecturers in South-West Nigerian Universities. This study agrees with the findings of Dikeocha et al. (2023) who found that when instructional delivery is effective through integration of ICT and adoption of learner-centered methods by aligning with industry needs; graduates would be better positioned to succeed in the labor market for improved economic productivity. Oguejiofor and Obigwe (2023) further argued that AI enable such strategies which are critical to the preparation of students with employability skills, as it would encourage active participation, collaboration, and the practical application of knowledge.

## Conclusion

AI tools have the potential to improve instructional delivery in business education; however, their adoption among lecturers in South-West Nigeria is still evolving. While many are aware of AI's benefits, infrastructural and capacity limitations hinder widespread usage. The study hereby concludes that AI utilization among lecturers of business education for instructional delivery in south-west Nigerian universities is still very low and there is the need for concerted efforts to step up the level of awareness and utilization since the AI has come to stay in every facet of human endeavour.

## Recommendations

Based on the findings of the study, it is recommended that:

1. capacity building through regular training workshops on AI tools for lecturers should be organized for business education lecturers across universities in Nigeria for the purpose of ICT integration into business education curriculum.
2. policy support provided by universities should adopt policies that promote AI integration into the curriculum of business education.
3. infrastructure investment to improve internet access and digital infrastructure in all the universities should be provided by government and other critical stakeholders through public-private partnership (PPP).
4. immediate curriculum review to integrate AI literacy into business education training programs across universities in south-west Nigeria and all other sub-sectors of tertiary institutions offering business education programme.

## References

- Aina, O. E., & Akinyemi, S. T. (2022). Technology integration in tertiary education in Nigeria: Trends and challenges. *Journal of Educational Technology in Africa*, 9(2), 113–124.
- Ally, M., Cleveland-Innes, M., & Kyei-Blankson, L. (2021). Artificial intelligence in education: Promises and implications for teaching and learning. Routledge.
- Dikeocha, L. U., Efughi, S. A., Peters, C. B., & Eneremadu, K. E. (2023). Integration of new technologies in business education instructional delivery: Key for functional skills in business education. *Nigerian Journal of Business Education (NIGJBED)*. <https://nigjbed.com.ng/index.php/nigjbed/article/view/757>
- Falobi, O. V., Sansadeen, Z. A., & Okuneye, O. S. (2023). Information and communication technology and instructional delivery of business education courses: Evidence from Federal College of Education (Technical), Akoka, Lagos. *AAU Journal of Business Educators*, 3(1). <https://aaujbe.com.ng/index/index.php/aaujbe/article/view/26>
- Ibrahim, A. (2025). Application of artificial intelligence for effective business education. *Global Journal of Education, Humanities and Management Sciences*.
- Kebritchi, M., Lipschuetz, A., & Santiago, L. (2020). Issues and challenges for teaching successful online courses in higher education. *Journal of Educational Technology Systems*, 49(1), 4–20.
- Liadi, H. O. (2025). Assessing the impact of AI-driven tools on fostering innovation among business education students in South-South Nigeria. *International Journal of Emerging Trends in Innovation (IJETI)*, 5(1), 77–91.
- Luckin, R., Holmes, W., Griffiths, M., & Forcier, L. B. (2021). Intelligence unleashed: An argument for AI in education. Pearson Education.
- Ojo, O. (2024). Exploring factors influencing Nigerian higher education students to adopt ChatGPT in learning. *International Journal of Education and Development Using ICT*, 20(3), 39–59.
- Okeke-Ezeanyanwu, J. A., Makwe, F., & Ezenwaji, C. F. (2023). Instructional delivery for skills acquisition in business education in the new normal in colleges of education in Anambra State. *Nigeria Journal of Business Education (NIGJBED)*, 10(2). <https://nigjbed.com.ng/index.php/nigjbed/article/view/786>
- Oguejiofor, C. S., & Obigwe, R. U. (2023). Modern strategies needed for effective instructional delivery in business education. *Multidisciplinary Journal of Vocational Education & Research*, 5(1).

- <https://gojehms.com/index.php/MJVER/article/view/174>
- Oladokun, O. A., Akinola, M. T., & Yusuf, I. B. (2024). Investigating the awareness and adoption of ChatGPT in Nigerian higher education. *International Journal of E-Learning and Digital Competence*, 14(3), 112–126.
- Olawale, A. T., & Salami, R. A. (2022). Enhancing business education in Nigeria through digital transformation. *African Journal of Business Education*, 5(1), 42–55.
- Thomas, G. (2024). Assessment of lecturers' utilisation of AI for education in a Nigerian university. *Journal of Digital Learning in Africa*, 3(2), 65–79.
- Turnitin. (2024). Turnitin AI writing detection model architecture and testing protocol (white paper). Turnitin.
- UNESCO. (2024). Handbook on Artificial Intelligence in Education: Global perspectives on AI adoption in higher education. UNESCO Publishing.
- Wagbara, S. O. (2023). Leveraging cloud-based digital competencies for effective instructional delivery in business education. *Nigerian Journal of Business Education*. <https://www.nigjbed.com.ng/index.php/nigjbed/article/view/328>
- Wired. (2024). Students are likely writing millions of papers with AI. Wired Magazine.
- The Guardian. (2024, December 15). 'I received a first but it felt tainted and undeserved': inside the university AI cheating crisis. The Guardian.
- Yakubu, M. A. (2024). Application of AI for automated essay grading in Nigerian schools. *International Journal of Open Educational Development*, 2(1), 101–114.
- Yusuf, M. O., & Balogun, A. O. (2023). Lecturers' readiness for integrating Artificial Intelligence in Nigerian higher education. *International Journal of Educational Research in Africa*, 11(3), 73–88.