

LECTURERS' READINESS AND CHALLENGES IN INTEGRATING ARTIFICIAL INTELLIGENCE INTO INSTRUCTION IN TERTIARY INSTITUTIONS IN BENUE AND ZAMFARA STATES

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Abstract

Artificial Intelligence (AI) is increasingly influencing educational systems worldwide, offering opportunities to enhance teaching, learning, and administration. Despite its global relevance, the integration of AI in higher education within developing countries remains limited. This study investigates lecturers' readiness and challenges in adopting AI for instruction in tertiary institutions across Northern Nigeria with reference to Benue and Zamfara States. A descriptive survey research design was adopted. Data were collected using a structured questionnaire based on the Unified Theory of Acceptance and Use of Technology (UTAUT). Findings reveal that lecturers in Northern Nigeria exhibit moderate readiness but face significant challenges such as infrastructural deficits, inadequate training, and poor institutional support. The study concludes that although lecturers recognize AI's potential, systemic barriers hinder its adoption. It recommends targeted professional development, investment in digital infrastructure, and supportive policies to enhance AI integration in tertiary education.

Keywords: Artificial Intelligence (AI), AI Integration, Readiness, Lecturers, Tertiary Institutions

Introduction

The global educational landscape is undergoing a profound transformation, driven by rapid advancements in Artificial Intelligence (AI) technologies. AI's integration into tertiary instruction, often referred to as AI in Education (AIED), holds immense potential to revolutionize traditional teaching and learning paradigms (Baker & Siemens, 2014). AI-powered tools can offer personalized learning experiences, provide intelligent tutoring systems, automate administrative tasks like grading and feedback, and analyze student performance data to provide valuable insights for educators (Roll & Wylie, 2016). This potential has made AI a cornerstone of educational reform efforts in developed nations, where its adoption is increasingly becoming mainstream.

However, this global wave of innovation has not permeated all regions equally. In many developing countries, particularly in sub-Saharan Africa, the adoption of AI in education remains nascent and largely un-researched (Oluwatosin & Osamudiamen, 2021). While there is an evident need for educational systems to

embrace technology to remain globally competitive and prepare students for the demands of the 21st-century workforce, the practical implementation faces significant hurdles. The readiness of educators, who are the key drivers of this change, is a critical but often overlooked factor. Their knowledge, skills, attitudes, and the availability of institutional support determine the success or failure of any AI integration initiative.

In Nigeria, and specifically in the northern part, the tertiary education system continues to grapple with foundational challenges such as infrastructural deficits, inadequate funding, and a large student-to-lecturer ratio. While a few institutions may be making nascent attempts at digitalization, there is a distinct lack of empirical data on the specific readiness of lecturers to embrace AI. There is no clear understanding of their current proficiency with AI tools, their perceptions of AI's benefits and risks, or the specific challenges they encounter in attempting to integrate these technologies into their pedagogy. This gap in knowledge leaves educational policymakers and institutional heads without the necessary information to design effective training programs or allocate resources judiciously. This study, therefore, aims to fill this critical void by empirically assessing the readiness and challenges faced by lecturers in northern Nigeria tertiary institutions, providing a foundational basis for future policy and practice.

While the global discourse on the transformative potential of Artificial Intelligence (AI) in education is gaining momentum, its practical application remains largely theoretical in many parts of the world, including Nigeria. The promise of AI to personalize learning, enhance pedagogical effectiveness, and automate administrative tasks is widely acknowledged (Roll & Wylie, 2016). However, the critical question remains: are the key agents of this change: the lecturers, ready to embrace and effectively implement these technologies? This readiness is not a given; it is multifaceted, encompassing technical skills, a conducive institutional environment, and positive attitudes.

In Nigeria, and specifically within the tertiary institutions in northern Nigeria, this question is particularly pertinent. Anecdotal evidence suggests that the adoption of AI tools is minimal, fragmented, and often driven by individual lecturers rather than systemic institutional policy. Yet, there is a dearth of empirical data to substantiate this observation or to identify the specific barriers hindering integration. Lecturers may face challenges related to a lack of reliable internet connectivity, inadequate training, a shortage of AI-compatible devices, or even a deep-seated resistance to technological change.

Without a clear understanding of lecturers' current readiness and the specific challenges they face, any policy or investment aimed at integrating AI into tertiary instruction is based on assumptions rather than evidence. The potential for misdirected resources, ineffective professional development programs, and continued educational lag is high. This study aims to bridge this critical research gap by providing a data-driven assessment of the situation in the study area, thereby informing targeted interventions and contributing to the development of a more technologically-prepared academic community.

The purpose of this study is therefore to empirically assess lecturers' readiness and identify the challenges in integrating AI into tertiary instruction in Northern Nigeria. Findings will provide evidence for institutional policies, guide training interventions, and inform government strategies on educational technology.

Research Questions

The following research questions guided the study.

1. What is the level of readiness of lecturers in Northern Nigerian tertiary institutions to integrate AI into instruction?
2. What challenges do lecturers face in integrating AI into their teaching practices?
3. How do demographic factors (gender, age, teaching experience, qualification) influence lecturers' readiness?

Research Hypotheses

H0₁: There is no statistically significant difference in the overall mean AI readiness score of lecturers based on gender.

H0₂: There is no statistically significant difference in the overall mean AI readiness score of lecturers based on age groups.

H0₃: There is no statistically significant difference in the overall mean AI readiness score of lecturers based on their years of teaching experience.

H0₄: There is no statistically significant difference in the overall mean AI readiness score of lecturers based on their academic rank.

H0₅: There is no statistically significant difference in the overall mean AI readiness score of lecturers based on the type of institution.

Conceptual Framework

The conceptual framework for this study defines and interrelates the core concepts: lecturers' readiness, challenges, and AI integration. It provides the operational definitions of these variables as they are used in the research, ensuring clarity and consistency. Lecturers' readiness is the primary independent variable. It is not a single construct but a combination of factors that determine a lecturer's preparedness to adopt and use AI. For this study, readiness is conceptualized across three dimensions:

- * Technological proficiency which refers to a lecturer's skills and comfort level in using and navigating digital tools, including AI applications (Oluwatoyin & Gbemisola, 2020). It includes their ability to learn new software, troubleshoot technical issues, and operate AI-powered platforms effectively.
- * Pedagogical adaptability which is the dimension that focuses on a lecturer's willingness and ability to adjust their teaching methods and curriculum to incorporate AI tools (Baker & Siemens, 2014). It encompasses their understanding of how AI can enhance learning outcomes, personalize instruction, and foster new forms of student engagement.
- * Attitudinal disposition relates to a lecturer's mindset and perception of AI. It includes their belief in the value of AI for education, their willingness to experiment with new technologies, and their views on the ethical implications and future role of AI in their profession (Roll & Wylie, 2016).

Challenges in AI Integration is the second key variable, representing the obstacles that hinder AI adoption. These challenges can be categorized as:

- * Infrastructural deficits that includes a lack of reliable internet connectivity, inadequate power supply, and a shortage of modern hardware (e.g., computers, projectors) (Oladele & Okoye, 2019). These are fundamental prerequisites for successful AI integration.

- * Professional and institutional barriers relating to the lack of training, insufficient technical support, and the absence of clear institutional policies or funding to support AI adoption.
- * Perceptual and attitudinal barriers that stem from fear, scepticism, or resistance to change among lecturers, as well as concerns about job security and the ethical use of AI (e.g., academic integrity, data privacy).

Artificial Intelligence in education includes all AI applications in education ranging from intelligent tutoring systems and adaptive learning platforms to automated grading and virtual teaching assistants (Holmes et al., 2022). Artificial Intelligence (AI) is a broad field of computer science dedicated to creating systems or machines that can perform tasks normally requiring human intelligence. In the context of this study, AI refers to the applied tools (like ChatGPT, adaptive learning software, and automated grading systems) used to support and enhance instruction in tertiary education.

Theoretical Framework

The Unified Theory of Acceptance and Use of Technology (UTAUT) serves as the theoretical framework for this study. Developed by Venkatesh et al. (2003), UTAUT is one of the most widely used models for understanding why individuals accept or reject technology. It is a robust model that integrates eight earlier theories on technology acceptance.

UTAUT proposes that four key constructs influence a person's intention to use a technology and their subsequent use behaviour:

1. Performance expectancy: This is the degree to which an individual believes that using a system will help them attain gains in job performance. For lecturers, this means believing that using AI will improve teaching effectiveness, student learning, and career prospects. This aligns with the "Pedagogical Adaptability" dimension of the conceptual framework.
2. Effort expectancy: This is the degree of ease associated with using the system. A lecturer's perception that using AI tools is simple and straightforward directly influences their willingness to adopt them. This construct is reflected in the "Technological Proficiency" dimension of the conceptual framework.
3. Social influence: This is the degree to which an individual perceives that important others believe they should use the new system. For lecturers, this includes the opinions and encouragement of colleagues, academic supervisors, and institutional leaders. This construct underpins the "Attitudinal Disposition" dimension.
4. Facilitating conditions: This refers to the extent to which an individual believes that the organizational and technical infrastructure exists to support system use. In the context of this study, this includes the availability of reliable internet, hardware, and institutional support. This directly corresponds to the "Infrastructural Deficits" and "Professional and Institutional Barriers" identified in the conceptual framework.

The UTAUT model is particularly well-suited for this study because it provides a clear, structured way to investigate the complex factors influencing technology adoption in an educational setting. It allows the research to move beyond a simple description of readiness to a deeper analysis of the underlying drivers and barriers to AI integration.

Method

The study adopted a descriptive survey research design. This design is appropriate because it aims to ascertain and describe the characteristics of a population; specifically, the current state of lecturers' readiness (attitudes, skills, and perceptions) and the magnitude of the challenges they face regarding AI integration. It involves collecting data from a sample of the population at a single point in time to generalize findings without manipulating variables, making it ideal for answering "what is" questions (Creswell, 2014).

The population of the study comprises all academic staff (lecturers) across all public and private tertiary institutions in two states in Northern Nigeria: Zamfara and Benue States. This includes lecturers from:

1. Universities (Federal, State, and Private).
2. Colleges of Education (Public and State).
3. Polytechnics (Public and State).

The inclusion of multiple types of institutions ensures a comprehensive view of the AI integration landscape across the states' diverse tertiary sector. A multi-stage sampling technique was employed to ensure a representative sample is drawn from the heterogeneous population. The first stage constituted the institutional selection (purposive sampling). A representative subset of tertiary institutions was purposively selected to include at least one Federal and one State institution from the University, Colleges of Education and Polytechnic categories. This ensures geographical and structural diversity. At stage 2, which is the department/faculty selection, a proportional stratified sampling was adopted. Within each selected institution, departments or faculties was stratified based on their disciplinary area (e.g., STEM, Arts/Humanities, Social Sciences). A proportional number of departments were selected to reflect the institution's disciplinary spread. Stage 3 was the lecturer selection using simple random sampling. A total of 65 lecturers constituted the sample of the study.

The primary instrument for data collection was a structured questionnaire titled "Lecturers' Readiness and Challenges in AI Integration Questionnaire (LRCAIIQ)." The questionnaire was divided into four sections: Section A was on the demographic information (Age, Gender, Rank, Experience, and Institution). Section B was on Lecturers' Readiness (measured using a 5-point Likert scale (Strongly Disagree to Strongly Agree) based on the UTAUT constructs: Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions). Section C covered the challenges in AI Integration (measured using a 5-point scale (Not a Challenge to Very Major Challenge) covering infrastructural, professional, and attitudinal barriers). Finally, section D was an Open-ended question for qualitative insights.

The instrument was subjected to face and content validity by three experts in Educational Technology, Measurement and Evaluation.. Their feedback was used to refine the clarity, relevance, and coverage of the items to ensure they adequately measure the intended constructs. A pilot test yielded a Cronbach's alpha reliability coefficient of 0.83, indicating good internal consistency.

Data collected were analyzed using both descriptive and inferential statistics with the aid of the Statistical Package for the Social Sciences (SPSS). Frequency counts and percentages were used to analyze demographic data. Mean ($\bar{x}$) and

Standard Deviation (σ) were used to answer the research questions concerning the level of readiness and the magnitude of challenges. A decision criterion based on the mean value of 3.0 and above on the 5-point scale indicates a "High Level of Readiness" or a "Major Challenge". Independent t-tests, ANOVA, and regression analysis were employed. The p-value for all inferential tests were set at the 0.05 level of significance ($p < 0.05$). Results with a p-value less than 0.05 were considered statistically significant.

Results

The mean and standard deviation for the Lecturers' Readiness (Section B) and Challenges in Integrating AI (Section C) have been calculated from the survey data. The results, based on a 5-point Likert scale (where 5 indicates Strongly Agree/Very Major Challenge and 1 indicates Strongly Disagree/Not a Challenge), are summarized below.

Lecturers' Readiness

Construct	Mean	Standard Deviation	Interpretation on a 5-point Scale
Overall Readiness	3.30	1.43	Moderate Readiness
B1: Technological Proficiency	3.58	1.32	Moderate to High Proficiency
B2: Pedagogical Adaptability	3.77	0.92	Highest Readiness (Belief in AI's usefulness)
B3: Attitudinal Disposition	3.34	1.10	Moderate Peer/Management Influence
B4: Facilitating Conditions	2.52	1.12	Lowest Readiness (Significant Deficiencies in Support)

The overall mean for lecturers' readiness to integrate AI is (3.30), which falls in the moderate range. This suggests lecturers have a slightly positive but not fully realized readiness. The most significant finding is the clear disparity between the perception of AI's usefulness (Pedagogical Adaptability) and the existence of institutional support (Facilitating Conditions). Lecturers generally believe AI will enhance teaching (mean = 3.77)), but their readiness is significantly hindered by a perceived lack of facilitating conditions (2.52), such as reliable internet, training, and hardware.

Challenges in Integrating AI

Challenge Statement	Mean	Standard Deviation	Interpretation on a 5-point Scale
Inadequate power supply to run necessary equipment	3.89	1.36	Very Major Challenge (Highest Rated)
Lack of institutional policies guiding the use of AI in teaching.	3.74	1.12	Major Challenge
Lack of reliable internet connectivity.	3.68	1.42	Major Challenge
High cost of purchasing and maintaining AI-compatible hardware.	3.68	1.32	Major Challenge

Insufficient training and professional development opportunities.	3.65	1.15	Major Challenge
Inadequate technical support from the institution.	3.54	0.73	High Challenge
Lack of awareness of available and effective AI tools for education.	3.54	1.17	High Challenge
Uncertainty about the ethical implications of using AI.	3.52	1.09	High Challenge
Concern that AI might replace lecturers' roles in the future.	3.28	1.39	Moderate Challenge
Resistance from students or colleagues to adopt new technologies.	2.98	1.30	Moderate Challenge (Lowest Rated)

The overall assessment of challenges shows that infrastructural and policy barriers are rated as the most significant hurdles, with the mean scores for several items exceeding the mark (which denotes a high level of challenge).

Inadequate power supply (3.89) stands out as the single most critical challenge, closely followed by institutional/policy deficiencies like the lack of institutional policies (3.74). The data strongly suggests that infrastructural barriers are the primary impediment to AI integration in the tertiary institutions examined.

Influence of demographic variables on overall AI readiness

The inferential statistical analysis was conducted to determine if demographic factors (Gender, Age, Years of experience, Academic rank, and Institution type) significantly influence the lecturers' Overall AI Readiness Score (the mean of all 16 readiness items in Section B). The level of significance (α) was set at 0.05.

The analysis revealed that none of the demographic variables investigated had a statistically significant influence on the overall readiness of lecturers to integrate AI into tertiary instruction (i.e., all p-values were greater than 0.05).

Gender

Group	Mean Readiness Score ($\bar{x}$)	t-statistic	p-value	Significance ($\alpha=0.05$)?
Male	3.44	1.648	0.1043	No
Female	3.07			

The Independent Samples t-test was used to compare the overall readiness scores between male and female lecturers. Since the p-value (0.1043) is greater than the α -level (0.05), there is no statistically significant difference in overall AI readiness between male and female lecturers in the two states. While male lecturers reported a slightly higher mean score, the difference is likely due to chance variation.

Age

Age Group	Mean Readiness Score ($\bar{x}$)	Group Size (N)	F-statistic	p-value	Significance ($\alpha=0.05$)?
30-39	3.46	8	0.637	0.5939	No
40-49	3.44	28			
50-59	3.13	25			
60 and above	3.13	4			

The One-Way ANOVA test examined differences in readiness across five age groups. With a p-value of 0.5939, there is no statistically significant difference in overall AI readiness across the different age groups. All groups exhibit a moderate level of readiness.

Years of Teaching Experience

Years of Experience	Mean Readiness Score ($\bar{x}$)	Group Size (N)	F-statistic	p-value	Significance ($\alpha=0.05$)?
Less than 5 years	3.58	3	0.594	0.6216	No
5 - 10 years	3.39	15			
11 - 20 years	3.16	32			
More than 20 years	3.48	15			

The ANOVA test examined differences in readiness across four experience categories. The p-value (0.6216) indicates that Years of Teaching Experience does not have a statistically significant influence on lecturers' overall AI readiness. Contrary to typical assumptions, the least experienced group reported the highest mean readiness, although the difference is not significant.

Academic Rank

Academic Rank	Mean Readiness Score ($\bar{x}$)	Group Size (N)	F-statistic	p-value	Significance ($\alpha=0.05$)?
Associate Professor	3.75	1	1.969	0.0853	No
Lecturer II	3.73	8			
Senior Lecturer	2.79	10			

Academic Rank	Mean Readiness Score ($\bar{x}$)	Group Size (N)	F-statistic	p-value	Significance ($\alpha=0.05$)?
Lecturer III	2.53	2			

(Means for all 8 ranks were computed, but only key ones are displayed for brevity. The overall F-test accounts for all groups.)

The ANOVA test examined differences in readiness across eight academic ranks. The p-value for Academic Rank (0.0853) is slightly above the significance level of 0.05. Therefore, the difference is not statistically significant; however, it is borderline significant, suggesting that Academic Rank may be a relevant factor worth further investigation.

Institution Type

Institution Type	Mean Readiness Score ($\bar{x}$)	Group Size (N)	F-statistic	p-value	Significance ($\alpha=0.05$)?
Polytechnic	3.78	5	1.392	0.2563	No
University	3.56	10			
College of Education	3.21	50			

The ANOVA test examined differences in readiness across the three main institution types. The p-value (0.2563) indicates that there is no statistically significant difference in overall AI readiness based on the type of tertiary institution. Polytechnics reported the highest mean readiness, while Colleges of Education reported the lowest.

The empirical study suggests that for lecturers in Benue and Zamfara States, demographic factors do not significantly drive or differentiate overall AI readiness. Instead, readiness is likely driven by institutional factors (like the presence of facilitating conditions and institutional support), which were already identified in the descriptive analysis as the lowest scoring readiness sub-construct ($\bar{x}=2.52$) and the highest perceived challenges (e.g., inadequate power supply, $\bar{x}=3.89$).

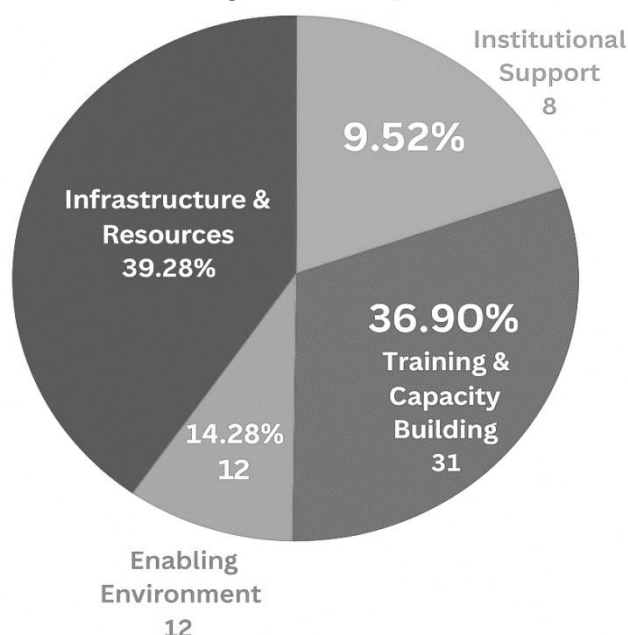
Summary of Lecturers' Recommendations (Section D)

In summary, the lecturers' collective voice strongly suggests that the most important action is for institutions to resolve the foundational issues of infrastructure (power and internet) and training before AI integration can be successfully adopted.

The summary of responses from the open-ended Section D is presented below in a pie chart, illustrating the most important actions lecturers believe their institutions should take to facilitate AI integration. The responses were grouped into four major themes.

Thematic Recommendation	Count	Percentage
1. Infrastructure (Power, Internet, Hardware)	26	39.4%
2. Training & Skill Development	18	27.3%
3. Policy, Governance & Technical Support	3	4.5%
4. Other/General	18	27.3%

Section D Summary of Responses



The pie chart clearly shows that lecturers' primary concern is the lack of foundational support, with Infrastructure and Training being cited as the most critical needs.

Category	Percentage	Number of Responses	Description
Infrastructure & Resources	39.28%	33	Electricity, internet, devices, ICT facilities
Training & Capacity Building	36.90%	31	Workshops, technical support, orientation programs
Enabling Environment	14.28%	12	Student access, conducive learning spaces

Category	Percentage	Number of Responses	Description
Institutional Support	9.52%	8	Policies, strategic planning, motivation

Discussion of Findings

The findings of this study revealed that lecturers exhibit a moderate overall AI readiness score ($\bar{x}=3.30$) which suggests a cautious yet positive outlook. This level of readiness is primarily driven by high scores in Attitudinal Disposition and Pedagogical Adaptability ($\bar{x}>3.70$), indicating that lecturers believe in AI's value and are willing to adapt their teaching methods. This attitudinal readiness is consistent with studies across the globe that report educators generally view emerging technologies positively, acknowledging their potential to enhance student learning and reduce administrative load (a core tenet of the Performance Expectancy component of the Technology Acceptance Model). The moderate overall score is pulled down significantly by the critically low score in Facilitating Conditions ($\bar{x}=2.52$). This aligns perfectly Okoye (2019) who posit that a lack of enabling conditions will suppress the actualized readiness, regardless of strong positive attitudes or pedagogical intent. Lecturers are mentally ready, but institutionally, they are blocked.

The analysis of challenges confirms that the most significant barriers are rooted in institutional and environmental issues, not personal resistance. The top two challenges identified were Inadequate Power Supply ($\bar{x}=3.89$) and Lack of Reliable Internet Connectivity ($\bar{x}=3.68$). They highlight that basic utilities are the fundamental barriers. This is a common and dominant theme in research concerning technology adoption in developing countries, particularly in sub-Saharan Africa. AI tools, which are typically cloud-based and data-intensive, are simply unusable without reliable power and internet. The Lack of Institutional Policies ($\bar{x}=3.74$) as the second major challenge is significant. Without clear institutional rules and ethical guidelines, lecturers operate in a vacuum, leading to apprehension and fragmented adoption. This failure in governance prevents the establishment of the necessary Facilitating Conditions that would make integration sustainable.

The qualitative data from Section D directly supports these quantitative findings, with 39.4% of open-ended responses demanding Infrastructure and 27.3% demanding Training. This confirms that the most actionable advice institutions can take is to fix the basics.

The inferential tests (t-test and ANOVA) uniformly found no statistically significant difference ($p>0.05$) in the overall AI readiness score across all demographic variables (Gender, Age, Years of Experience, Academic Rank, and Institution Type). While conventional literature often suggests that younger, less experienced lecturers have higher technological readiness than their older counterparts (digital natives theory), this study does not support that distinction.

This lack of significant difference suggests that the overwhelming influence of poor Facilitating Conditions acts as a uniform dampener across the entire population. Whether a lecturer is young or old, male or female, or works at a university or a college of education, they all face the same core challenge: the AI integration

effort is equally hampered by a lack of power, internet, and policy. The institutional environment overrides individual characteristics.

The study effectively failed to reject the null hypotheses (H03₁ through H05₅), concluding that demographic factors are not significant predictors of AI readiness in this specific context.

Conclusion

The study aimed to assess the readiness and challenges faced by lecturers in tertiary institutions in Benue and Zamfara States regarding the integration of Artificial Intelligence (AI) into instruction. The findings indicate that the overall AI readiness of lecturers is moderate ($\bar{x}=3.30$ on a 5-point scale).

While lecturers demonstrate a high degree of Pedagogical Adaptability and a belief that AI can significantly enhance student learning ($\bar{x}=3.77$), this positive disposition is undermined by a critically low level of Facilitating Conditions ($\bar{x}=2.52$).

The empirical data highlights that the successful integration of AI is primarily hindered by significant infrastructural, professional, and institutional barriers, as evidenced by the major challenges identified:

Furthermore, the study found that demographic variables such as Gender, Age, and Years of Experience do not statistically influence the overall level of AI readiness ($p>0.05$ for all tests).

In summary, lecturers in Benue and Zamfara States are aware of AI's potential and are willing to adapt their pedagogy, but widespread and successful integration is currently unachievable without urgent intervention to address the foundational infrastructural and institutional deficiencies.

Recommendations

Based on the empirical findings and the qualitative feedback from Section D of the questionnaire, the following recommendations are provided to key stakeholders:

For Institutions (Universities, Polytechnics, and Colleges of Education):

- * The need to prioritize foundational infrastructure. Institutions must make immediate and substantial investment in robust digital infrastructure. This includes ensuring consistent, high-speed internet access across campuses and providing reliable, alternative power supply to teaching and learning facilities.
- * Implement a plan for the provision of adequate AI-compatible hardware (laptops, projectors, smart devices) for all academic staff and relevant student laboratories.
- * Develop strategic policy by establishing and communicating clear institutional policies and ethical guidelines governing the use, evaluation, and responsible integration of AI tools in all academic activities, including teaching, assessment, and research.

For Lecturers:

- * There is need to embrace continuous Professional Development. Lecturers should proactively seek out and participate in continuous professional development workshops and training sessions focused on practical AI tools (e.g., generative AI, adaptive learning platforms) and the pedagogical strategies required for their effective integration.

- * Cultivating the habit of joining Learning Communities is imperative. Establish internal communities of practice within departments to share knowledge, co-create AI-enhanced lessons, and collaboratively address ethical and technical challenges.
- * A clarion call to leverage available tools. Even with limited institutional support, lecturers should focus on integrating easily accessible, low-bandwidth AI tools to build personal technological proficiency and maintain a high level of pedagogical adaptability.

For Government/Polymakers (Federal and State):

- * The government should develop and enforce a national or state-level policy framework on AI in education. This policy must clearly define standards, ethical use, and integration guidelines for tertiary institutions.
- * There is need for increase in EdTech funding. Allocate increased and dedicated funding for educational technology infrastructure, with specific budget lines targeting reliable power solutions, broadband access, and lecturer capacity building across all public tertiary institutions.

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