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Assessment Of Lecturers' Acceptance of Artificial Intelligence Tools for Teaching and Assessment of Students in Tertiary Institutions in Nigeria

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Abstract- ***The rapid rise of Artificial Intelligence in education opens up new vistas for redefining pedagogical approaches and evaluative mechanisms in tertiary institutions. However, the efficacy of integrating AI into academic circles primarily lies on the lecturers' propensity to adopt the technology and integrate it into practice. Therefore, the current study seeks to determine the extent of acceptance of Artificial Intelligence (AI) tools by lecturers for teaching and assessment in tertiary institutions in Nigeria. A cross-sectional descriptive survey research design was adopted, guided by the Technology Acceptance Model (TAM). A sample of 241 lecturers were purposively and randomly obtained from 3 Universities, 2 Polytechnics and 1 College of Education. Lecturers' Acceptance of Artificial Intelligence Tools for Teaching and Assessment Questionnaire (LAAITAQ), developed by the researcher, was used to collect data from the sample. The questionnaire was validated by specialists in Educational Technology and Measurement and Evaluation. Cronbach Alpha coefficient of 0.87 was established to guarantee the reliability of the instrument. Research questions were answered using means and standard deviations while t-test and one-way ANOVA were utilized to test the hypotheses at 0.05 level of significance. The findings show that generally, lecturers have a high level of acceptance for the use of AI tools for teaching (Grand Mean = 3.62, SD = 0.73) and assessment (Grand Mean = 3.58, SD = 0.74). Male and female lecturers have a similar level of acceptance of AI tools for teaching and assessment as there was no significant difference between the gender of the lecturers (t = 1.38, p > 0.05). Also, there was a significant difference in the acceptance level of AI tools for teaching and assessment based on the type of institution (F = 4.58, p < 0.05). Lecturers in universities recorded significantly higher level of acceptance compared to their counterparts in the polytechnics and college of education. The study concluded that lecturers in Nigerian tertiary institutions are quite receptive to the incorporation of AI in their teaching and assessment and recommended that efforts in the area of continuous professional development, infrastructural upgrades and enabling institutional policies are imperative to promote ethical and efficient deployment of AI in mathematics education.***

Keywords- ***Artificial Intelligence, Lecturers' Acceptance, Teaching, Assessment, Technology Acceptance Model, Tertiary Institutions.***

1. INTRODUCTION

Technology have found their way into almost all areas of human endeavours, and education is not an exception. The use of digital technologies has made a significant difference in the ways of teaching, learning, assessing and educational management and policy-making. One of the significant twenty-first century technologies is the Artificial Intelligence (AI) first mentioned by John McCarthy at Dartmouth conference in 1956 [1].

It started as a purely scientific domain of computer science and has turned out to be a viable tool used across healthcare, finance, transport, and manufacturing, as well as in education.

According to [2], artificial intelligence is a study field concerned with making machines that can do what humans are capable of, like learning, reasoning, problem solving, comprehension of language and decision making.AI refers to a machines or computer system having ability of a person to think, understand or perform complex tasks. AI is said to be one of the major products of Education 4.0 with the use of intelligent systems to perform difficult tasks such as facial and voice recognition, pattern prediction, or autonomously making decisions [3]. The recent emergence of technologies such as artificial generative intelligence (AI), intelligent tutoring systems, machine learning (ML), natural language processing (NLP), learning analytics, automated assessment platforms and intelligent chatbots have

revolutionized educational teaching and learning. Currently available AI tools in education can generate learning content, offer personalized learning, automate common instructional tasks, analyze the learners' behavior, provide feedback, assist instructors in making data-driven decisions about instructional approaches, etc.

In fact, today's AI in education is being promoted not only as a helpful educational tool but also as a disruptive innovation that has the potential to reshape future education systems.

In higher education, AI technologies have been utilized more extensively to implement personalized learning, adaptive feedback, intelligent content delivery and automatic grading [4]. As noted by [5], AI helps the learner develops good learning habits by prompting students to monitor, regulate and reflect on their own learning by designing activities based on learner, pace, skills and interests, this provides continuous learning monitoring to provide timely interventions to enhance the instructions provided. Similarly, AI assisted assessment platforms can analyze student work, deliver instant feedback and reduce administrative workload for the lecturers whilst also improving test quality, MOOCs platforms like Coursera have implemented an AI feature that alerts lecturers whenever a student has difficulty in specific concept or a significant number of students have problem [6].

The widespread adoption of artificial intelligence technology in tertiary institutions across the globe continues. For example, Australian higher education institutions like Deakin University have successfully adopted IBM’s Watson to help their students in achieving educational and career guidance [7]. Similarly, the Nigerian government established National Center for Artificial Intelligence and Robotics (NCAIR) in 2020 to promote the application of AI for economic development and to foster research in this cutting-edge technology [8].

Information Technology has become integral and very important aspect of today’s life due to its fundamental importance in administration and the development of science, engineering, technology, economics, data science and a multitude of other quantitative fields. It plays a pivotal role not just in class education but also in research, innovation, health, public planning and decision making.

In research, both simulatedl and automated models have been variously employed to investigate the effects of intervention programmes on a variety of issues of public interest. For instance, [9] simulated the effects of imperfect vaccines on the spread of COVID-19 in Nigeria, while [10] constructed a hybrid reliability model which established survival and hazard rate functions. Through simulation, this model was applied to estimate both recovery and mortality rates arising from the Covid-19 pandemic in Nigeria.

Other applications ranges from demographic modeling to survival analysis, where [11] simulated a time series model of infant mortality rate in Nigeria. Thus, it can be seen that a successful future career in any area depends on a learner's proficiency in Information Technology along the educational ladder. As such, lecturers are increasingly obliged to adopt technology capable of effectively improving education delivery.

Tertiary level education has the challenge of dealing with abstractions, symbolism, proofs and logic. Students should be proficient in educational contents and processes. Tertiary level lecturers face unique assessment challenges; they require development and evaluation of relevant test items and appropriate scoring processes, provide timely feedbacks and implement valid marking schemes [12] argued that education assessment is one vital part of the whole educational process, which attempts to measure the degree of achievement of instructional goals.

In fact, [13] noted that tests can be said to be one form of assessment. However, artificial intelligence technology is potentially useful for teaching and learning by producing various kinds of instructional materials, generating test questions, analysing student performance, personalising learning activities, automatic grading and feedback. Machine learning and natural language processing ofAI tools improve consistency and minimise the potential for human bias in evaluating the solution processes [14,15]. The global experience of population growth and higher enrolment in number of students has brought immense pressure on resources, planning and budget considerations. For this reason, [16]

emphasized the need for regular update in demographic parameters.

AI systems' ability to detect and identify student's mistakes and recommend a relevant intervention to aid the better learning outcomes is valuable [17]).
Specifically, [4] found that generated mathematics test items via AI are quality comparable to those produced traditionally in Nigerian Higher Education context. Even with the significant potentials, successful adoption of AI in math teaching and learning hinges on how lecturers – who have responsibility for delivering the curriculum at tertiary institution- respond to this new technology. Mere provision of the technologies is not enough for their integration in classrooms; lecturers' attitude toward adoption and usage play a pivotal role. The Technology Acceptance Model (TAM), formulated by [18], identified perceived usefulness and perceived ease of use as determinants of technological acceptance and use.

Thus, lecturers are more likely to adopt and use AI tool if it is perceived to be useful in accomplishing their teaching and learning goals and if it is perceived to be easy to use.
Therefore, it is essential to examine math lecturers' adoption of AI tools as this forms the basis of successful integration of AI in mathematics education. Existing empirical research concerning AI adoption in the Nigerian tertiary institution reveals inconsistent trends. Some scholars found that lecturers' adoption for testing was high [19], while some research identified low utilization of the available technologies by lecturers in tertiary institutions, despite relatively high awareness [20].
Some studies identified a low actual utilization rate by the lecturers, attributing this to factors such as lack of training and knowledge as well as support systems for lecturers, despite moderate awareness [21,22,23]. These studies suggest that even if lecturers may demonstrate awareness of new technologies and show acceptance for such technologies, it is not a sufficient indicator for their actual use and integration in classrooms. However, majority of these studies focus on all the disciplines together without paying particular attention on mathematics lecturers who operate under a unique setting with specific demands regarding the nature of reasoning (symbolic, formal), problem solving, algorithms and formal proof.

A lecturer is responsible for both the pedagogy and relevant assessment practices in university or college, therefore a specific look at the adoption rate of AI in teaching and learning, as well as, their acceptance towards using AI tools is important.
More so, given the increasing global applications of AI in various fields of life, the use of AI technology in the education sector becomes an issue of academic and public concern in Nigeria. Therefore, this study aimed to investigate lecturers' acceptance of Artificial Intelligence tools in teaching and assessment of mathematics students in Nigerian tertiary institutions.

Statement of the Problem
The duties of a lecturer are challenging and particularly in Nigerian tertiary institutions as a learning institution with diverse ability of students, large classes, and a workload to create, set and mark examination tests themselves manually. Teaching and assessment can benefit from AI tools, for example, they support for individualised learning, generation of test items, efficient and objective scoring, and providing real-time feedback. All these potential advantages would only be realized if and only if university lecturers (as the curriculum delivery agents) can accept and adopt these AI tools in their daily activities.

The available literatures indicate that there is a paradox.
Studies indicate that Nigeria lecturers are positively disposed toward the acceptance of AI technologies in general [19] but the adoption level of these technologies remains minimal in practice. To the best of knowledge of the researcher, there is no study carried out to assess the level of acceptance of AI tools for teaching and assessment among university lecturers. In the absence of evidence on the level of acceptance of AI tools by lecturers, institutions, stakeholders and policymakers may not be able to provide the necessary training, intervention and deployment strategy for positive use of AI in tertiary education. Hence, the present study was conceptualized to address the gap by investigating the level of acceptance of AI tools for the teaching and assessment among lecturers in tertiary institutions in Nigeria.

Purpose of the Study
The general purpose of this study was to assess lecturers' acceptance of Artificial Intelligence tools

for the teaching and assessment of students in tertiary institutions in Nigeria. Specifically, the study sought to:

1. ascertain the level of lecturers' acceptance of AI tools for teaching in tertiary institutions;
2. ascertain the level of lecturers' acceptance of AI tools for the assessment of students in tertiary institutions;
3. assess the mean acceptance rate of artificial intelligence tools for teaching and assessment according to lecturers' type of institution (university, polytechnic, and college of education).

Research Questions

The study was guided by the following research questions:

1. What is the level of lecturers' acceptance of AI tools for the teaching in tertiary institutions?
2. What is the level of lecturers' acceptance of AI tools for the assessment of students in tertiary institutions?
3. What is the mean acceptance rate of AI tools for teaching and assessment according to lecturers' type of institution?

Research Hypotheses

The following null hypotheses were tested at a 0.05 significance level:

H_{01}: The acceptance of AI tools for the teaching and assessment of students in tertiary institutions does not differ significantly between male and female lecturers.

H_{02}: There is no significant difference in lecturers' acceptance of AI tools for the teaching and assessment of mathematics students based on type of institution.

II. METHODOLOGY

A descriptive survey of the cross-sectional type was adopted for the study. This approach was deemed suitable because it allows quantitative data to be gathered from a representative sample at a single point in time, making it possible to examine respondents' perceptions, opinions, and attitudes towards the acceptance of Artificial Intelligence (AI) tools for the teaching and assessment of mathematics students.

The population for the study was made up of every lecturer in tertiary institutions across Nigeria. The sample size of the study consisted of 240 lecturers drawn from six tertiary institutions, comprising three universities, two polytechnics, and one college of education. Purposive sampling technique was used to select the institutions based on institutional diversity, while simple random sampling technique was used to select lecturers from the selected institutions.

Lecturers' Acceptance of Artificial Intelligence Tools for Teaching and Assessment Questionnaire (LAAITAQ), designed by the researcher, was employed to gather data. It comprised of three section. Section A focused on the demographics of the participants such as sex, kind of institution, level of education and years of experience in teaching.

Section B covered 10 items on lecturers' acceptance of AI tool for teaching, while section C covered 10 items on their acceptance of AI tools for the assessment of students.

The research instrument had a total of 20 items, which are in the structured format measured using a 4-point scale: strongly Agree (SA = 4), Agree (A = 3), Disagree (D = 2) and strongly Disagree (SD = 1). The instrument was subjected to face and content validation by three experts: two in Measurement and Evaluation and one in Educational Technology, all from recognized tertiary institutions. Their corrections, suggestions, and modifications were incorporated into the final version of the instrument before administration.

To ascertain how reliable the instrument was, it was pilot-tested on 30 mathematics lecturers from institutions that did not form part of the main study. Cronbach Alpha analysis of the resulting data produced a coefficient of 0.87, an indication of high reliability.

The questionnaires were administered with the assistance of six research assistants. Out of the 260 copies of the questionnaire administered, 241 were retrieved and found valid, representing a 92.3% response rate. Therefore, the analysis was based on the sample size of 241 respondents.

After collection, the data were coded and processed with the Statistical Package for Social Sciences (SPSS) version 25. The research questions were addressed through mean and standard deviation, whereas hypothesis one was examined using an

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independent samples t-test and hypothesis two through a one-way Analysis of Variance (ANOVA), both at the 0.05 significance level.

A mean score of at least 2.50 was used as the cut-off for acceptance of AI tools, with anything below 2.50 counting as non-acceptance. For the hypotheses, the null was rejected at p-values higher than 0.05 level and retained at p-values of 0.05 or below.

III. RESULTS

In this section, we present the summary of responses obtained from the research instrument and the relevant analyses for the research questions and hypotheses.

Research Question One:
What is the extent of acceptance of AI tools for mathematics teaching among lecturers in tertiary institutions?

Table 1: Mean and Standard Deviation of Lecturers' Acceptance of AI Tools for the Teaching of students

S/N	Item	N	Mean	SD	Decision
1	I accept the use of AI tools for preparing lesson content.	241	3.64	0.72	Accept
2	AI tools can help me explain difficult concepts to students.	241	3.71	0.68	Accept
3	I am willing to use AI-powered platforms to deliver instruction.	241	3.58	0.74	Accept
4	AI tools enable me to accomplish teaching tasks more quickly.	241	3.66	0.70	Accept
5	Given the technical know-how, AI tools are easy to use for teaching.	241	3.49	0.77	Accept
6	AI tools allow self-direction in the teaching.	241	3.60	0.73	Accept
7	I am willing to use intelligent systems to provide personalised learning for my students.	241	3.57	0.75	Accept
8	The use of AI tools improves my collaboration with colleagues in instruction.	241	3.48	0.78	Accept
9	I look forward to exploring AI tools for teaching.	241	3.69	0.69	Accept
10	I will recommend AI tools for teaching to other lecturers.	241	3.63	0.71	Accept

Grand Mean = 3.62, Grand SD = 0.73, Decision: Accepted

Research Question Two:
What is the level of mathematics lecturers' acceptance of AI tools for the assessment of mathematics students in tertiary institutions?

Table 2: Mean and Standard Deviation of Lecturers' Acceptance of AI Tools for the Assessment of Mathematics Students

S/N	Item	N	Mean	SD	Decision
11	I accept the use of AI tools for generating test items.	241	3.60	0.74	Accept
12	AI tools can be used to score students' scripts accurately.	241	3.52	0.76	Accept
13	I am willing to use AI tools to provide personalised feedback on students' performance.	241	3.57	0.72	Accept
14	AI-based scoring reduces human bias in the assessment of students.	241	3.68	0.69	Accept
15	I accept the use of AI tools for computer-based testing of students.	241	3.55	0.75	Accept
16	AI tools make the assessment of students more efficient.	241	3.62	0.71	Accept
17	I am willing to use AI tools to analyse students' performance data.	241	3.50	0.77	Accept
18	AI tools can be used always for the assessment of students.	241	3.48	0.78	Accept
19	I accept AI tools for assessment if made compulsory by the authorities.	241	.56	0.73	Accept
20	I will recommend AI tools for the assessment of students to other lecturers.	241	3.58	0.72	Accept
	Grand Mean		3.58	0.74	Accept

Table 2 presents the mean responses of mathematics lecturers on their acceptance of Artificial Intelligence tools for the assessment of mathematics students in tertiary institutions. The result shows that all the item mean scores are above the benchmark mean of 2.50, indicating that mathematics lecturers accept AI tools for the assessment of mathematics students in tertiary institutions.

Specifically, the high mean scores across all items suggest that lecturers recognise the usefulness of AI in generating test items, improving scoring accuracy, providing personalised feedback, and enhancing the efficiency of mathematics assessment. The grand mean of 3.58 further confirms a high level of acceptance of AI tools for assessment purposes.

Item 14, which states that AI-based scoring reduces human bias in the assessment of mathematics students, recorded the highest mean score, indicating strong agreement among lecturers on the fairness advantage of AI-assisted assessment. Conversely, Item 18, which states that AI tools can be used anytime and anywhere for assessment, recorded the lowest mean score, although it still remained above the acceptance threshold. This suggests that while lecturers are generally positive toward AI tools, concerns may still exist regarding accessibility and practical implementation conditions.

Overall, the findings indicate a consistently high acceptance of AI tools for assessment among mathematics lecturers in tertiary institutions.

Research Question Three:
What is the mean acceptance of AI tools for teaching and assessment according to mathematics lecturers' type of institution?

Table 3: Mean Acceptance of AI Tools According to Type of Institution

	University	Polytechnic	College
N	112	82	47
Mean	3.68	3.55	3.47
Std	0.69	0.73	0.76

Table 3 reveals the mean acceptance of AI tools for the teaching and assessment of mathematics students according to type of institution. The results show that all the institutional categories recorded mean scores above the benchmark mean of 2.50, indicating that mathematics lecturers in universities, polytechnics, and colleges of education generally accept AI tools for teaching and assessment of mathematics students.

Specifically, lecturers in universities recorded the highest mean score (M = 3.68), followed by lecturers in polytechnics (M = 3.55), while lecturers in colleges of education recorded the lowest mean score (M = 3.47). Although there are slight differences across the groups, all mean values are well above the acceptance threshold, implying a consistently high level of acceptance of AI tools across all types of tertiary institutions.

The findings suggest that university lecturers demonstrate the strongest acceptance of AI tools, while lecturers in colleges of education show comparatively lower but still positive acceptance levels.

Hypothesis One:
There is no significant difference between male and female mathematics lecturers' acceptance of AI tools for the teaching and assessment of mathematics students in tertiary institutions.

Table 4: t-test for sig difference between Male and Female Lecturers

Sex	N	Df	Mean	SD	t-val	p-val	Decision
Male	149	239	3.61	0.72	1.38	0.169	Not Sig
Female	92		3.64	0.71			

Table 4 shows that male lecturers (M = 3.61, SD = 0.72) and female lecturers (M = 3.64, SD = 0.71) had very close mean scores. The t-test result, t(238) = 1.38, p = 0.169, indicates that the difference is not statistically significant at the 0.05 level. This led to the retention of the null hypothesis: male and female lecturers showed no meaningful difference in how readily they accepted AI tools for teaching and assessment of mathematics students.

Hypothesis Two:
There is no significant difference in mathematics lecturers' acceptance of AI tools for the teaching and assessment of mathematics students based on type of institution.

Table 5: ANOVA of Lecturers' Acceptance of AI Tools Based on Type of Institution

Source	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	4.862	2	2.431	4.57	0.018
Within Groups	125.944	237	0.532		
Total	130.806	240			

The analysis of variance indicates that F-value is 4.57 and $p = 0.018$. Since the p-value is less than 0.05, the null hypothesis is rejected. That is, type of institution is a significant factor influencing lecturers' acceptance of AI tools for teaching and assessment of students.

IV. DISCUSSION

The results show a high level of acceptance of Artificial Intelligence (AI) tools among lecturers in Tertiary institutions across Nigeria, indicating the potential and willingness of lecturers to use AI in teaching, explaining concepts, and assessing students. This is consistent with the assumption of the Technology Acceptance Model (TAM) [18] which states that users are likely to adopt a technology when it is perceived as useful and easy to use. The high acceptance shown by lecturers in this study could be attributed to their understanding of the effectiveness of AI technologies in advancing knowledge and assessment. These findings support previous studies such as [19] which found that the participants generally exhibit a high degree of acceptance of AI technologies in testing, and [5] which posited that AI can lead to improvement in instructional effectiveness through personalised learning experiences and continuous feedback systems. However, the results of this study contradict previous ones by [20] and [22], who indicated low utilisation of AI tools by lecturers. The difference may stem from the discrepancy between attitude and use (actual adoption) which can be influenced by lack of resources, training and institutional policies, and support systems. No statistically significant difference was found in the acceptance level of AI tools between male and female lecturers. This result implies that gender has no significant impact on the readiness of mathematics lecturers to accept AI technologies, aligning with the TAM which states that acceptance is driven by perceived usefulness and ease of use rather than demographic attributes [18]. It also resonates with [20], who did not report any significant difference in lecturers' use of AI tools in terms of gender.

The type of institution, however, proved to be a significant determinant of lecturers' acceptance of AI tools. Lecturers from universities had the highest acceptance level, followed by those in polytechnics, while lecturers from colleges of education had the least acceptance level. This might be due to availability of the digital resources and equipment, research culture and research grant opportunities in universities which could enhance the use of new technology compared to polytechnics and colleges of education [24]. These findings are consistent with Diffusion of Innovation Theory, which postulates that innovation adoption rates vary among different organizations and groups within societies.
In conclusion, the study confirms a positive inclination of Mathematics lecturers in Nigeria toward the adoption of AI tools for teaching and assessment. Yet, institutional factors rather than gender significantly influence the acceptance of AI technologies. Hence, increased access to digital infrastructure, enhancement of professional development opportunities, and adequate institutional support systems would be beneficial in bridging the gap between perceived usefulness of AI and actual classroom practices.

Lecturers' Acceptance of AI Tools for the Teaching of Students
In relation to the first research question, it was discovered that lecturers accept Artificial Intelligence (AI) tools for the teaching of mathematics in tertiary institutions to a great extent. This finding supports [19] who discovered that the acceptance of AI technology by tertiary institution lecturers in Akwa Ibom State and it also supports the stance of [25] that lecturers who play significant role in curriculum delivery of tertiary institutions are expected to have good knowledge of new instructional tools. The high level of acceptance

might have arisen as the result of the effectiveness of AI tools in reducing workload of lecturers in class and in preparing of lesson note. Moreover the ease of use to access contents and explain concepts is likely to cause high level of acceptance by lecturers which is supported by TAM model of [18].

Lecturers' Acceptance of AI Tools for the Assessment of Students

Result of research question two states that lecturers recorded high acceptance level towards the use of AI tools to assess students in the tertiary institutions. This finding aligns with[19], who said that lecturers do accept the application of AI technology for educational testing, and also align with [4], who established that technically, AI-generated test items do not differ in quality to the items constructed using conventional procedure. The result also further gives credence to [14] argument that AI improves the validity, reliability and scoring subjectivity of assessment.

However, one cannot ignore other related concerns highlighted in the literatures that raise concern regarding using AI to assess students. [26] has alerted readers regarding how generative AI impacts on conventional testing and assessment and also pointed out the limits that exist within an AI's ability to assess not only the correctness of the student's response, but its originality and the logic that underlies the solution [27]

Acceptance of AI Tools According to Gender and Type of Institution

Hypothesis One results revealed that no significant difference was observed between male and female lecturers' acceptance of AI tools for teaching and assessment. This is consistent with the finding of [20] who did not find any significant differences between male and female lecturers regarding their use of the AI tools, as well as [28] who did not find any significant differences in technology usage in their sample of teachers by sex. This finding suggests that gender has no impact on the acceptance of AI tools, with both male and female lecturers sharing positive views of emerging technologies.

Hypothesis Two results showed a significant difference in lecturers' acceptance of AI tools by type of institutions. The result of the analysis shows that the type of institution matters and influences lecturers' acceptances to use the emerging technologies. The lecturers' in universities appear to have higher acceptance rates than those of polytechnics and colleges of education. This indicates that the structural and environmental factors are key influences in lecturers' acceptance of technology and these are most likely prevalent in universities due to differences in resources, access to technology, training, and awareness about AI technologies and its impact in the higher education environment. The observed differences across studies and institutions suggest that although there is an overall acceptance rate of the AI tools among lecturers, there are structural and environmental factors that would affect and influence the extent of AI tool's integration.

V. CONCLUSION

From the discussion of the results of this study, it can be concluded that Lecturers at Tertiary Institutions in Nigeria are positively inclined towards Artificial Intelligence (AI) Tools used in Teaching and Students Assessment. The study concluded that there was no statistically significant difference in lecturers' acceptance of Artificial Intelligence (AI) tools between male lecturers and female lecturers; it found that there was statistically significant difference in acceptance of Artificial Intelligence (AI) tools by level and type of institution where university lecturers expressed higher levels of acceptance toward Artificial Intelligence (AI) tools than their counterpart in Polytechnics and Colleges of Education.

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~~VII.~~VI. RECOMMENDATIONS

In line with the results, the study recommends that;

1. Managements of tertiary institutions, working with relevant agencies like TETFUND, need to organize frequent training/workshops for hands-on use of the AI tools among lecturers for adoption and integration of these tools into teaching and assessment processes.
2. Management should create the conducive environment of integrating AI tools for teaching and assessment through enabling high speed internet, the necessary AI platform and the needed ICT infrastructure for lecturers across institutions.

3. The lecturers, across all categories of institutions and sex should be availed of training and exposure to the available AI tools.
4. Institutional Quality Assurance Units should set clear institutional ethical standards for the implementation of AI tools in teaching and assessment to ensure integrity and sound academic standards. and to protect against malicious application of AI in assessment while harnessing the benefits.

REFERENCES

[1] A. Adeyoju. *The role of intellectual property in artificial intelligence. 2019.* https://www.mondaq.com/nigeria/patent/794610/the-role-of-intellectual-property-in-artificial-intelligence

[2] S. S.Shukla, & V. Jaiswal. Applicability of artificial intelligence in different fields of life. *International Journal of Scientific Engineering and Research, 2013. 1*(1), 28-35.

[3] S. Elayyan. The future of education according to the fourth industrial revolution. *Journal of Educational Technology and Online Learning*, 2021. *4*(1), 23–30.

[4] R. E. D. Ekim, J. B. Essien A. N. Essien. Comparative analysis of multiple-choice mathematics test items generated through artificial intelligence and traditional methods in Ikot Abasi LGA, Akwa Ibom State. *Journal of Evaluation*, 2024. *9*(1), 52–60.

[5] O. Y. Fernández, L. A. Valenzuela-Fernández & L. L. Garro-Aburto. Artificial intelligence and its implications in higher education. *Propósitos y Representaciones*, 2019. *7*(2), 553–568.

[6] T. Karsenti. *Artificial intelligence in education: The urgent need to prepare teachers for tomorrow's schools*. *Formation et Profession, 2019. 27*(1), 105 – 111. https://doi.org/10.18162/fp.2019.a166

[7] M. Fahimirad & S. S.Kotamjani. *A review on application of artificial intelligence in teaching and learning in educational contexts*. *International Journal of Learning and Development, 2018. 8*(4), 106 – 118. https://doi.org/10.5296/ijld.v8i4.14057

[8] J. O. Effoduh. *Factsheet on artificial intelligence in Nigeria*. Paradigm Initiative. 2021. https://doi.org/10.32920/24242893.v1

[9] E. O. Aghanenu, J. N. Igabari, R Jenije & F. I. Arunaye. Simulating models for the transmission dynamics of a novel coronavirus under the administration of an imperfect vaccine in Nigeria. Journal of Mathematics and Computer Science. 2022: 12, Article 155. https://doi.org/10.28919/jmcs/7254

[10] J. C. Ehiwario, J. N. Igabari & P. E. Ezimadu. Theory and applications of the alpha power type II Topp–Leone-generated family of distributions. Reliability: Theory & Applications. 2023: 18(3.74), 785–807. https://doi.org/10.24412/1932-2321-2023-374-785-807

[11] N. N. Onyemarin, H. I. Ojarikre & J. N. Igabari. *An ARMA modelling approach on infant mortality rate in Nigeria*. *Nigerian Journal of Science and Environment, 2023: 21*(1), 94–114.

[12] J. D. Eduwem, R. E. D. Ekim & J. B. Offiong. Teachers' characteristics and test construction ability in technical colleges in Akwa Ibom State, Nigeria. *African Journal of Educational Foundations*, 2023. *4*(2), 43–61.

[13] T. Manichander. *Assessment in Education*. 2015. https://www.lulu.com.

[14] Y. Attali & J. Burstein. *Automated essay scoring with e-rater® v. 2.0*. *ETS Research Report Series, 2004.* 2: 1 – 21. https://doi.org/10.1002/j.2333-8504.2004.tb01972.x

[15] V. I. Shute & Y. J. Kim. Formative and Stealth Assessment. In: Spector, J., Merril, M., Elen, J., Bishop, M. (eds) *Handbook of Research on Educational Communications and Technology*. Springer. 2014. 311 – 321 .

[16] J. N. Igabari. *The Population Question in Nigeria: Models and Reliable Projections*. *Asian Research Journal of Mathematics, 2017:5*(3), 1–10. https://doi.org/10.9734/ARJOM/2017/33989

[17] A. Baig, J. D. Cressler, M. Minsky.The future of AI in Education: Personalized Learning and Intelligent Tutoring Systems. AlgoVista: Journal of AI and Computer Science, 2024: 1(2): 1 – 11.

[18] F. D. Davis. Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 1989. 13*(3), 319-340.

[19] R. E. D. Ekim, J. D. Eduwem & E. E. Ekong. Assessment of lecturers' acceptance and adoption of artificial intelligence technology for educational testing in tertiary institutions in Akwa Ibom State, Nigeria. *International Journal of Current Academic Research*, 2025. *3*(1).

[20] G. Thomas, A. I. Gambari, F. M. Sobowale & B. A. Shehu. Assessment of lecturers' utilisation of artificial intelligence for education in a Nigerian university. 2024. Department of Educational Technology, Federal University of Technology, Minna.

[21] C. I. Agi, A. E. A. Hager, L. T. Hindan & I. A. Egiri. Assessment of lecturers' level of awareness, utilization, and constraints of artificial intelligence (AI) for teaching and assessment in universities in Nigeria. *African Journal of Theory and Practice of Educational Assessment*, 2024. *13*, 46–58. https://www.earnia.org/?p=article-detail&id=278

[22] B. O. Ukeh, & A. A. Anih. Utilization of artificial intelligence based tools for teaching and research among lecturers in Federal University Otuoke, Bayelsa State Nigeria. *Sapientia Foundation Journal of Education, Sciences and Gender Studies, 2024. 6*(1), 153 – 159 .

[23 C. O. Madu & A. Musa. *Lecturers' level of awareness of artificial intelligence as correlate of their digital competence at Federal University Wukari, Nigeria*. *Journal of Educational Research in Developing Areas, 2024. 5*(1), 59–71. https://doi.org/10.47434/JEREDA.5.1.2024.59

[24] W. W. LaMorte. *Diffusion of innovation theory*. Boston University School of Public Health. 2022. https://sphweb.bumc.bu.edu/otlt/mph-modules/sb/behavioralchangetheories/behavioral changetheories4.html

[25] M. A. Omiola, S. A. Onasanya, R. A. Shehu & O. O. Ogunlade. *Designing, development and validation of web-based instructional package for teaching and learning in Nigerian schools*. *Singapore Journal of Scientific Research, 2011. 1*(1), 49–58. https://doi.org/10.3923/sjsres.2011.49.58

[26] J. Rudolph, S. Tan & S. Tan. ChatGPT: Bullshit spewer or the end of traditional assessments in higher education? *Journal of Applied Learning & Teaching, 2023. 6*(1), 342-363.

[27] E. S. Aluthman. *The effect of using automated essay evaluation on ESL undergraduate students' writing skill*. *International Journal of English Linguistics, 2016. 6*(5), 54–67. https://doi.org/10.5539/ijel.v6n5p54

[28] A. B. Alba & L. C. Trani. Extent of utilisation of Information and Communication Technology (ICT) by selected secondary school teachers of city schools division of Malolos: Basis for the development of strategic action. *International Journal of Education and Research*, 2018. *6*(1), 181-188.