Artificial Intelligence (AI): Perception and Utilization of AI Technologies in Educational Assessment in Nigerian Universities

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ABSTRACT
The ubiquity of Artificial Intelligence (AI) has generated different perceptions and views regarding its usefulness in conducting educational assessment in Nigerian universities. This study determined whether academic integrity and innovative assessment concerns affect how university teachers utilize diverse AI tools in educational assessment. It also investigated if university teachers’ perception of using AI tools is likely to be associated with their tendency to personalize AI use at universities in the country. The study adopted inferential research design. 3,083 university teachers comprised the population in the study, out of which the sample of 322 participants who are professors, associate professors, and senior lecturers from government and privately-owned universities, were randomly selected for the study. The instrument was a 4-point scale questionnaire titled: “University Teachers’ Perception and Utilization of AI Questionnaire (UTPUAIQ).” The data were analyzed using independent t-test, Pearson Product Moment Correlation and Chi-Square statistics, as percentile analysis was explored using simple percentage statistical procedure. The results revealed that academic integrity concerns have an influence on how university teachers perceive AI use in assessment; that perception for innovative assessment concerns at university significantly affects how university teachers utilize diverse AI tools in educational assessment; and that university teachers’ perception of using AI tools is likely to be associated with their tendency to personalize AI use at universities. It was concluded that AI use in educational assessment is in itself not harmful but the potential risks involved must be mitigated as it is deployed for use for students’ assessment at universities in Nigeria. Hence, there is a need to ensure the ethical, inclusive and equitable use of AI in educational assessment at universities in the country.

Keywords: artificial intelligence; machine learning; perception; utilization; educational assessment

1. INTRODUCTION
The integration of Artificial Intelligence (AI) into education has ushered in a new era of possibilities and challenges, particularly in the realm of educational assessment. As scholars and researchers delve into the implications of AI technologies, a multifaceted landscape emerges, highlighting both the advancements and the critical considerations that shape the future of assessment practices especially in Nigerian universities.

The emergence of Student-Facing AI, exemplified by tools like Automated Writing Evaluation (AWE), Automated Essay Scoring (AES), and ChatGPT, marks a significant step towards personalized and efficient learning experiences. These AI applications aim to empower students by providing instant
feedback on their assignments, irrespective of their geographical location. However, as Yeadon et al. (2022) and Herman (2022) suggest, there looms a concern among scholars regarding the potential displacement of traditional assessment methods, particularly in the domain of essay writing.

Yet, the promise of AI extends beyond students to encompass educators through Teacher-Facing AI. This facet of AI technology, as highlighted by Baker et al. (2019), aids teachers in developing assessments, managing classrooms, and tailoring instruction to meet individual student needs. This symbiotic relationship between AI and educators holds the potential to revolutionize teaching practices, provided the technology is harnessed effectively. Moreover, the realm of System-Facing AI introduces innovative solutions for educational institutions, streamlining administrative tasks and enhancing overall efficiency. Martinez-Plumed’s (2020) pilot project, focused on co-creating an AI handbook for teachers and education developers, reflects a collaborative effort to navigate this evolving landscape of AI in education. Such initiatives underscore the importance of aligning technological advancements with pedagogical goals.

As AI technologies infiltrate educational settings, pertinent concerns emerge regarding equity, ethics, and the very fabric of assessment practices. While AI-powered tools like ChatGPT offer efficiency and accessibility, concerns raised by Rudolph et al. (2023) regarding the potential for students to “outsource” (p. 352) their written assignments underscore a pivotal challenge. The fear of diminishing creativity and critical thinking skills looms large, prompting a reevaluation of the role of AI in nurturing, rather than replacing, student learning. Furthermore, the efficacy and reliability of AI assessments, particularly in capturing nuanced elements of writing such as coherence and creativity, are subject to scrutiny (Aluthman, 2016). This raises questions about the balance between automated processes and the holistic insights offered by human evaluators. The study by Luckin (2017) on AI-enabled adaptive and continuous assessment sheds light on the potential benefits of these technologies. However, robust evidence on their long-term impact remains a gap in current research.

Equally significant is the role of university teachers in this evolving landscape. United Nations Educational, Scientific and Cultural Organization (UNESCO)’s observation (2021) that “AI is not a magic bullet” (p. 37) emphasizes the need for thoughtful integration and pedagogical alignment. Tuomi’s (2020) argument for co-designing technology use with teachers resonates, highlighting the importance of empowering educators as active participants in the AI education journey. In other words, Tuomi (2020) argued that “the learning outcomes do not depend on technology. It depends on how teachers can use technology in pedagogically meaningful ways. An appropriate approach, therefore, is to co-design the uses of technology with teachers” (p. 7).

In navigating the complexities of AI in conducting and administering educational assessment, a nuanced approach that balances innovation with ethical considerations is imperative. The study by Sanusi et al. (2024), drawing from the beliefs of pre-service teachers, underscores the pivotal role of perceptions in shaping AI technology adoption. That is, the beliefs of pre-service teachers are a key determinant of technology use concerning their perception of AI technology across learning contexts. Accordingly, students and teachers come into close contact with AI technologies, whereby through classical and operant conditioning, the students and teachers form their individual perceptions of AI use in educational assessment. Depending on both the students and teachers, this perception may lead to motivation. This calls for intentional efforts to foster a culture where AI is seen as a tool for enhancement rather than a replacement for human expertise (Farjon et al., 2019; Ruth et al., 2022).

Moving forward, the need for rigorous research to validate the efficacy of AI technologies in educational assessment becomes apparent. The concerns raised about formative and summative assessment methods, test equity, and the evolving role of university teachers necessitate a collaborative
effort between researchers, educators, and policymakers. As the landscape of AI in education continues to evolve, the emphasis on co-creation, evidence-based practices, and ethical considerations will pave the way for informed decision-making and meaningful integration of AI technologies in educational assessment.

This intertwined narrative highlights the dynamic interplay between advancements in AI for educational assessment and the critical considerations that shape its implementation. Through collaborative efforts, a balance between innovation and pedagogical integrity can be struck, ensuring that AI technologies serve as catalysts for enhancing, rather than overshadowing, the learning experience. In specific terms, AI’s impact on learning has been thoroughly researched, as recent studies have shown that AI deployment in universities improves assignment feedback rather than exploring concerns relating to university teachers’ perception and utilization of AI in conducting and administering formative and summative assessment, as well as opportunities for innovative assessment design, especially in Nigeria. Here, AI tools are given sensationalistic portrayals and unbridled euphoria or hype as magic wands to solve all academic entanglements and difficulties, hence, this study.

**Objectives of the Study**

Three key specific objectives guided this study. These are to:

1. Determine whether university teachers’ perception of AI use in educational assessment reinforces their belief in academic integrity concerns at the universities.
2. Examine if university teachers’ utilization of diverse AI tools in educational assessment reinforces their perception of innovative assessment concerns at the universities.
3. Investigate whether university teachers’ perception of using AI tools predisposes them to personalize AI use in educational assessment at the universities.

**Research Hypotheses**

Three hypotheses meant to guide the direction of this study were postulated:

1. University teachers’ perception of AI use in educational assessment will not be significantly influenced by academic integrity concerns at the university.
2. University teachers’ utilization of diverse AI tools in educational assessment will not be significantly affected by their perception of innovative assessment concerns at the university.
3. University teachers’ perception of using AI tools will not significantly predispose them to personalize AI use in educational assessment at the university.

**Theoretical Background**

Educational Psychologists and Researchers in the field of Education have defined perception in many ways, such as the totality of our attitudes toward ourselves or things; a set of beliefs that one holds about things, beliefs that are relatively difficult to modify (Ibrahim, 2014). It is the recognition and interpretation of the messages that the brain receives from the sense organs, as it involves identification. According to Wohlwill (2017), perception is influenced by behavioral and central determinants, which include values, rewards, experiences, and needs. Since these traits abound differently in individuals, differential perception arises from them. In terms of item information processing, all information around an individual cannot all be used at a time. There is a process of selection. What is selected and what categories are constructed depend on perceived context and higher-order or general knowledge of the receiver (Ibrahim & Saleh, 2020). In other words, perception is a source of data-driven input (external stimulation) but is, in turn, influenced by conceptually driven input (what one knows).

On the other hand, AI is the deployment of computers and machines to do things attributed to human beings and seemingly like human beings. Of all creatures, the human being is noted to have
uncommon but super intelligence. Also, it is humans who are capable of thinking critically and performing exceedingly intelligently than any known creature. When humans now make machines mimic and emulate them in all aspects of existence, then AI is birthed. This is the concept Russell and Norvig (2016) tried to explain when they conceptualized AI as “machines that mimic human cognitive functions such as learning, understanding, reasoning, or problem-solving” (p. 5). Likewise, Farrokhnia et al. (2023) and Xu et al. (2021) defined AI as the “science and engineering of creating systems that are capable of performing tasks commonly associated with intelligent beings such as learning, judgment, and decision-making” (p. 1). Thus, AI is the study of how to make computers do things at which, at the moment, people are better (George, 2020).

Most importantly, AI consists of subfields known as machine learning and deep learning. Machine learning (ML) is the scientific study of algorithms that computer systems learn through experience, while an algorithm refers to the step-by-step procedure to be followed by AI (Delipetrev et al., 2020). Noteworthy, without algorithms, AI will not be able to function well or perform intelligently like humans do. Also, there are AI systems that are made up of both software and hardware systems developed to perform complex goals digitally by perceiving their environment through data acquisition, data interpretation, and critical reasoning to enable them to decide how to achieve the earmarked goals (Delipetrev et al., 2020).

In the same vein, Rudolph et al. (2023) compared literature on the use of AI in education with an emphasis on OpenAI's Generative Pretrained Transformer (GPT) and its relevance in conducting and administering assessments, learning, and teaching in higher education. It was discovered that despite the impressionistic hype about GPT-3 strengths, it has serious weaknesses and sometimes makes very silly mistakes. The AI software was able to answer some pertinent questions in assessment, learning, and teaching despite its limitations, such as limited word characters, the inability to draw diagrams, and consistent network error prompts. It was concluded that ChatGPT may prove most useful to teachers when it comes to facilitating more innovative teaching and learning.

In a related study, Sullivan et al. (2023) examined about 100 news articles using content analysis to explain how ChatGPT disrupts higher education in Australia, New Zealand, the United States, and the United Kingdom. It was discovered that the data showed general concerns about academic integrity and ways that students could be discouraged from using ChatGPT. Also, fewer articles offered how and why ChatGPT could be used productively in assessment, learning, and teaching.

Subsequent research by Sanusi et al. (2024) investigated pre-service teachers’ perception of AI using Planned Behaviour Theory (PBT) as a model to guide the study. The researchers surveyed 796 pre-service teachers in Nigerian Universities using a structural equation modeling approach to analyze data. It was discovered that pre-service teachers significantly displayed a positive behavioural intention to learn AI among all constructs except self-efficacy that could not independently lead to actual AI learning behaviour.

As a consequence, the studies reviewed above showed that perception can influence what people learn and how they learn and internalize it. This is because perception is the awareness of the elements of the environment through physical sensation, interpreted in the light of experience, and a function of non-conscious expectation derived from past experience and serving as a basis for further learning. To buttress this assertion, Ibrahim and Saleh (2020) described perceptual as an essential forerunner of cognitive development. What is seen or heard will depend on what one already knows and how he reacts (Ibrahim & Saleh, 2020).
2. METHODS

Research Design

The design for this study is basically inferential in nature. According to Creswell (2014) and Yin (2018), inferential research design refers to a methodology used in research to draw conclusions and make inferences about a population based on a sample taken from that population. It involves the use of statistical analysis to generalize findings from a sample to a larger population. Given the quantitative nature of this study’s objectives, inferential design allows for rigorous statistical analysis. Further, it is inferential because the sample is selected from the target population of university teachers who are currently undergoing a thirteen-week training on the ABC of AI and the delivery of quality higher education in Nigeria.

Similarly, the objective of exploring university teachers’ perception of innovative assessment concerns is well-suited to inferential research. The design allows for the examination of how these perceptions influence teachers’ decisions to personalize AI use in educational assessment. Through inferential research, the study aims to determine how university teachers’ perceptions of AI tools influence their utilization and personalization in educational assessment. This aspect is crucial for understanding potential trends and outcomes in the broader population. The study’s objective of understanding how university teachers utilize AI tools in educational assessment aligns with the inferential design. By analyzing the relationship between teachers’ perceptions and their actual use of AI tools, the study aims to draw conclusions about the broader population’s behaviour.

Therefore, the inferential research design was chosen for its ability to generalize findings, test hypotheses, conduct statistical analysis, and provide predictive insights. This aligns well with the study’s objectives of exploring university teachers’ perceptions of AI tools in educational assessment and their impact on utilization and personalization. The design allows for a thorough examination of the relationships between variables, offering valuable insights into the behavior and decision-making processes of university educators in the context of AI integration in education. Hence, it is considered the suitable tool in the study for analyzing data gathered in a fashion that addresses the research hypotheses in the study. Also, the variables involved have been found to exist within the respondents; thus, these variables are not manipulatable. While perception is considered to be the independent variable, the utilization of AI by university teachers is the dependent variable of interest.

Participants

3,083 participants were offered provisional admission to participate in the free thirteen-week training on the ABC of AI and the delivery of quality higher education in Nigeria, comprising the population in this study. However, 2,049 participants who completed the form accepting the offer for the course constituted the accessible population of university teachers in the study. These university teachers are mainly professors, associate professors, and senior lecturers who freely registered for the Module 8 training on ABC of Artificial Intelligence organized by the Virtual Institute for Capacity Building in Higher Education (VICBHE), Nigeria. The university teachers were teaching in public (state and federal) and privately-owned universities in the country as professors, associate professors, and senior lecturers, respectively.

Armed with the sample frame and Research Advisor, at the heart of this study is the sample of 322 participants who are very senior university teachers viz: professors, associate professors, and senior lecturers from federal universities, state government-owned universities, and privately-owned universities, who freely registered for the Module 8 training on ABC of Artificial Intelligence organized by the Virtual Institute for Capacity Building in Higher Education (VICBHE), Nigeria. The participants were selected through the hat and draw method of a simple random sampling technique from federal, state, and private.
universities in the country, which spread across the six geopolitical zones of Nigeria. They comprised female and male university lecturers, respectively.

**Instrumentation**

The research instrument was initially developed through discussions among members of the research team, and then relied on the literature reviewed. Thus, the instrument used in sourcing information from the participants was a simple survey questionnaire of 20 items, which was developed by researchers in this study. It was a 4-point scale questionnaire titled: “University Teachers’ Perception and Utilization of AI Questionnaire (UTPUAIQ).”

**Validity and Reliability**

To establish the validity of this instrument, experts in the field of Psychology of Education, Measurement, and Evaluation were consulted for vetting, and their suggestions were incorporated into the final copy of the questionnaire regarding both content and face validity. Thereafter, a pilot study was carried out to establish how reliable the instrument is using the split-half reliability method. The split-half reliability of the instrument is 0.88. The split-half was preferred because of the desire to determine the internal consistency of the instrument for data collection.

**Data Collection**

The Google Survey Approach targeted at the participants was used to gather information from 322 participants with login credentials for module 8 VICBHE. The list of participants consists of their names, e-mail addresses, and VICBHE passwords which facilitated easy access to and communication with each participant. Also, the survey, which consists of 20 items that made up the self-developed instrument “University Teachers’ Perception and Utilization of AI (UTPUAI),” aimed to understand the nature of perception of university teachers and their utilization of AI in educational assessment in the universities, as well as to gather data on participants’ perceived use of AI in constructing, developing, and administering formative and summative assessments with regard to academic integrity, innovative assessment, and personalization of AI use in educational assessment at universities.

A number of challenges were experienced during the fieldwork. The survey questionnaire, which takes approximately less than 10 minutes to complete, revealed that a vast majority of the participants are not used to checking their e-mail boxes for information always and most of the time. They tend to check their e-mails on an incident basis as when convenient to them. This attitude necessitated the researchers to engage them in a follow-up but friendly reminder, which lasted several days to achieve through telephone calls and several gentle reminder messages to their e-mail boxes. We issued four reminders! For example, some of the participants complained of too much engagement, lack of time, and overbearing domestic work as reasons for their lukewarm attitude to the survey. This method helped to reduce the invalid responses and wearing down often experienced in data collection.

**Data Preparation**

For data prudence and management, the items in the questionnaire were scored based on the weight of the response. The addition of scores under each variable, which represented the feeling of each participant constituted the operational definition for each of the variables involved. Consequently, the data obtained for this study to test the hypotheses were analysed with the use of Chi-square test for independence, the independent samples t-test, and Pearson Product Moment Correlation statistical technique. All hypotheses were tested at 0.05 level of significance.
3. RESULTS AND DISCUSSION

**Hypothesis One:** The first null hypothesis stated that university teachers’ perception of AI use in educational assessment is not influenced by academic integrity concerns at universities. To analyze this hypothesis, which aims to explore the perception of university teachers regarding AI use in educational assessment and its relationship with academic integrity concerns, we would want to conduct a statistical test to determine if there is a significant relationship between these variables. Since we have a single categorical independent variable (i.e., academic integrity concerns at university, which we assume is binary) and a single categorical dependent variable (i.e., University teachers’ perception of AI use in educational assessment, which we assume is also binary), a Chi-square test for independence was used to analyze the data. The result is presented in Table 1.

<table>
<thead>
<tr>
<th>University Teachers’ Perception of AI Use in Educational Assessment</th>
<th>AI Use Influenced by Integrity Concerns</th>
<th>Total</th>
<th>χ²-cal</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perception Positive</td>
<td>Strongly Agree</td>
<td>a82</td>
<td>(25.47%)</td>
<td>66.46</td>
</tr>
<tr>
<td></td>
<td>Agree</td>
<td>a38</td>
<td>(11.80%)</td>
<td>45.34</td>
</tr>
<tr>
<td></td>
<td>Disagree</td>
<td>56</td>
<td>(17.39%)</td>
<td>45.34</td>
</tr>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>24</td>
<td>(7.45%)</td>
<td>42.86</td>
</tr>
<tr>
<td>Perception Negative</td>
<td>25</td>
<td>35</td>
<td>(7.76%)</td>
<td>27.66</td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>45</td>
<td>(10.86%)</td>
<td>27.66</td>
</tr>
<tr>
<td></td>
<td>40.54</td>
<td>26.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>45.34</td>
<td>322</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant; df = 3; critical χ² = 7.81, p<0.05

The Table 1 presented data on university teachers’ perception of AI use in educational assessment, specifically focusing on how AI use is influenced by integrity concerns. The table includes categories such as “Perception Positive” and “Perception Negative,” along with corresponding frequencies and percentages. The total number of participants in the study was 322, with subcategories of perceptions and their frequencies provided.

From Table 1, it could be seen that 120 university teachers exhibited positive perception constituting 37.27% of the 322 participants confirmed that academic integrity concerns have an influence on how university teachers perceive AI use in assessment, while 80 university teachers among those with positive perception constituting 24.84% of 322 participants asserted that academic integrity concerns may not significantly influence how university teachers perceive AI use in assessment. However, 60 university teachers who manifested negative perception constituting 18.62% of the 322 participants confirmed that academic integrity concerns have an influence on how university teachers perceive AI use in assessment, while 62 university teachers with negative perception constituting 19.28% of the 322 participants believed that academic integrity concerns may not significantly influence how university teachers perceive AI use in assessment. This implies that a higher percentage of participants had a positive perception of AI use in educational assessment compared to those with a negative perception.
Further analysis of the data resulted in the calculated $\chi^2$-value of 35.46. This calculated $\chi^2$-value of 35.46 was greater than the $p$-value given 3 degree of freedom at 0.05 level of significance. Hence, the null hypothesis was disconfirmed, meaning there is evidence to suggest that there is a significant relationship between academic integrity concerns at universities and university teachers’ perception of AI use in educational assessment. In other words, there was a significant relationship between academic integrity concerns at universities and university teachers' perception of AI use in educational assessment. This suggests that addressing integrity concerns related to AI use could potentially impact how university teachers perceive and utilize AI tools in educational assessment. The findings highlight the importance of considering academic integrity issues when implementing AI technologies in educational assessment practices.

**Hypothesis Two:** The second null hypothesis stated that university teachers’ utilization of diverse AI tools in educational assessment is not affected by their perception for innovative assessment concerns at universities. This hypothesis aims to determine whether a significant difference exists in the mean utilization of AI tools between university teachers with positive and negative perceptions of innovative assessment concerns. The participants were categorized into two independent groups namely University teachers with positive perception for innovative assessment concerns and University teachers with negative perception for innovative assessment concerns based on their responses to items number 8-13 of section B of questionnaire measuring the variables. Thereafter, the independent samples t-test was used to analyse the data. The result of the analysis is presented in Table 2.

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean (x)</th>
<th>SD</th>
<th>t-cal</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Teachers with Positive Perception</td>
<td>200</td>
<td>22.64</td>
<td>7.42</td>
<td>2.88*</td>
<td>p&lt;0.05</td>
</tr>
<tr>
<td>for Innovative Assessment Concerns</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University Teachers with Negative Perception</td>
<td>122</td>
<td>19.88</td>
<td>8.87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>for Innovative Assessment Concerns</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant; df = 320, critical $t$ = 1.650, p<0.05

The Table 2 presented data on university teachers’ perceptions of innovative assessment concerns categorized as positive and negative. It includes the number of participants (N), mean scores, standard deviation (SD), calculated t-value (t-cal), and p-value for each perception group. University teachers with a positive perception of innovative assessment concerns (N=200) had a higher mean score (22.64) compared to those with a negative perception (N=122) with a lower mean score (19.88). Thus, Table 2 showed a significant difference in the mean utilization of AI tools between university teachers with positive and negative perceptions of innovative assessment concerns. The calculated t-value of 2.88 is greater than the p-value given 320 degree of freedom at 0.05 level of significance. Consequently, the null hypothesis was disconfirmed. This implies that there is evidence to suggest that there is a significant difference in the mean utilization of AI tools between university teachers with positive and negative perceptions of innovative assessment concerns. In other words, there was a significant difference in the mean utilization of AI tools between university teachers with positive and negative perceptions of innovative assessment concerns.

University teachers with positive perceptions of innovative assessment concerns tend to have higher mean scores, indicating a more favorable view towards utilizing diverse AI tools in educational
assessment. The significant difference in perception between the positive and negative groups suggests that attitudes towards innovative assessment concerns can influence the utilization of AI tools in educational assessment. The findings highlight the importance of considering teachers' perceptions and concerns regarding innovative assessment when implementing AI technologies in educational assessment practices.

**Hypothesis Three:** The third null hypothesis stated that university teachers' perception of using AI tools will not be significantly predisposed them to personalize AI use in educational assessment at universities. To analyze this hypothesis, which aims to explore the relationship between university teachers' perception of using AI tools and their predisposition to personalize AI use in educational assessment, we would once again use a statistical test to determine if there is a significant relationship between these variables. Since we have two continuous variables (i.e., University teachers' perception of using AI tools and Predisposition to personalize AI use in educational assessment), Pearson Product Moment Correlation statistic was used to analyse the data. The result is presented in Table 3.

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean (𝑥̄)</th>
<th>SD</th>
<th>r-cal</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Teachers' Perception of Using AI Tools</td>
<td>322</td>
<td>41.38</td>
<td>3.03</td>
<td>0.762</td>
<td>p&lt;0.05</td>
</tr>
<tr>
<td>Predisposition to Personalize AI Use in Educational Assessment</td>
<td>322</td>
<td>38.54</td>
<td>4.38</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant; df = 320, critical r = .133, p<0.05

The Table 3 allows for a comparison between the mean scores of university teachers' perception of using AI tools and their predisposition to personalize AI use in educational assessment. Table 3 indicated a significant correlation between university teachers' perception of using AI tools and their predisposition to personalize AI use. The calculated r-value of 0.762 is greater than the p-value given 320 degree of freedom at 0.05 level of significance. Consequently, the null hypothesis was disconfirmed. This implies that there is evidence to suggest that there is a significant correlation between university teachers' perception of using AI tools and their predisposition to personalize AI use in educational assessment. In other words, there was a significant correlation between university teachers' perception of using AI tools and their predisposition to personalize AI use. The significant correlation between these variables (r-cal) indicates a relationship between how university teachers perceive AI tools and their tendency to personalize the use of AI in educational assessment. The p-value being less than 0.05 suggests that this relationship is statistically significant, highlighting the importance of considering teachers' perceptions when implementing AI in educational assessment.

**Discussion of Findings**

The first hypothesis which has speculated that university teachers' perception of AI use in educational assessment is not influenced by academic integrity concerns at universities was rejected on the basis of the findings of this study. The finding showed that there is a significant relationship between academic integrity concerns at university and university teachers' perception of AI use in educational assessment. The implication of this result is that academic integrity concerns have an influence on how university teachers perceive AI use in assessment. That is, this finding suggests that academic integrity
concerns play a role in shaping how university teachers view the use of AI in assessment. This finding agrees with those of Sullivan et al. (2023) who had expressed concerns about academic integrity and ways that students could be discouraged from using ChatGPT. They reported that cheating, academic dishonesty, students outsourcing their academic work to AI tools especially if they did not have a strong academic background, risk of increased plagiarism and general misuse as most academic integrity concerns expressed by participants in their study. Similarly, the finding is consistent with Rudolph et al. (2023) discovery when they claimed that ChatGPT has serious weaknesses and sometimes makes very silly mistakes. It was concluded that ChatGPT may prove most useful to teachers when it comes to facilitating more innovative teaching and learning.

Despite these concerns, there is a recognition, as highlighted by Rudolph et al. (2023), that ChatGPT and similar AI tools can be valuable in facilitating innovative teaching and learning practices. It was concluded that ChatGPT may prove most useful to teachers when it comes to facilitating more innovative teaching and learning. This contrasting view from prior research underscores the nuanced nature of university teachers’ perception of AI use in educational assessment. While concerns about academic integrity and the reliability of AI tools like ChatGPT are evident, there is also recognition of their potential to enhance teaching and learning practices in innovative ways. As the landscape of AI in education continues to evolve, addressing these concerns while harnessing the benefits of AI tools remains a critical area of focus for educators and researchers alike.

Essentially, the identified significant relationship between academic integrity concerns and university teachers’ perception of AI use in educational assessment highlights the nuanced considerations that educators make when adopting new technologies in their teaching practices. It suggests that concerns about maintaining academic integrity directly impact how teachers view the role and potential of AI in assessment. For instance, teachers, particularly in higher education, are responsible for ensuring the integrity and validity of assessment outcomes. Concerns about academic integrity may lead to skepticism regarding the use of AI tools for grading, plagiarism detection, or exam proctoring. Teachers might question the reliability of AI algorithms in detecting plagiarism accurately or worry about potential biases in AI-generated assessment scores. Also, academic integrity concerns often intersect with issues of fairness and equity in assessment. University teachers may worry that AI tools could inadvertently disadvantage certain students or fail to recognize nuanced forms of originality. Hence, university teachers may grapple with questions about student privacy, data security, and the potential misuse of AI tools for cheating or gaming the system.

The second hypothesis did speculate that university teachers’ utilization of diverse AI tools in educational assessment is not affected by their perception for innovative assessment concerns at universities was rejected on as a result of the findings of this study. The finding revealed that there is a significant difference in the mean utilization of AI tools between university teachers with positive and negative perceptions of innovative assessment concerns. This means that perception for innovative assessment concerns at university significantly affects how university teachers utilize diverse AI tools in educational assessment. This suggests that university teachers’ perception of innovative assessment concerns does indeed influence how they utilize diverse AI tools in educational assessment.

This finding is in consonance with earlier ones, which had alluded to the existence of some form of relationship between utilization of AI tools and university teachers’ perceptions of innovative assessment concerns. In fact, Sullivan et al. (2023) concluded that “academics can redesign assessment tasks in such a way that they cannot be completed as easily by AI tools” (p. 35). This is despite opportunities for redesigning assessment of learning and assessment for learning using diverse AI tools in educational assessment and how assessment tasks could be improved to reduce the danger of
inappropriate AI tools’ use. The finding that there is a significant difference in the mean utilization of AI tools between university teachers with positive and negative perceptions of innovative assessment concerns is noteworthy. It suggests that the attitudes and concerns university teachers hold regarding innovative assessment practices directly impact their adoption and use of AI technologies for educational assessment purposes. University teachers who have positive perceptions of innovative assessment likely see AI tools as facilitators of their teaching and assessment practices. They might view these tools as valuable assets that enhance the efficiency, accuracy, and fairness of assessments. Positive perceptions could be linked to beliefs that AI tools can save time, offer new insights into student learning, and enable personalized feedback, leading to increased utilization. Teachers who view innovative assessment methods positively are more likely to embrace AI technologies for educational purposes. No doubt, positive perceptions can act as facilitators, encouraging teachers to explore and integrate AI solutions.

The way university teachers perceive innovative assessment concerns plays a crucial role in their adoption and utilization of AI tools.

Despite the concerns raised, there are opportunities, as noted by Sullivan et al. (2023), for redesigning assessment tasks to align with the use of AI tools. This highlights the potential for enhancing both assessment for learning (AfL) and assessment of learning (AoL) through the thoughtful integration of AI tools. The discussion around redesigning assessment tasks also points to the importance of mitigating the risks associated with inappropriate AI tool use. Educators have the opportunity to improve assessment tasks to reduce the likelihood of AI tools being used in unintended or detrimental ways (Martínez-Plumed, 2020). This contrasting perspective from prior research underscores the dynamic interplay between university teachers’ perceptions of innovative assessment concerns and their utilization of AI tools in educational assessment. While there is evidence to suggest a significant relationship between these factors, there are also opportunities for educators to leverage AI tools in ways that enhance assessment practices. By redesigning tasks and aligning them with the capabilities and limitations of AI tools, educators can create assessments that are not easily completed by AI, thereby preserving the integrity and effectiveness of the assessment process. As the field continues to evolve, these insights will be crucial in guiding the responsible and effective integration of AI technologies in education.

Conversely, university teachers with negative perceptions of innovative assessment concerns may harbor doubts or reservations about AI tools. They might be skeptical of the accuracy of AI-generated assessments, concerned about the loss of human touch, or wary of the learning curve associated with these technologies. Negative perceptions could lead to hesitancy in adopting AI tools, resulting in lower utilization rates compared to their counterparts with positive perceptions. Not only this but also, negative perceptions may act as barriers to AI adoption. Concerns related to assessment innovation such as fairness, reliability, or unfamiliarity could hinder teachers from fully utilizing AI tools. Therefore, this particular finding sheds light on the intricate interplay between university teachers’ perceptions of innovative assessment concerns and their utilization of AI tools in educational settings. Recognizing and addressing these perceptions can pave the way for more effective adoption of AI technologies, ultimately enhancing the quality and efficiency of educational assessment practices. In other words, fostering a positive perception of innovative assessment concerns can enhance the integration of diverse AI tools in educational assessment. As educators become more comfortable with AI, they can harness its capabilities to improve teaching, learning, and assessment processes. After all, it is not just about the availability of AI technology at universities; but rather it is about how university teachers perceive its impact on assessment practices.

The third hypothesis did postulate that university teachers’ perception of using AI tools will not be significantly predisposed them to personalize AI use in educational assessment at universities was rejected.
owing to the finding of this study. The finding indicated that there is a significant correlation between university teachers’ perception of using AI tools and their predisposition to personalize AI use. This means that university teachers’ perception of using AI tools is likely to be associated with their tendency to personalize AI use. This suggests that university teachers’ attitudes towards AI tools play a role in their inclination to personalize the use of these tools in educational settings. This finding supports earlier studies by Sanusi et al. (2024) and Ibrahim and Saleh (2020) who respectively concluded that perception can influence what people learn and how they learn and internalize it. This is because perception is regarded as a forerunner of cognitive development. Thus, what is seen and heard will depend on what one already knows and how s/he reacts. Specifically, Sanusi et al. (2024) discovered that pre-service teachers significantly displayed positive behavioural intention to learn AI among all constructs except self-efficacy that could not independently lead to actual AI learning behaviour. Further, Sullivan et al. (2023) espoused ideas to improve learning, which includes using AI to personalise assignment tasks, provide feedback on student work, generating exemplar assignments for class critique, and creating assessment rubrics.

The correlation between university teachers’ perception of AI tools and their predisposition to personalize AI use highlights a nuanced aspect of how university teachers engage with technology. Most importantly, this finding suggests that how teachers view AI tools influences how they integrate and adapt these tools to their individual teaching styles and preferences. Teachers who perceive AI tools positively are more likely to see the potential benefits these tools offer in enhancing their teaching methods. This positive perception can lead to a greater inclination to customize AI applications to suit their unique teaching needs. For example, a teacher who views AI-driven grading systems favorably might personalize the tool to provide more detailed feedback tailored to their students’ learning styles. When teachers perceive AI tools as valuable assets, they are more motivated to personalize their use to maximize efficiency and effectiveness in their teaching practices. This might involve using AI-based learning platforms to create personalized learning paths for students, targeting individual strengths and weaknesses. Thus, the significant correlation between university teachers’ perception of using AI tools and their predisposition to personalize AI use underscores the importance of educators’ attitudes in shaping the integration of technology in education. By fostering positive perceptions and providing support for personalized use, institutions can harness the full potential of AI to enhance teaching practices and student learning experiences.

4. CONCLUSION

This study investigated if university teachers’ perception of academic integrity and innovative assessment concerns influence how they utilize diverse AI tools in educational assessment cum their tendency to personalize AI use at universities in the Nigeria context. Our findings show that academic integrity concerns have influence on how university teachers perceive AI use in assessment; that perception for innovative assessment concerns at university significantly affects how university teachers utilize diverse AI tools in educational assessment; and that university teachers’ perception of using AI tools is associated with their tendency to personalize AI use at universities.

It is also recommended that AI technologies should be meaningfully integrated into educational assessment especially in universities in Nigeria. To fully unleash the opportunities and mitigate the potential risks involved in AI use in educational assessment, university teachers should take painstaking efforts to understand AI tools’ benefits and limitations. Providing comprehensive training and resources can help bridge knowledge gaps and encourage personalized use. However, there is a strong but urgent need to interrogate the risks and opportunities of AI tools for university teaching and learning more
closely. As university teachers personalize AI tools, it is crucial to consider ethical implications and pedagogical principles. Ensuring that personalization aligns with ethical standards and supports effective teaching practices is essential for positive educational assessment outcomes.

**Ethical Clearance**

As a duly registered participant in the ongoing Module 8 training on ABC of Artificial Intelligence organized by the Virtual Institute for Capacity Building in Higher Education (VICBHE), Nigeria, permissions were sought for from the Management of VICBHE to make use of participants in the programme as respondents/participants in this study. Thus, ethical clearance was received for data collection with no known hindrance attached. Most importantly, ethical issues were kept under constant review at every stage of this study especially during data collection and administration of survey questionnaires, while a range of ethical issues associated with the conduct of the study were discussed in detail with the research team for absolute compliance. So, participants freely participated in the study as their consents were obtained hitherto. Consequently, the researchers in this study unequivocally declare no competing interests to disclose as far as this study is concerned except for academic purposes.

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5. **REFERENCES**


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