UTILIZATION OF ARTIFICIAL INTELLIGENCE AMONG AGRICULTRAL EDUCATION LECTURERS IN THE TEACHING OF AGRICULTURAL EDUCATION IN DELTA STATE OWNED TERTIARY INSTITUTIONS

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Abstract
This study examined the utilization of artificial intelligence among agricultural education lecturers in the teaching of agricultural education in Delta State owned tertiary institution. Two research questions and two null hypotheses was formulated to direct the study. The study employed survey research method. The entire population of agricultural education male and female lecturers of (90) were involved in the study. The study is a census study therefore; the whole population was used for the study. The instrument used for data collection was a structure questionnaire. Data collected was analysed with mean and standard deviation to answer the research question using SPSS version 25, while t-test was used to test the hypotheses at 0.05 level of significance. The findings of the study showed that lecturers have more AI knowledge when utilizing AI technologies in their instructional activities in the University, AI can significantly improve efficiency in agricultural research and data analysis and AI-powered tools can simulate real-life farm conditions for practical agricultural training. The study concluded that a significant number of surveyed lecturers have limited use of AI technologies, reflecting a broader trend of low AI awareness among educators. Despite the observed low-level utilizing, a positive trend emerges as the majority of agricultural education lecturers recognized the potential advantages of integrating AI technologies in improving educational programs in Agricultural Education. It was recommended that government and institution administrators should organize a comprehensive training and capacity building programs for these lecturers, especially within the context of agricultural education, government should invest in the necessary technological infrastructure, including hardware and software, to support the integration of AI technologies into the curriculum.

Keywords: Utilization, Artificial Intelligence, Teaching, Agricultural Education, Lectures, Tertiary Institution

Introduction

Artificial intelligence (AI) is one of the emerging technologies globally. It is progressively and consistently taking over tasks once performed by humans. The world's adequate technological changes have shown that the future is driving to digital era particularly as it concerns agricultural education, knowledge transformation, skills competencies and technology which are considered as the bedrock of economic, social and political growth. Artificial intelligence (AI) and machine learning are poised to revolutionize the educational landscape by providing personalized learning experiences for teachers and students. For teachers, this means creativity awareness to tools that can adapt to the learning process and style of individual students in vocational education that offer real-time feedback and generate an insight into students' performance that can give instructional strategies. AI involves mimicking human intelligence in computer systems that are programmed to emulate human thought and behavior, encompassing abilities such as learning and problem-solving. Similarly, evidence from some studies shows that AI exert significant influence on our daily existence, expanding our capabilities and enabling us to make changes in our surroundings, and also in various sectors of the economy (Ahngar et al. 2022). The integration of AI technologies into university-level teaching and learning of agric education by lectures represents a profound transformation in education whereby every student can undergo learning of vocational skills for self-employability interest (Bailey, 2023). More so, these authors further argue that these technologies have the potential to address diverse learning needs and styles, making education more inclusive, automate administrative tasks, allowing educators to focus on teaching and research. In Delta State owned Universities, AI technologies find utility in various forms. According to Simhadri & Swamy (2023), AI when applied in education can assess and provide immediate feedback, enabling continuous evaluation of student progress, departing from traditional stop-and-test methods.

The role of lecturers in fostering critical thinking, creativity, and interpersonal skills remains irreplaceable. The overreliance on AI might undermine the crucial human element of education (Nguyen, 2023). Some literatures have indicated that integrating AI technologies in higher education in Delta State owned tertiary institution faces several barriers. Recently, AI technologies have gained significant attention in Nigerian universities. Thus, there is a need to understand the level of artificial intelligence IA among lecturers on the integration of this technology. Few related studies have explored this subject-view and indicates more emphasis on the current state of utilization among educators. For instance, a systematic review conducted by Zawacki-Richter et al. (2019) examined the research on AI applications in higher education and highlighted the lack of involvement of educators in this area. With the rapid integration of Artificial Intelligence (AI) in various industries, including agricultural education, it is imperative to understand the level of utilization of AI among Agricultural Education lecturers on potentials, and challenges associated with AI technologies integration (Gupta et al., 2023). Lecturers use AI as internet to access research materials and e-mail. On the impact of the internet on lecturers' job performance, the study revealed that the internet contributed significantly to the ease of work done by the lecturers; that the internet has broken down barriers of communication and information access from anywhere in the world. It is fast reliable and does not have restrictions on content or format. The lecturers can also monitor the usage of their server and particular files by placing counter software in the home page. Artificial intelligence AI can be defined as a machine that can simulate human thought process and can take actions based on those thoughts and even draw conclusions. It should also be able to correct itself, if it makes a mistake. This also means that AI based computer would be able to make a decision in a given situation like human beings and in some cases even better. AI refers to the ability of machines to perform cognitive tasks like thinking, perceiving, learning, problem solving and decision making. Initially conceived as a technology that could mimic human intelligence, AI has evolved in ways that far exceed its original conception. With incredible advances made in data collection, processing and computation power, intelligent systems can now be deployed to take over a variety of tasks, enable connectivity and enhance productivity (Niti, 2025).

Artificial intelligence (AI) is a branch of computer science devoted to creating computer systems that perform tasks characteristic of human intelligence, such as learning and decision-making. AI is a vast and growing field which also includes a lot more subfields like machine learning and deep learning and so on. Machine learning is in a nutshell the concept of computers learning to improve their predictions and creativity to resemble a humanlike thinking process using algorithms (Porayska-Pomsta, Holmes, & Nemorin, 2024). The most common examples of uses of Artificial Intelligence can be found today in smart personal assistants like Apple's Siri and Amazon's Alexa. People interact with these devices to command them on a daily basis and these devices use the commands as a part of their dataset to learn from. Another known example of Artificial Intelligence is the use of algorithms in Netflix. Netflix provides very much accurate and relevant suggestions of movies, tv series from our data which is created every time we stream or click on something in Netflix. As the dataset for these systems grows, their accuracy and precision increase as well. Agricultural education is the process of teaching and learning about agriculture, food production, natural resources, agribusiness, agricultural technology, and environmental management. It equips individuals with the knowledge, skills, attitudes, and values needed to improve agricultural productivity, manage resources sustainably, and contribute to rural and national development through formal, non-formal, and informal educational programs (Abubakar, et al 2024). The gap in this study was that most existing research on Artificial Intelligence (AI) in education focuses on general lecturers or science/technology educators, with very few studies targeting **Agricultural Education lecturers,** despite their need for AI in modern agriculture and teaching. Several studies emphasize **awareness, perception, or attitude toward AI,** but there is limited research on the **actual level of use of AI tools** in teaching, research, assessment, and administration. Therefore, the gap in knowledge lies in the absence of comprehensive empirical studies specifically investigating the utilization of Artificial Intelligence among Agricultural Education lecturers in Delta State-owned tertiary institutions. This study intends to fill this gap by

examining examine utilization of Artificial intelligence among agricultural education lectures in Delta State owned tertiary institutions.

Statement of Problem

In every tertiary institution offering agricultural education as an area of discipline, lecturers play important roles and act as pivot for learning. The duties of lecturers include among others instruction delivery (teaching), instructional material acquisition, evaluation and research. Until recently, agricultural education lecturers in Delta State owned tertiary institutions, Nigeria depended almost entirely on the manual method of performing their professional jobs with its attendant inadequacies. Such adverse consequences include the use of ineffective instruction delivery, mutilation of examination and other academic records, fruitless efforts at tracing and acquisition of some instructional materials leading to time and energy wastage as well as difficulty in retrieval of important information and documents. Hence the agricultural education lecturers get so fatigued and often end in frustration, resentment and ultimately job work performance. The problem is that agricultural education lecturers who are confronted with this radical change sometimes experience shock, confusion and become disoriented. This is why the researcher wants to find out the extent is the utilization of Artificial intelligence among agricultural education lecturers in Delta State owned tertiary institutions.

Purpose of the Study

The main purpose of the study is to examine utilization of Artificial intelligence among agricultural education lectures in Delta State owned tertiary institutions. Specific purpose of the study are:

i. To examine the level of Agricultural Education lecturers on utilization of AI technologies in the teaching of Agricultural Education in Delta State owned tertiary institutions.
ii. To determine lecturers' perceived potentials of utilizing AI technologies in the teaching of Agricultural Education in Delta State owned tertiary institutions.

Research Questions

The following questions were used to guide the study.

i. To what extent is the level of Agricultural Education lecturers in the utilization of AI technologies and teaching of Agricultural Education in Delta State owned tertiary institutions?
ii. What is the lecturers' perceived potentials of utilizing AI technologies in the teaching of Agricultural Education in Delta State owned tertiary institutions?

Hypotheses

The following hypotheses was used to guide the study

$H0_1$: There is no significance difference between the mean rating scale of male and female lectures on the level of Agricultural Education lecturers' utilization of AI technologies and Agricultural Education in Delta State owned tertiary institutions.

$H0_2$: There is no significance difference between the mean rating scale of male and female lectures on lecturers' perceived potentials of utilizing AI technologies and the teaching of Agricultural Education in Delta State owned tertiary institutions.

Literature Review

Conceptual Framework

Artificial intelligence (AI) is a computational system that performs tasks by adapting, synthesising, self-correcting, and using data in a human-like manner. Verma (2023) defined AI as the process of making computer programs and machines to solve complex problems, the same as humans could solve problems in acting, identifying, recognizing and reasoning. Artificial intelligence is the use of software algorithms and techniques to enable computers and machines to replicate human perception and decision-making processes in order to execute jobs successfully. Iloba (2025) stated that artificial intelligence system can also comprehend and generate human language, enabling them to communicate with humans; it is an Artificial Intelligence system that uses algorithms to process data, learn from experiences and the system rely on high-quality data to learn, improve and make accurate decisions.

Agricultural Education

Agricultural education is the science and art of cultivating the soil, producing crops and raising livestock that are directly or indirectly benefiting humans. The term agricultural education also

includes the financing, processing, marketing and distribution of agricultural products, farm production supply and service industries, health, nutrition and food consumption the use and conservation of land and water resources, development and maintenance of recreational resources, and related economic, sociological, political, environmental and cultural characteristics of the food and fiber system which are the extremely basis of civilization (Ashiolon, 2025).

Agricultural education refers to a document, often an academic paper, program guide, or research study, that provides information on the field of agricultural education. These documents can cover the objectives of agricultural education programs, such as equipping students with skills for careers in farming, food production, and natural resource management, and explore topics like curriculum, teaching methods, or the role of agriculture in sustainable development (Zetal, 2024).

Level of Agricultural Education lecturers on utilization of AI technologies in the teaching of Agricultural Education

The high-profile applications of AI include advanced web search engines like Google Search recommendation systems such as YouTube Amazon, Netflix; autonomous speech such like Waymo; generative and creative tools such as ChatGPT and AI art; superhuman play and analysis in strategy games such as chess, Go; and interacting via human speech such as Google Assistant, Siri and Alexa. Today, the potential to enhance learning experiences, improve teaching methodologies, and augment academic outcomes has garnered significant attention. Fitra (2021) stated that AI systems assist the lecturers by allowing students to learn with the help of education assistants like bots. Fitra (2021) stressed that the developing educational system requires the world of education to adapt to technological developments to improve the quality of education, especially the adjustment of information and communication technology. Similarly, Wang and Xu (2023) noted that the integration of AI into education system has the proven potential to revolutionize teaching and learning processes. As evidenced by Kumar and Aggarwal (2020), artificial intelligence (AI) tools also facilitate the development of innovative teaching methods, such as simulations, virtual reality, and intelligent tutoring systems, which enhances student engagement and understanding. As opined by Canbek and Mutlu (2016), artificial intelligence serves as a valuable tool in addressing various challenges in teaching practice, allowing teachers to work at their own pace. This fosters self-reliance and independence in their planning and teaching processes. Generative AI tool, such as ChatGPT, are used to teach complex concepts more effectively. Keppler and Snyder (2024) further stressed that lecturers feel more effective with generative AI when they key into it for solutions. Sharma & Chen (2020) maintained that the integration or the use of AI in education, more particularly, integration with other technologies and use as instructional tools, has help in the development and use of better teaching tools.

Lecturers' Perceived Potentials of Utilizing AI Technologies in the teaching of Agricultural Education

According to Offia, Ayok, and Bintu (2025), artificial intelligence (AI) has had a positive impact on university administration by supporting efficient administrative and program planning; AI has helped academic staff conduct research and teaching; helps decision-makers, educators, and policymakers make better decisions. Kakungulu (2025) believed that machine learning generates predictive models and analyzes student data; some of the algorithms used in these models include multiple regression, neural networks, decision trees, decision rules, and association rules; these algorithms are also used in the prediction of student success analysis; other applications of AI include the use of natural language processing and cognitive computing. AI has been utilized to make some administrative activities in universities more efficient. Many institutions utilize AI for admissions and financial aid packaging to increase the likelihood an admitted student. Al can help teachers, parents, students, and school administrators communicate effectively in the classroom. Niyi and Gregory (2023) emphasized further that AI can support safety and security measures in schools. Only in a calm, safe, and supportive setting can teaching and learning occur. Video analytics and facial recognition software can be used

to monitor school grounds, identify any security risks, and guarantee staff and student safety. Additionally, social media or internet platforms can be analyzed by AI-powered systems to spot any threats and take preventative action. School security can be enhanced with the aid of artificial intelligence (AI). There are security cameras everywhere in the school, from the school gate to the classrooms. (AI) security cameras can collect a lot of data and recognize people, suspicious activity, and firearms.

Theoretical Framework

The study adopted Theory of Artificial Intelligence Innovation propounded by John McCa 1956

Theory of Artificial Intelligence Innovation

Theory of Artificial Intelligence Innovation, which systematically elaborates the fundamental laws of artificial intelligence in three aspects: knowledge acquisition, path exploration, and continuous innovation. The first law states that artificial intelligence has the potential ability to read, write, and understand the entirety of human knowledge, encompassing multimodal information such as literature, language, and video, thereby becoming a "hypothetical human" mastering all human knowledge. The innovative capacity of artificial intelligence depends not only on algorithms and computational power but also requires characterization at a more abstract level. To this end, this paper adopted this theory since the enable agric education lectures in Delta State owned tertiary institution to transformed digital knowledge to the students during teaching and learning process

Empirical Studies

Study carried by Glory, Amosa, Hamdalat, Mutahir, and Florence (2024) on the assessed lecturers' utilization of artificial intelligence for agric education in a Nigerian university. The study adopted a descriptive survey research design. A sample of 271 lecturers was selected using a proportionate stratified random sampling technique. The study was guided by two research questions and a corresponding research hypothesis. A researcher-designed structured questionnaire was used for data collection, which three experts validated. The questionnaire was pilot-tested, and the data obtained were subjected to statistical analysis using the Cronbach alpha correlation formula, and a reliability coefficient of 0.87 was obtained. Descriptive statistics of mean and standard deviation were used to answer the research questions. The findings of the study revealed that lecturers are aware of AI, with a grand mean of 2.57. Independent samples t-test analysis showed that $t = 1.047$, $p > 0.05$, indicating no significant difference in the mean response of male and female university lecturers' level of awareness of artificial intelligence for education. In light of the findings, it was recommended that conferences, seminars and workshops should be organised for lectures to increase their level of awareness of the numerous opportunities that AI can provide in augmenting their educational activities, enabling an environment with adequate facilities that will enable lecturers to acquire adequate knowledge on the use of AI should be provided by education stakeholders. The similarity between the previous study and the present study is that both studies focus on the utilization of Artificial Intelligence (AI) in education**,** particularly how lecturers use AI to support teaching and learning activities. the differences was that the previous study involved university lecturers in general while the present study focuses specifically on Agricultural Education lecturers, who have a more specialized role. The gap in the previous study was that the study focused mainly on universities, while the present study includes universities, colleges of education, and other tertiary institutions owned by Delta State**,** which may differ in resources and AI readiness. Another gap was that the previous study was carried in all university in Nigeria while the present study was carried in Delta State owners of tertiary institution.

Dumnoi et al, (2024) carried out a study to assess the predictors of Lecturers' attitudes and access to the use of artificial intelligence (AI) in teaching agricultural education in Universities in South-South Nigeria. Ex-post facto design was adopted for the study. The study answered two research questions and tested two null hypotheses and was carried out in Universities in South-South Nigeria. The population of the study was 395 lecturers and a multistage sampling technique was used to sample 199 Agric education lecturers in five states in the South-South zone of Nigeria. Data were collected using a structured questionnaire designed on a 4-point and analyzed using mean and standard deviation for

research questions and t-test for the hypotheses. The result revealed among others that, predictors of agricultural education lecturers' access to the use of AI are adequate skill in operating AI facilities, availability of AI facilities, and internet connectivity while factors that predict lecturers' attitude towards the use of AI in teaching agriculture were availability of AI, having an adequate skill for operating AI facilities, and having adequate time allocated for the lecture among others. The study recommended among others that there is a need to ensure that ICT facilities available to the agriculture lecturers for teaching should be periodically upgraded to be at par with current digital technologies. To this end, collaboration with institutions of higher learning in technologically advanced countries should be fostered by institutions covered by this study to benefit lecturers, students, and the academic community at large. The similarity between the previous study and present study was that both studies examine the role of Artificial Intelligence (AI) in agricultural education, particularly in improving teaching and learning processes in tertiary institutions. The difference between the previous study and present study was that previous study was conducted in Universities in South-South Nigeria (multi-state focus), while present study focused on Delta State-owned tertiary institutions only. The gap the present intend to fill was that the study covered multiple states in South-South Nigeria but did not focus specifically on Delta State-owned tertiary institutions, which may have unique infrastructural and policy conditions.

Methods

The study adopted ex-post facto design. According Creswell (2018) who said that Ex-post facto design is a research design where the researcher studies groups based on existing differences rather than assigning treatments or manipulating variables. This study was delimited to Delta State owned tertiary Institutions which comprises four tertiary instructions namely; Delta State University Abraka 7 male and 2 female lecturers =9, University of Delta Agbor, 3 male and 3 female=6, College of Education Mosugar, 4male and 2 female=6, College of Education Warri, 6male and 5female=11. The population of the study was 32 Lecturers in four States owned tertiary institutions. This includes Lecturers from the faculty of Agriculture and the Department of Agriculture Education from Colleges of Education and universities in the study area. The study is a census study therefore; the whole population was used for the study. A structured questionnaire made up of 10 items was used to collect data from the respondents. The instrument was constructed on a 4-point scale of High Extent (HE 4 points), Moderate Extent (ME 3 points), Low Extent (LE 2 points) and Very Low Extent (VLE 1 point). The questionnaire was subjected to face validation by three experts, one from the Department of Agricultural Education, one from the Faculty of Agriculture, and one from Measurement and Evaluation all from Delta State University, Abraka. The validated instrument was administered to Agriculture lecturers in Federal College of Education (Technical Asaba) while other two from test and measurement evaluation College of Education Warri, Delta State. The result of the reliability instrument was analyzed using Cronbach Alpha Method. A mean reliability coefficient of 0.70 was obtained which signifies that the instrument was reliable and adequate for the study. Thirty-two (32) copies structured questionnaire was administered to respondents Agricultural Education lecturers in Delta State-owned tertiary institutions after obtaining the necessary permission from the heads of the respective departments and institutions. The data collected were analyzed using means and standard deviation to answer research questions using SPSS version 25, while the t-test was used to test the hypotheses. Any item with a mean rating of 2.50 and above was regarded as agreed, while any item with a mean rating of less than 2.50 was regarded as disagreed. Any hypothesis whose significance level was less than or equal to 0.05 level of significance, was rejected while a hypothesis with a significance level greater than 0.05 level was accepted.

Result

Research question 1

To what extent is the level of Agricultural Education lecturers on utilization of AI technologies in teaching of Agricultural Education in Delta State owned tertiary institution?

Table 1: showing the mean score of respondents on the level of Agricultural Education lecturers on the utilization of AI technologies in teaching of Agricultural Education

S/N	Item: The level of Agricultural Education lecturers on utilization of AI technologies in teaching of Agricultural Education	X	SD	Decision
1	I use AI tools (e.g., ChatGPT) to prepare lesson notes in Agricultural Education	3.33	0.85	Accepted
2	I use AI to generate teaching outlines and schemes of work.	3.45	0.69	Accepted
3	I use AI tools to simplify complex agricultural concepts for students.	3.85	0.59	Accepted
4	I use AI to develop instructional materials (e.g., slides, handouts).	3.83	0.57	Accepted
5	I use AI-based simulations to explain agricultural practices to students.	3.49	0.50	Accepted
	Grandmean / S.D	3.59	0.57	Accepted

The data presented in table 1 shows the mean of both male and female agricultural education lecturers as 3.34 and 3.59, standard decoration as 0.83 and 0.57. It reveals that there is no significance difference in the mean response of the respondents on the item state under research question 1.

What is the lecturers' perceived potentials of utilizing AI technologies in teaching of Agricultural Education in Delta State owned tertiary institution?

Table 2: Showing the mean score of respondents on lecturers' perceived potentials of utilizing AI technologies in teaching of Agricultural Education

S/N	Item: Lecturers' perceived potentials of utilizing AI technologies in teaching of Agricultural Education.	X	SD	Decision
1	AI can enhance the teaching and learning of complex agricultural concepts	3.38	0.85	Accepted
2	AI technologies can personalize agricultural learning experiences for students	3.61	0.67	Accepted
3	AI can significantly improve efficiency in agricultural research and data analysis	3.83	0.57	Accepted
4	AI-powered tools can simulate real-life farm conditions for practical agricultural training	3.4	0.69	Accepted
5	AI tools can help bridge the gap between theoretical and practical agricultural knowledge	3.69	0.54	Accepted
	Grandmean/SD	3.58	0.67	Accepted

The data presented in table 2 shows that there is no significance difference in the mean responses of lectures of the items stated under research question 2. The calculated table show the mean of 3.58 and standard deviation of 0.67 which is above the benchmark respectively.

Testing of Hypotheses

$H0_1$: There is no significance difference between the mean rating scale of male and female lectures on the level of Agricultural Education lecturers' utilization of AI technologies and Agricultural Education in Delta State owned tertiary institutions.

Table 3 showing t-score of male and female students on the level of Agricultural Education lecturers and utilization of AI technologies in teaching of Agricultural Education.

Variables	NO.	X	S.D	Df	t-cal. Value	t-crit. Value	Decision

Female lectures	10	3.49	0.75	32-2 (30)	0.64	2.04	0.05	Accepted
Male lectures	22	3.58	0.69					

The above table shows that there is no significant difference in the means response of male and female lectures on hypotheses tested. The observed t-calculated value of 0.64 is lower than the t-critical value of 2.04 at 0.05 level of significance. Since the t-calculated value is higher than t-critical value the hypotheses stated for the study is accepted.

$H0_2$: There is no significance difference between the mean rating scale of male and female lectures on lecturers' perceived potentials of utilizing AI technologies and teaching of Agricultural Education in Delta State owned tertiary institutions.

Table 4 showing t-score of male and female student on lecturers' perceived potentials of utilizing AI technologies and teaching of Agricultural Education

Variables	NO.	X	S.D	Df	t-cal. Value	t-crit. Value	Level of significance	Decision
Female lectures	10	3.34	0.83	30	1.79	2.04	0.05	Accepted
Male lectures	22	3.59	0.57					

The above table shows that there is no significant difference in the means response of female and male lectures on hypotheses tested. The observed $H0_2$ tested showed that t-calculated value of 1.79 is lower than the t-critical value of 2.04 at 0.05 level of significance. Since the t-calculated value is higher than t-critical value the hypotheses stated for the study is accepted.

Discussion

The discussion of findings was discussed according to the research question and hypotheses stated below.

Extent is the Level of Agricultural Education Lecturers on Utilization of AI Technologies in Teaching of Agricultural Education in Delta State owned Tertiary Institution

Findings from the table showed the extent is the level of agricultural education lecturers on utilization of AI technologies in teaching of agricultural education in Delta State owned tertiary institution as stated under research question 1. The findings table was accepted because there is no significant difference in the means response of female and male lectures based on the hypotheses tested. The findings showed that lectures feel good when utilizing AI technologies in their instructional activities in the University, respondents agreed that AI can improve the quality of agricultural education, while findings showed that AI can enhance students' learning experience, respondents strongly agreed that lectures feel confident integrating AI into their teaching practices, and findings showed that AI technologies are too complex for regular teaching staff to use. The finding is in line with Fitra (2021) who stated that AI systems assist the lecturers by allowing students to learn with the help of education assistants like bots. The finding also agreed with study carried by Canbek and Mutlu (2016), who in a study found out that artificial intelligence serves as a valuable tool in addressing various challenges in teaching practice, allowing teachers to work at their own pace.pls support with more literatures

Lecturers' Perceived Potentials of Utilizing AI Technologies in Teaching of Agricultural Education in Delta State owned Tertiary Institution

Findings on table 2 showed respondent agreement on lecturers' perceived potentials of utilizing AI technologies in teaching of Agricultural Education in Delta State owned tertiary institution as stated

under research question 2. The finding table was accepted because there is no significant difference in the means response of female and male lectures according to hypotheses tested. The findings showed that AI can enhance the teaching and learning of complex agricultural education concepts, respondents agreed that AI technologies can personalize agricultural learning experiences for students, respondents strongly agreed that AI can significantly improve efficiency in agricultural research and data analysis. Findings showed that AI-powered tools can simulate real-life farm conditions for practical agricultural training and respondents agreed that AI tools can help bridge the gap between theoretical and practical agricultural knowledge. The finding is agreement with Offia, Ayok, and Bintu (2025), who stated that artificial intelligence (AI) has had a positive impact on university administration by supporting efficient administrative and program planning; AI has helped academic staff conduct research and teaching; helps decision-makers, educators, and policymakers make better decisions. The finding also agreed with study carried out by Niyi and Gregory (2023) emphasized further that AI can support safety and security measures in schools. They further said that social media or internet platforms can be analyzed by AI-powered systems to spot any threats and take preventative action. School security can be enhanced with the aid of artificial intelligence (AI).

Conclusion

This exploratory study highlights lecturers' level of utilizing artificial intelligence AI in teaching Agricultural Education. The study reveals that a significant number of surveyed lecturers have limited use of AI technologies, reflecting a broader trend of low AI awareness among educators. Despite the observed low-level utilizing, a positive trend emerges as the majority of Agricultural Education lecturers recognize the potential advantages of integrating AI technologies in improving educational programs in Agricultural Education. These benefits include enhancing program efficiency, educational content, personalizing learning experiences, tailoring content to individual needs, and more effective assessment methods. This recognition is in line with existing literature, emphasizing the advantages of AI-driven tools in enhancing the overall educational experience. Moreover, AI technologies are seen as valuable assets that bridge the gap between theory and practice, fostering real-world simulations and preparing students for the evolving agricultural industry.

Recommendations

Based on the findings of this study, the researcher recommends the following:

i. Delta State government in conjunction with tertiary institution administration should organize a comprehensive training and re-training on C.B.T for lecturers within the context of agricultural education. This includes providing workshops, courses, and resources to enhance their awareness and skills in AI.

2. Government should invest in the necessary technological infrastructure, including hardware and software, to support the integration of the use of AI technologies in teaching of agricultural education.

3. Lecturers should also focus on raising students' awareness and understanding of AI technologies to ensure they can effectively engage with AI-enhanced learning

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