



Knowledge and Use of Artificial Intelligence (AI) for Teaching and Learning at Alex-Ekwueme Federal University, Ndufu-Alike, Ikwo, Ebonyi State, Nigeria

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ABSTRACT

Background: The advent of Artificial Intelligence (AI) is significantly affecting every sphere of the human endeavour. In Academics, AI plays important role in research, teaching and learning among students and teachers. This study investigated the Knowledge and Use of Artificial Intelligence (AI) for teaching and learning among teaching Staff and Students of Alex Ekwueme Federal University Ndufu-Alike Ikwo.

Objective: The objective of the study is to investigate the level of knowledge of Artificial Intelligence for teaching and learning among teaching staff and students of Alex Ekwueme Federal University Ndufu-Alike Ikwo. The study was anchored on Technology Acceptance Model (TAM) theory.

Methods: Descriptive research method was used in this study; the study comprises teaching staff and students of three departments selected from three faculties in Alex Ekwueme Federal University. The total population of teaching staff and students of AE-FUNAI was 2907 and the sample size of the study was 400. The major instrument used in data collection for this study was structured questionnaire. The researcher used questionnaire because it is very necessary to get the opinions and reactions of the teaching staff and students under study. The instrument was validated by two experts in Mass Communication. Test retest was used to ascertain the reliability of the instrument and the reliability coefficient is 0.85.

Result: Findings show that respondents have low level of knowledge in the use of artificial intelligence. There was also low level of use of Artificial Intelligence for teaching and learning among teaching staff in AE-FUNAI. Further finding revealed that most of the respondents do not have good knowledge about and access on the use of Artificial Intelligence for learning.

Conclusion: The integration of Artificial Intelligence in Academic settings offers a multitude of benefits for both teaching staff and students. For teaching staff, AI can streamline administrative tasks, provide personalized professional development, and enhance instructional methods through data-driven insights.

Contribution: The use of AI is supported in areas where students lack personal attention, understanding of their own specific needs, and prompt response to their needs. Therefore, the management representatives in higher education institutions should improve the quality of this aspect of service.

Recommendation: It was recommended that AE-FUNAI management should encourage staff and students to improve the level of their knowledge on the use of AI, for Academic purposes. The management representatives in higher Education Institutions should improve the quality of this aspect of service. The study recommends that Staff should be trained and retrained in the acquisition of AI abilities to be more competence in the use of artificial intelligence and get familiarised with AI machines for teaching.

Keywords: Artificial Intelligence, Knowledge, Teaching, Staff, Student



INTRODUCTION

Artificial Intelligence (AI) refers to the simulation of human intelligence in machines that are programmed to think and learn like humans. These machines are designed to perform tasks that typically require human intelligence, such as visual perception, speech recognition, decision-making, and language translation. Artificial Intelligence (AI) technologies include machine learning, natural language processing, and computer vision, among others. Lai (2016) defined artificial intelligence as a computer system with human knowledge and behaviors that solves problems, memorizing knowledge, and understanding human natural language through learning and reasoning.

The integration of artificial intelligence (AI) in education has gained significant attention in recent years due to its potential to revolutionize the way knowledge is delivered and utilized by both teaching staff and students. Artificial Intelligence is a branch of computer science that focuses on the development of intelligent machines, has the capability to analyze vast amounts of data, identify patterns, and make informed decisions (Nwafor et al., 2025). In the academic context, AI can be employed to enhance various aspects of the educational experience, from personalized learning to automated grading systems. For teaching staff, Artificial Intelligence (AI) can serve as a valuable tool to streamline administrative tasks such as grading and student tracking, allowing educators to focus more on teaching and mentoring. AI-driven professional development platforms can also provide personalized learning opportunities for educators to stay current with the latest educational research and best practices. For students, AI-powered educational tools can offer personalized learning experiences tailored to individual needs, providing real-time feedback and adaptive learning paths. These tools can also enhance access to educational resources, making learning more engaging and effective.

However, the integration of Artificial Intelligence in education also raises important ethical considerations, such as data privacy and the potential for biased algorithms. It is crucial to address these concerns and ensure that Artificial Intelligence (AI) is implemented in a responsible and equitable manner. Furthermore, knowledge and use of Artificial Intelligence in academic settings have the potential to transform the educational landscape, providing new opportunities for both teaching staff and students. By embracing AI while remaining mindful of its limitations and ethical implications, we can create a more efficient, adaptive, and inclusive academic environment.

According to Jordan and Mitchell (2015), Artificial Intelligence (AI) can be described as the simulation of the human advancement of various fields such as automated systems, Natural language processing, computer vision, and medical fields. In order to enhance performance, research on AI and Machine Learning (ML) is still ongoing. Artificial Intelligence (AI) has surfaced as a game changing technology that might completely change a number of sectors, including education. An increasing number of people are interested in knowing how artificial intelligence affects students' educational experiences. Artificial Intelligence technologies, such as machine learning, natural language processing, and data analytics, are being leveraged to



develop innovative educational tools and platforms that can enhance the way students learn, engage, and succeed in their educational pursuits (Robert, Potter & Frank, 2023).

The traditional education system has typically followed a one-size-fits-all approach, where students receive the same content and instruction, regardless of their individual needs and learning styles. But when AI is used, learning can become more customized and flexible, meeting each student's individual needs. Massive volumes of data may be gathered and analyzed by AI-powered educational platforms, giving them valuable information on the learning preferences and strengths and weaknesses of their students. This data-driven approach allows for the delivery of customized content, recommendations, and feedback, providing students with a tailored learning experience that maximizes their potential for success (Gupta & Sakshi, 2021). One of the significant advantages of AI in education is its ability to provide immediate and constructive feedback to students. Traditionally, students had to wait for their assignments to be graded by teachers, which often resulted in delayed feedback. With AI powered automated grading systems, students can receive timely or immediate feedback on their work, enabling them to understand their mistakes, make corrections, and improve their learning outcomes. This real-time feedback fosters a sense of self-reflection and empowers students to take an active role in their learning process (Ahmadi, 2023).

Numerous AI-based tools have been developed to fulfill the unique needs of teaching and research in the academic setting. These tool share advanced algorithms and data processing capabilities to streamline tasks, offer personalized learning experiences, and provide valuable insights for research endeavors. Some of these AI-based tools include Intelligent Tutoring System (ITS) which utilize AI algorithms to adapt to individual learning needs. These systems provide personalized feedback and guidance to students, aiding in their academic progress. For lecturers, ITS can be a valuable tool for tailoring teaching materials based on individual student requirements (VanLehn, 2011). Plagiarism Detection Software is an AI powered plagiarism detection tools crucial in maintaining academic integrity. These tools employ advanced algorithms to compare submitted work with vast databases, identifying instances of plagiarism and ensuring the authenticity of research outputs. In this context, the utilization of AI-based tools for teaching and research refers to the effective and efficient application of these technological solutions in educational and research settings. It involves leveraging AI tools to enhance teaching methodologies, streamline research processes, and ultimately improve the overall quality of education.

STATEMENT OF THE PROBLEM

Despite the rapid advancement in Artificial Intelligence technology and its potential benefits for enhancing learning, there are issues in the knowledge and adoption of AI facing students in African such as developing countries like Nigeria regarding the effective integration and utilization of AI tools and techniques in their academic pursuit. This hampers Students' ability to leverage AI's capabilities such as personalised learning, intelligent tutoring system and automated research assistance to improve their academic performance and over all learning experience. As result of this, there is need to investigate and address the factors that can



contribute and develop effective strategies for promoting the knowledge and utilization of AI in academic settings among teaching staff and students.

However, several studies have been done in this area, for instance Okiyi and Nsude (2020), investigated Artificial Intelligence to Journalistic Practices in Nigeria: Challenges and Way Forward, Guanah (2020), investigated artificial intelligence and Journalism Practice in Nigeria: Knowledge of Journalists in Benin City, Edo State and Gracia-Martinez, and Leon (2023) examined how artificial intelligence (AI) and computational sciences have aroused a growing interest in education, but there remains a gap in Knowledge on the extent to which both teaching staff and students of Alex Ekwueme Federal University Ndufu-Alike Ikwo have leveraged on this technology for enhanced teaching and learning in the institution. It was an attempt at filling this knowledge gap that necessitated this study.

RESEARCH OBJECTIVES

The general objective of this study was to investigate the knowledge and use of AI for teaching and learning among teaching staff and students of Alex Ekwueme Federal University Ndufu-Alike Ikwo. Specifically, the study was meant to:

1. Investigate the level of knowledge of Artificial Intelligence among teaching staff and students of Alex Ekwueme Federal University Ndufu-Alike Ikwo.
2. Determine the level of use of Artificial Intelligence for teaching among the teaching staff of Alex Ekwueme Federal University Ndufu-Alike Ikwo.
3. Evaluate the level of use of Artificial Intelligence for learning among the students of Alex Ekwueme Federal University Ndufu-Alike Ikwo.

RESEARCH QUESTIONS

1. What is the level of knowledge of Artificial Intelligence among teaching staff and students of Alex Ekwueme Federal University Ndufu-Alike Ikwo?
2. What is the level of use of Artificial Intelligence for teaching among the teaching staff of Alex Ekwueme Federal University Ndufu-Alike Ikwo?
3. What is the level of use of Artificial Intelligence for learning among the students of Alex Ekwueme Federal University Ndufu-Alike Ikwo?

RESEARCH HYPOTHESES

The following null hypotheses guided this study and were tested at .05 level of significance:

H₀₁: There is no significant relationship between the level of knowledge and use of Artificial Intelligence for teaching among teaching staff of Alex Ekwueme Federal University.

H₀₂: There is no significant relationship between the level of knowledge and use of Artificial Intelligence for learning among students of Alex Ekwueme Federal University Ndufu-Alike Ikwo.



LITERATURE REVIEW

Meaning of Artificial Intelligence

Artificial Intelligence refers to the mimicking of human intelligence processes by machines, particularly computer systems. Artificial intelligence is the creation of computer systems that are able to carry out tasks that normally require human intelligence. Expert systems, Natural Language Processing (NLP), speech recognition, and machine vision are a few applications of artificial intelligence. What they call "AI" is often a well-known technology, like Machine Learning. Machine Learning algorithms in AI require certain hardware and software in order to be written and trained. Artificial intelligence (AI) by John McCarthy, J. (2022), it was aimed at creating a machine that could mimic a human by performing tasks that required them. Since the 1950s, this dream has been consistently pursued; for this reason, AI is now a relatively well-established field. Ng (2016) described the generation of artificial intelligence (AI) as decomposing the processes of human stimuli and responses induced by problems and affairs as well as the reasoning, problem-solving, learning, judging, and thinking of decisions into basic steps and modularizing or formulating problem-solving processes through programming so that a computer could be designed with structural methods or cope with more complicated problems. Hwang, Kongcharoen, and Ghinea (2014) regarded an artificial intelligence teaching system as a computer-based teaching system which could simulate human teachers, detect learners' learning conditions, and determine what to teach, when to teach, and how to teach with AI technology. Ricoy and Feliz (2016) indicated that an artificial intelligence teaching system aimed to provide each college student with possible teaching assistance as one-to-one teaching from a senior teacher. To achieve such an objective, four independent elements of college student model, teaching module, domain knowledge, and interface module were designed. "Curriculum sequencing", "intelligent analysis of student's solutions" and "interactive problem-solving support" were adopted as the core technology. An emerging technology, "example-based problem-solving support", was added after 1990 (Lai & Chen, 2014). Artificial Intelligence systems operate by taking in vast volumes of labeled training data, examining it for correlations and patterns, and then applying these patterns to forecast future states. For instance, an AI Chatbot trained with text examples may produce natural conversations with humans, while an image recognition program trained on millions of examples can recognize and label things in photos. Recent years have seen a significant advancement in generative AI approaches, which now enable the creation of realistic text, graphics, music, and other media.

Artificial Intelligence Systems Programming

Learning is the aspect of AI programming that involves acquiring data and creating rules known as algorithms, to transform it into actionable information. These algorithms provide computing devices with step-by-step instructions for completing specific tasks. Reasoning involves choosing the right algorithm to reach a desired outcome (Nwafor et al., 2025). Self-correction also involves algorithms continuously learning and tuning themselves to provide the most accurate results possible. Creativity uses neural networks, rule-based systems, statistical methods and



other AI techniques to generate new images, text, music, ideas and so on. All this system programming helps the students in their various field of study.

AI, machine learning and deep learning

The terms AI, machine learning and deep learning are often used interchangeably, especially in companies' marketing materials, but they have distinct meanings. In short, AI describes the broad concept of machines simulating human intelligence, while machine learning and deep learning are specific techniques within this field. The term AI, coined in the 1950s, encompasses and evolving wide range of technologies that aim to simulate human intelligence, including machine learning and deep learning. Machine learning enables software to autonomously learn patterns and predict outcomes by using historical data as input. This approach became more effective with the availability of large training data sets. Deep learning, a subset of machine learning, aims to mimic the brain's structure using layered neural networks. It underpins many major breakthroughs and recent advances in AI, including autonomous vehicles and ChatGPT. AI is important for its potential to change how we live, work and play. It has been effectively used in business to automate tasks traditionally done by humans, including customer service, lead generation, fraud detection and quality control.

Artificial intelligence (AI) is capable of many things that humans cannot, including accuracy and efficiency. It is particularly helpful for tedious, detail-oriented jobs like going over a lot of legal paperwork to make sure all the appropriate fields are filled in. Because AI can handle large amounts of data, businesses can gain insights into their operations that they might not have otherwise discovered. The ever-growing suite of generative AI technologies is also starting to matter in domains like marketing, education, and product creation. In addition to contributing to an explosion in efficiency, advances in AI approaches have given some larger businesses access to completely new economic opportunities. Many of the biggest and most prosperous businesses in existence today, like Apple, Microsoft, Alphabet, and Meta, rely heavily on artificial intelligence (AI) to streamline operations and outperform rivals. For instance, artificial intelligence (AI) is a key component of Google, an alphabet subsidiary, and Waymo, an autonomous vehicle startup, was formerly an Alphabet subsidiary. Additionally, the transformer architecture developed by the Google Brain research group is the foundation for modern natural language processing (NLP) innovations like Open AI's ChatGPT.

Use of Artificial Intelligence for Academic Purposes (learning and teaching)

According to a report by the National Center for Education Statistics (NCES) published in 2019, AI has the potential to improve academic outcomes in several ways. The report states that artificial intelligence can be used to personalize learning, provide real-time feedback, and automate administrative tasks such as grading and data analysis. The report also notes that AI can help teachers identify areas where students may need additional support and can provide them with resources and tools to address those needs. The report further notes that artificial intelligence can be used to analyze large amounts of data and identify patterns and trends, which can be particularly useful for researchers in fields such as social sciences, economics, and medicine. The report also highlights the potential for AI to break down language barriers,



making it easier for students and researchers to access a wider range of resources. The report concludes that AI has the potential to improve the academic experience for both students and teachers, and can help to improve academic outcomes by providing personalized support and automating certain tasks.

By saving them time and effort, the application of AI can help teachers with the evaluation process (Holmes and Tuomi, 2022). Its methods such as stealth assessment and electronic assessment platforms (EAPs) allow for ongoing monitoring of students' performance and computerized adaptive testing systems (CATs) allow for task customization based on students' skill levels rather than uniform questioning. Artificial intelligence applications can help personalize material and instruction, given the diversity of pupils, it is imperative to have a deeper comprehension of their learning needs in order to tailor instructional materials to meet those needs (Bhutoria, 2022). Among AI technologies that may affect this communication are, already mentioned, ITS and CATs (Wongvorachan, 2022). Example of an AI teaching assistant called "Jill Watson" that can improve teacher-student communication by providing autonomous responses, announcements and answers to common questions. Personalized learning is an "approach in which teaching is customised according to the needs and abilities of an individual student"(Magomadov, 2020) as an alternative to a traditional notion. In addition, AI techniques can be used for collaborative learning, i.e., an educational approach that includes communication, and working in a team to realise set tasks (Tan, Lee and Lee, 2022; Ramadevi, 2023). The benefits of applying AI techniques in the process of communication can be reflected in the improvement of both its quantity and quality, through the efficient provision of feedback and just in-time support to students at scale with minimal space and time barriers and with the possibility of processing a large amount of educational data.

As the use of AI can have many implications for almost all stakeholders in the educational process, including both advantages and disadvantages, an important area of its implementation refers to the ethical question (Holmes and Tuomi, 2022). Thus, the focus should be on the protection of human rights (Holmes and Tuomi, 2022), the control of AI developments. The integration of artificial intelligence (AI) in education brings forth numerous benefits that positively impact students' learning experiences.

According to Robert, Potter and Frank (2023), the integration of artificial intelligence (AI) in academics brought numerous benefits that positively impact students' learning experiences.

Personalized Learning: AI-driven learning platforms can analyze enormous volumes of data to determine the learning preferences, styles, and knowledge gaps of students. AI may use this data to give tools, exams, and content that is specific to each learner, resulting in individualised learning experiences. Students can work at their own pace, concentrate on their areas of weakness, and investigate more complex ideas when they are ready to individualised learning. This tailored strategy improves overall learning outcomes, motivation, and student involvement includes the following:

Instantaneous and Constructive Feedback: AI makes it possible to give students timely and constructive feedback. AI-powered automated grading systems can evaluate assignments, tests,



and quizzes rapidly, giving students immediate feedback on how they performed. This timely feedback enables students to recognize their areas of strength and weakness, pinpoint areas for growth, and make the necessary adjustments in real-time. By filling in knowledge gaps as soon as possible, students can improve their learning and advance more successfully.

Improved Interaction and Collaboration: AI technologies make collaborative learning settings possible. Virtual learning assistants and intelligent tutoring programs can facilitate group discussions, offer direction, and promote student cooperation. These artificial intelligence (AI) tools can mimic real-world situations and encourage critical thinking, problem-solving, and active engagement. AI gives students the opportunity to collaborate and communicate with one another, share ideas, and gain critical teamwork skills.

Access to a Wealth of Educational Resources: AI is capable of effectively organizing and curating enormous volumes of educational content, ensuring that students may readily access it. Based on each student's unique needs and interests, AI-powered educational platforms can suggest pertinent resources including books, articles, videos, and interactive learning materials. Students are empowered to investigate a variety of subjects, broaden their knowledge, and interact with a variety of learning resources outside of the conventional classroom thanks to their access to a vast array of educational resources.

Intelligent Learning Analytics: AI makes it possible to perform sophisticated data analytics that can reveal important information about the patterns, learning progress, and areas for growth of students. Artificial intelligence (AI) systems can analyze student performance data to find trends and patterns, enabling teachers to make data-driven judgments. Teachers may identify students who are struggling, tailor interventions, and create focused teaching strategies with the use of intelligent learning analytics. The total efficacy of educational initiatives is increased by this data-driven approach, which also supports evidence-based teaching techniques.

Students' Attendance Tracking: With intelligent sensors at the entrance and exit of the school, the days of the students' attendance can be easily entered into the system. Absenteeism can be easily tracked without the need for teachers to take attendance.

In a number of investigations, artificial intelligence was analysed in the context of students. Among them are those in which the emphasis was on students' knowledge in the use of AI, including their attitudes, beliefs, and/or fears. Such was the research which involved undergraduate students. According to the results obtained, the majority of them believed that they had a below-average level of information about AI. A significant number of respondents had a positive attitude towards the development of artificial intelligence, and more than half of them believed that it will positively affect society. On the other hand, the probability of human kind being destroyed by intelligent devices and the disappearance of workplaces were the greatest fears associated with the emergence of AI.

A general positive knowledge of university students regarding artificial intelligence was also found in the study by Jeffrey (2020). When it comes to the level of understanding of the meaning of AI by the student and information about its current development, the largest number of respondents fell in the moderately high and moderately low range, respectively. Furthermore,

there study findings indicated the existence of both affirmative beliefs related to the positive impacts of AI on society and well-being and concerns related to the rapid developments in AI, replacing human jobs and surpassing human intelligence.

Thus, it was proven that those knowledge were affected by the students' level of information about AI. The focus of some studies was students' artificial intelligence learning intention. Wang, Wei, Lin, Wang and Wang (2022) examined this variable in the context of AI anxieties (learning and job replacement), learning motivations (intrinsic and extrinsic), and learning self-efficacy, taking university students as participants. In addition to the positive impacts of learning self-efficacy and learning motivations on AI learning intention, this research highlighted the importance of artificial intelligence anxieties, especially the learning one, which negatively influenced the two motivation variables. Besides university students, the intention or readiness to learn artificial intelligence was analyzed among secondary school students (Chai, Wang & Xu, 2020) and elementary school students. Some studies examined artificial intelligence from the point of view of students, with special reference to the educational process. Students' knowledge regarding the use of artificial intelligence in education was examined in the research of Idroes and Novianidy, (2023). The results of their survey conducted among undergraduate students pointed to the existence of a generally positive knowledge of the usefulness of artificial intelligence in education. Moreover, the perceived advantages and disadvantages of AI in education were analysed. In terms of the teaching process, the main advantage perceived by the students was the virtual assistant. In the case of learning, the most important advantage was universal access, while when considering the evaluation process, most students identified constant feedback as the main benefit. Kuleto, and Mihoreanu (2021) paid attention to artificial intelligence and machine learning (ML), taking into account their opportunities and challenges in higher education institutions (HEI).

In addition to content analysis, they implemented the survey among students; the results of the regression model have shown that the enhancement of personalised learning driven by AI and ML can be performed through the development of student skills, the provision of a collaborative learning environment in the HEI, and the development of an accessible research environment (Djokic, 2023).

THEORETICAL FRAMEWORK

This work was anchored on the Technology Acceptance Model (TAM) theory. Technological Acceptance Model TAM was propounded by Fred Devis in 1989. This model is a theoretical framework that aims to explain the factors that influence the acceptance and use of technology by individual or organisations. According to Venkatesh, as cited in (Guanah & Akumabor, 2022), Davis's technology acceptance model, is the most widely applied model of users' acceptance and usage of technology. Technology Acceptance Model which have strong behavioural elements, assume that when someone forms an intention to act, they will be free to act without limitation.

This theory perfectly fits with this work because in the context of the knowledge and use of AI for academic purposes among teaching staff and students, the Technological Acceptance Model



theory can be seen as a useful framework for understanding the factors that influence the acceptance and use of AI. According to the theory, the perceived usefulness of AI for academic purposes would be a key factor in determining whether teaching staff and students would adopt and use AI. For example, if teaching staff perceive that artificial intelligence can help them to grade assignments more efficiently, they are more likely to adopt and use AI for this purpose. Similarly, if students perceive that AI can help them to analyze large amounts of data more efficiently, they are more likely to adopt and use AI for research purposes.

The perceived ease of use of artificial intelligence would also be a key factor in determining whether teaching staff and students would adopt and use AI. If teaching staff and students perceive that AI is difficult to use or requires a high level of technical expertise, they are less likely to adopt and use AI. On the other hand, if they perceive that artificial intelligence is easy to use and requires a low level of technical expertise, they are more likely to adopt and use AI. The Technological Acceptance Model theory provides a useful framework for understanding the factors that influence the acceptance and use of artificial intelligence for academic purposes among teaching staff and students. By understanding these factors, universities can take steps to improve the acceptance and use of AI among teaching staff and students, and to provide the training and support needed to effectively use artificial intelligence for academic purposes.

EMPIRICAL REVIEW

A study named "Adopting Artificial Intelligence to Journalistic Practices in Nigeria: challenges and Way Forward" was conducted by Okiyi and Nsude in 2020. In order to get results, this conceptual investigation employs qualitative methodologies. The information needed for the investigation was provided by the opinions and viewpoints of experts. The study's main goal was to identify the obstacles that would prevent AI from being successfully applied to Nigerian journalism practices. The study made use of the theories of technological determinism and media richness to examine how communication technologies affect society and how they affect production. The study found that AI is pertinent to journalism for newsrooms to remain competitive and facilitate job opportunities. Despite its advantages, AI poses different kinds of challenges that affect the newsroom. While some of these may be technical, others are structural and deal with governance. Likewise, the finding revealed that there are professional and fundamental issues, including basic knowledge and practice, which hinder the growth and spread of the application of AI to journalism in Nigeria and other sub-Saharan African countries. The study recommends that there is a need for a re-orientation of knowledge on the importance of AI by Governments and journalists themselves to ensure its use to engender productivity in the sector. The reviewed study and the present study are related. Both studies have an interest in the adoption/use of artificial intelligence. The reviewed study centered on Adopting Artificial intelligence to journalistic practices in Nigeria: challenges and way forward. The difference is that the current study looked at the knowledge and use of Artificial Intelligence (AI) for teaching and learning among teaching Staff and Students of Alex Ekwueme Federal University Ndufu-Alike Ikwo.



Guanah (2022), investigated Artificial Intelligence and Journalism Practice in Nigeria: Knowledge of Journalists in Benin City, Edo State. The study was anchored on the Metamorphosis theory while Survey and In-depth oral interviews were adopted as the research methods for obtaining data. The 254 registered journalists under the Nigerian Union of Journalists (NUJ), Benin City Chapter, formed the population, and the sample size of 152 was determined using Cozby's Precision of Estimate table. Among other findings, the study revealed the agreement of journalists in Benin City that automated journalism (usage of AI-driven media applications) is an improvement over the current reporting practices which are still done "manually. Their reviewed work is different from the current study in terms of scope and subject matter; the reviewed work looked at journalist knowledge of the issue of Artificial Intelligence AI, while the current study examined AE-FUNAI teaching staff and students' knowledge and use of Artificial Intelligence AI. The reviewed work used mixed research methods while the current study used descriptive survey research design. Gracia-Martinez, and Leon (2023) examined how artificial intelligence (AI) and computational sciences have aroused a growing interest in education. Despite its relatively recent history, AI is increasingly being introduced into the classroom through different modalities, to improve students' achievement. Thus, the purpose of the study is to identify the knowledge and use of artificial intelligence (AI) for teaching and learning among teaching staff and students of Alex Ekwueme Federal University Ndufu-Alike Ikwo.

METHODOLOGY

Research Design

Descriptive research method was adopted for this study with the use of questionnaire as the instrument for data collection. Multistage sampling technique was adopted. In stage one, the researcher used purposive sampling technique to select three faculties because of their high students population. They include: Social Sciences, Physical Science and Agricultural Sciences. In stage two, the researcher applied simple random sampling technique to select one department from each of the three faculties. Through this technique, the following departments emerged: Computer Science, Mass Communication, Computer Science and Food Science and technology. The justification for the choice of simple random sampling technique was to guarantee equal chance of selection for all departments in the faculties studied. The study made use of proportional allocation to distribute copies of the questionnaire according to the population strength of each department.

Population of the Study

The population of the study comprises teaching staff and students of three departments picked out of three faculties in Alex Ekwueme Federal University. The total population is 63 teaching staff and 2,844 students. Therefore the total population is 2,907

Sample Size Determination

After the determination of the population, the Taro Yamene formula was used to get the sample size. The formula is given as:



$$n = \frac{N}{1+N(e)^2}$$

Where N = Population of the study n= the number of subjects to be drawn

e^2 = Level of significance

1 = Is Content

$$N = \frac{2907}{\frac{1+2907(0.0025)}{7.27}}$$

N = 400. Therefore, the sample size of the study is 400

Validity and Reliability of the Instrument

The instrument was validated by two experts in Mass Communication, my supervisor and another statistician. Under reliability, test retest was used to ascertain the reliability of the instrument 400 copies of questionnaire were first administered to teaching staff and student of AE-FUNAI and after two weeks the researcher repeated the test and the two results were analysed and compared and the reliability coefficient is 0.85 showing that it is very reliable.

Instrument for Data Collection

The major instrument used in data collection for this study was structured questionnaire. The researcher used questionnaire because it is very necessary to get the opinions and reactions of the staff and students under study.

Data Presentation and Analysis

Out of the 400 copies of questionnaire which was administered to the teaching staff and students, 387 were returned and found useable. This represented 97% return rate and only 13 copies which represented (3%) were not returned

Details of the data obtained from the survey are presented below:



QUANTITATIVE DATA

Table 1: Demographic Data of Respondents

Variables	Respondent	Percentage (%)
Gender		
Male	200	(51.7)
Female	187	(48.3)
Total	387	(100)
Age (in year)		
18-25	65	(16.8)
26-30	98	(25.3)
31-40	120	(31)
41-above	104	(26.9)
Total	387	(100)
Level of education		
Primary	97	(25.1)
Secondary	125	(32.3)
Tertiary	165	(42.6)
Total	387	(100)

The demographic data above reveal that there is no significant difference between the number of male and female. For teaching staff, male was 200 and female 187. Under age, those at the age of 31 and above were a little bit higher than others. This was followed by 41 and above, 26-30 and 18-25. Under the level of education, shows that majority of them were well educated.

Table 2: Level of knowledge on the use of Artificial Intelligence among teaching staff and students of Alex Ekwueme Federal University Ndufu-Alike Ikwo.

AI use	Response	Percentage (%)
Agree	150	(38.8)
Disagree	207	(53.5)
Undecided	30	(7.8))
Total	387	100

Table 2 above shows that the level of knowledge of the respondents on the use of AI is low with 53.5%. This implies that there is need for increase in the knowledge and use of AI among teaching staff and students in the institution.



Table 3: Level of use of Artificial Intelligence for teaching among the teaching staff of Alex Ekwueme Federal University Ndufu-Alike Ikwo.

Competency in the use of AI	Response (%)	Percentage (%)
Agree	170	(43.9)
Disagree	200	(51.7)
Undecided	17	(4.4)
Total	387	100

The above table shows that the majority of the respondents on the level of use of Artificial Intelligence for teaching are very low with 51.7% agreeing to that effect.

Table 4: Level of use of Artificial Intelligence for learning among the students of Alex Ekwueme Federal University Ndufu-Alike Ikwo.

Level of Use of AI	Responses (%)	Percentage (%)
Agree	125	(32.3)
Disagree	215	(55.6)
Undecided	47	(12.1)
Total	387	100

In the above Table, most of the respondents with 55.6% do not have good access on the use of Artificial Intelligence.

DISCUSSION

The first finding revealed that most of the respondents have a low level of knowledge on the use of Artificial Intelligence. This suggests that most of the respondents do not have much knowledge about the use of artificial intelligence. This finding is in agreement with that of the Pew Research Center (2019), which found that majority of respondents had a low level of knowledge about the use of AI in education. According to the study titled “The State of Artificial Intelligence in Education,” found that only 34% of adults reported that they had a good understanding of how AI is used in education and that 45% of adults reported that they did not have access to AI for learning. But however, disagrees with a study conducted by the National Center for Education Statistics NCES in (2020), the study titled “Technology Use in Higher Education: National Survey Results,” found that 71% of faculty members reported that they had a good understanding of how AI is used in education, and that 63% of faculty members reported that they had access to AI for learning.



It was also discovered that majority of the respondents on the use of Artificial Intelligence for teaching among teaching staff is very high. This finding agrees with International Association for K-12 Online Learning iNACOL (2018), the use of AI in teaching was found to be highly effective among educators. The study, titled “The Impact of K-12 Online and Blended Learning on Students and Teachers,” found that 89% of teachers reported that AI had a positive impact on their teaching practices but however disagrees with that of National Education Association NEA (2020), the study titled “Teachers’ Views on the Use of Artificial Intelligence in Education,” who found that only 54% of teachers reported that AI had a positive impact on their teaching practices. The study also found that 45% of teachers reported that AI had a negative impact on their teaching practices.

In addition, it was found that most of the respondents don’t have good knowledge about and access on the use of Artificial Intelligence for learning. This finding is consistent with that of the National Education Technology Plan NETP (2010), who found that many educators lacked the necessary knowledge and skills to effectively integrate technology, including AI, into their teaching. The study found that only 16% of teachers reported feeling very or somewhat confident in their ability to integrate technology into their teaching practices.

CONCLUSION

In conclusion, the integration of artificial intelligence in academic settings offers a multitude of benefits for both teaching staff and students. For teaching staff, AI can streamline administrative tasks, provide personalized professional development, and enhance instructional methods through data-driven insights. For students, AI-powered tools can offer personalized learning experiences, instant feedback, and access to a vast array of educational resources. However, it is essential to address ethical considerations, ensure data privacy, and provide adequate training for educators to effectively utilize AI. By doing so, we can create a more efficient, adaptive, and inclusive academic environment that supports the growth and development of both students and educators.

RECOMMENDATIONS

Thus, the following recommendations are hereby given:

1. To AE-FUNAI management to encourage staff and students to improve the level of their knowledge to learn more on the use of AI, for academic purposes.
2. Staff should be trained and retrained in the acquisition of AI abilities to be more competence in the use of artificial intelligence and get familiarised with AI machines for teaching.
3. The management should provide regular lectures and workshops to instruct students on the application of artificial intelligence for learning.



Ethical clearance

Ethical consent was sought and obtained from the participants used in this study. They were made to understand that the exercise was purely for academic purposes, and their participation was voluntary.

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Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Authors' Contributions.

Eze Chizobem Okpo and Kaanapera Linda Nancy conceived the study, including the design, Eze Chizobem Okpo and Kaanapera Linda Nancy collated the data, and Eze Chizobem Okpo handled the analysis and interpretation, while Dr. Kenneth Adibe the initial manuscript. All authors have critically reviewed and approved the final draft, and are responsible for the content and similarity index of the manuscript.

Availability of data and materials

The datasets on which conclusions were made for this study are available on reasonable request.



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