Education-Related Artificial Intelligence and Its Effect on Academic Performance: A Study of Private Universities in Delta State

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ABSTRACT
The present study, which looked at private universities in the Delta state, explored the function professors will play in the era of artificial intelligence. Using a cross-sectional survey research approach, this study examined three (3) carefully chosen postsecondary institutions that make up the study's accessible population. Two hundred and fifty-nine (259) questionnaires from the field survey were retrieved and examined; the demographic data of respondents was analyzed using descriptive statistics; the relationship between the dimensions of artificial intelligence and the role of lecturers in the future in the era of artificial intelligence was also examined using Spearman's Rank Order Correlations Coefficient from SPSS version 20.00. and to test hypotheses postulated for the research between the predictor and criterion variables. Findings revealed that Artificial Intelligence through its indicators of adaptive learning, web-based technology and emotional artificial intelligence had weak relationship with the future role of lecturers in the teaching profession. Despite some participants' beliefs that artificial intelligence would eventually replace teachers, it was concluded that human instructors are irreplaceable because they possess unique abilities like critical thinking, creativity, and emotion. It was also recommended that educational training environments be provided that enhance the role of artificial intelligence applications in lecturers' professional development in order to maintain their relevance in the field.

Keywords: *Artificial Intelligence, Adaptive and Personalized learning, Web-based Technology, Emotional Artificial Intelligence and Future of the Lecturing Profession*

Introduction

Undoubtedly the use of technology in research and teaching should be adopted in the current practices of teaching and lecturing in order to help both their discipline and pre-service and in-

service teachers ascertain more positive outcome in their services. The convergence of technologies in the field of education is to blame for this. For instructors to gain familiarity with the technology, professional development opportunities are necessary. Whether technology is used to increase opportunities for interaction and problem-solving in a traditional classroom or in a distance-learning course, the physical barrier between teachers and students only becomes insignificant when the technology is transparent (University of Missouri-Columbia, 2020).
According to Siegle et al. (2021), lecturers are respected for their ability to use technology to enhance their own teaching and learning as well as to connect with students and increase their resources. Sancar, et al. (2021) presented an institutional framework to remind us that we need to renew our commitment to our faculty in light of the quick development of technologies and their application to the field of education. As a commitment to our faculty, the purpose of this study was to investigate the professional development of lecturers with regard to technology.

Statement of the Problem

The increasing use of artificial intelligence in various fields and sections of the economy shows its great importance; including its role in education, and the improvement of educational institutions. Artificial intelligence is often viewed by some as a debatable subject and it is often represented in a negative way in most cases by some researchers. Artificial intelligence has impacted our way of life either directly or indirectly and is influencing the course of the future. Some have portrayed it as a convincing boon for institutions, while others see it as a technology that threatens the very existence of the human race because it may be able to control and manipulate man (Duin & Bakhshi, 2020). This has led some scholars to pose an intriguing query: how much can technology transform the field of education? (Aldosari, 2020). Therefore, this study looks at how relevant lecturers will be in higher education in the future if artificial intelligence is accepted, as well as how ready these institutions are to integrate AI into their curricula.

Aim and Objectives

The primary goal of the study is to determine the effect of Education-Related Artificial Intelligence and its effect on Academic Performance of selected private Universities in Delta State; other specific objectives are to;

i. ascertain the relationship between adaptive and personalized learning and Academic Performance of selected private Universities in Delta State
ii. determine the relationship between web-based technology and Academic Performance of selected private Universities in Delta State
iii. examine the relationship between emotional AI and Academic Performance of selected private Universities in Delta State

Research Hypotheses

The following hypothetical statements are as tentative answers to the research questions;

$H0_1$: There is no significant relationship between Adaptive and Personalized Learning and Academic Performance of selected private Universities in Delta State.

$H0_2$: There is no significant relationship between Web-based technology and Academic Performance of selected private Universities in Delta State.

$H0_3$: There is no significant relationship between Emotional AI and Academic Performance of selected private Universities in Delta State.

Literature Review

Utilizing technology entails using instruments, procedures, and methods (Bates, 2019). For this study, we adopt Bates' description of the technology, which is based on assessments of the literature and in-depth stakeholder engagements. Within this study "technology" refers to several devices or instruments, including electronic computers and calculators. Technology describes the processes or methods by which the technologies are applied or controlled. Technology can also relate to an object's usage, application, or goal (Bates, 2019).

As the study progressed, it became clear to the researchers that the majority of the participants, if not all of them, were familiar with the term "technology," therefore the study's citation of Bate's definition of technology as an apparatus, process, or method was maintained. Basic word processing and the internet are used by lecturers, and LMS is widely used in Uganda (Bigirwa et al., 2022; Gaspard-Richards, 2022; Hamiza et al., 2020). However, in the study university, only a few of the lecturers are in tune with modern technology, and there is a low level of lecturers adopting the LMS.

Theoretical Framework

Venkatesh, et al. (2003)'s Unified Theory of Acceptance and Use of Technology (UTAUT) model was chosen since its domains were more fitting than other technology adoption models. Some models lacked important domains, while others had extra unnecessary domains. The performance expectancy, effort expectancy, social influence, and facilitating conditions are the four primary domains of the UTAUT model that were used in this study.

These four domains serve as determinants for the individual's intention to adopt the technology. The model also has four variables that might have an impact on the four main domains; these variables are gender, age, experience, and voluntarism of use (Venkatesh et al., 2003). For example, age can affect whether a person adopts a technology or not. Moreover, experience can affect technology adoption since someone with a vast experience might be ready to adopt new technologies while those with little experience might be more hesitant. This model serves as a model that integrates the eight previous technology adoption models, so it is a built-on and improved version of previous models such as the Technology Acceptance Model (TAM) by Davies (1989, as well as TAM 2 and TAM3. This model serves as an aid to determine the likelihood that the individual will adopt a technology (Slepankova, 2021). The ability of UTAUT to explain technology acceptance and usage in a variety of contexts and settings is one of its strengths. It has been used with numerous platforms, such as cell phones, social media, e-commerce, and medical equipment, and it has also been applied in developed and developing countries (Venkatesh et al.,
2003).

Artificial Intelligence

One of the most well-known contemporary uses of information systems is artificial intelligence, a field of study that aims to comprehend the nature of human intellect and its simulations in order to develop a new breed of intelligent computers that can be configured to perform a wide range of tasks requiring a high degree of inference, deduction and perception, which are qualities that people enjoy It is included in the list of smart behaviors (Uford & Akpan, 2024).

Uses for Artificial Intelligence are significant in all spheres of life, but they are particularly crucial for academic institutions and universities, which are an absolute necessity given that universities are no longer just for teaching, but rather have become an essential part of the system of sustainable development in societies, as it stresses (Morín, 2018). The mission of universities today exceeded the traditional function of preserving heritage, identity and education. Instead, institutions now have to develop new teaching and learning strategies to

keep up with the rapid advancement of technology. The plan delivered by the Gutenberg Summit in the month of November 2017 for culture and education focused on three priorities for improved utilization of artificial intelligence in teaching and learning, so educational reform projects quickly developed their educational systems in accordance with the specifications of artificial intelligence represented in developing digital competencies and skills related to digital transformation; Education through data analysis and insight (Tuomi, 2018).

Researchers' efforts to investigate the effects of AI on education in general and higher education in particular have also accelerated. As a result, studies like Tuomi's (2018) and Khare, Stewart, and Khare (2018) highlighted the value of AI and the beneficial effects of AI applications on student success. Robots can help students become more interested in learning foreign languages by offering rich learning settings and the potential to use artificial intelligence applications to solve traditional educational challenges (Fryer, 2019). On the investigation, Ma and Siau (2018) stressed how crucial artificial intelligence is to the advancement of higher education and the transformation of conventional teaching approaches.

On the other hand, a number of studies examined the difficulties posed by the use of artificial intelligence in the workplace, particularly in relation to the conventional roles of human resources (Akpan, 2024). One such study (Fernández, Fernández & Aburto, 2019) found that the major issue confronting universities in the new millennium is the pressing need to plan, design, develop, and implement digital skills in order to better prepare professionals who can comprehend the technological environment and adapt it to meet their needs.

According to some researchers (Harkut & Kasat, 2019), there is growing concern about artificial intelligence spreading. This concern stems from people's lack of confidence because AI is centered around science, technology, and algorithms that most people are unfamiliar with, making it difficult for them to trust. It also decreases the need for labor, which raises the possibility of unemployment spreading.

Artificial Intelligence: Dimensions

Adaptive and Personalized Learning

Intelligent tutoring systems (ITS), also known as adaptive learning, are online learning environments that modify instructional strategies and available materials based on the needs and ability levels of specific students (Luckin et al., 2016). Several contemporary ITS use machine learning techniques, self-training algorithms based on large data sets, and neural networks to enable the system to make appropriate decisions about what learning content to deliver to the student (Luckin et al., 2016). These techniques allow the system to adjust the rate, order, or amount of learning based on the student (JISC, 2021).

Adaptive learning offers a personalized learning experience to the student, identifying each student’s proficiency level and providing them with activities and assessments relevant to them (Baker, 2021; Akai & Uford, 2025). Additionally, Calatayud et al. (2021) explained how teachers could combine a customized system that includes self-assessment for the disabled and non-disabled to self-assess themselves through adaptive learning AI systems and adjust the learning and materials accordingly. Consequently, adaptive and personalized learning offers a major advantage to students and helps in creating equity since all students get to achieve the same learning objectives based on their own level and ability (Akai, Uford & Udoh, 2025).

Examples showcasing the use of AI in teaching and learning are through adaptive learning systems, AI-assisted marking and feedback, chatbots, and virtual teaching assistants (JISC, 2021). For example, at Arizona State University, experts have started using CogBooks. This adaptive learning system replaces the traditional textbook and provides a personalized learning

experience to the student (JISC, 2021). Students' passing rates improved by 24%, and the dropout rates were cut down by 90% (JISC, 2021). Other examples of adaptative learning systems include but are not limited to TSAL (Tseng et al., 2008) and WELSA (Popescu, 2010), which are adaptive learning systems designed to support different learning styles. These are examples of systems that integrate several AI tools in one; adaptive learning, web-based technology, and responses using chatbots.

Web-based Technology

For lecturers, LMS may be a useful tool (Green &Chewning, 2020; Hidayat et al., 2019; Mohammadi et al., 2021). In order to upload materials for students on the Learning Management System (LMS), lecturers must plan ahead of time. This includes creating a course outline, biographies, reading lists, and resource links. In order to establish a connection with students, LMS has the potential to be a useful communication tool (Al-Sharhan et al., 2020; Oguguo et al., 2021; Ross, 2019). Li et al. (2022) make the relevant point that instructors should focus on management, humanizing, and engagement when it comes to LMS-based learning. To humanize the experience, instructors need to be informal, distribute lists of participants to all students, and be responsive. To facilitate interaction, instructors need to be patient, synchronize and resynchronize, be careful about the amount of instructor contribution, use e-mail to prompt, and be clear in their communications. To provide management, instructors need to provide procedural leadership, not overload, moderate for tangents and lurkers, encourage student leaders, and end sessions. Lecturers need to moderate online discussions with specific attention to facilitating interaction and group dynamics, setting up group tasks, providing feedback, reflecting on transcripts, becoming role models, reviewing pedagogical demands, providing support and training for learners, and counting on a longer time period to plan and implement online courses. Writing, typing, scanning, and online reading skills need to be developed.

Emotional AI

Emotional AI is being used by Education Technology businesses to measure social and emotional learning (McStay, 2019). Building systems and gadgets that can identify, detect, and interpret human emotions is the goal of the field of study known as "affective computing" (Pabba& Kumar, 2021). Affective computing is among the AI technologies that are utilized to construct autonomous engagement monitoring systems that track and report student engagement levels by analyzing nonverbal signs without the need for human intervention (Pabba& Kumar, 2021).

In a study conducted by Sharma et al. (2019), the researchers created an AI system to detect student engagement through their eye and head movements and facial emotions using the laptop camera in an e-learning scenario. The results showed that the AI tool could correctly identify when the student was very engaged or when a student was not engaged (Sharma et al., 2019). However, in some rare instances when the students had their faces covered with their hands, the system couldn't detect the information (Sharma et al., 2019).

Pabba and Kumar (2021) also conducted a study where they created a system to monitor student engagement both online and offline through their facial expressions and their affective states. The authors used six affective states in their study, which are "bored, confused, focused, frustrated, yawning, and sleepy" (Pabba& Kumar, 2021). Another study also confirmed how a teacher could recognize if a student is bored, frustrated, or facing difficulties and provides them with a personalized activity or assessment of their reported behavior (Baker, 2021), which combines emotion AI and adaptive and personalized learning.

The authors concluded that the results of the system were very promising and that the tool can be used to effectively track students' engagement and make the appropriate changes in the lesson to achieve the learning result and enhance engagement (Pabba& Kumar, 2021). However, while the results were promising, there are huge privacy concerns. Also, if students consented to its use, there are still cues that the tool might not detect, especially for students with a certain disability, such as ADHD, since there will always be a spectrum, and thus, the tool might not be able to detect a certain motion or expression.

Uses for Artificial Intelligence in Education

According to Papaspyridis (2020), teaching and learning in AI refers to developing AI solutions that enable educators and students to realize their full potential through collaborative learning, learning management, and learning environments. The creation and uptake of new technologies in education have increased within the past 30 years (Popenici& Kerr, 2017). Although initial initiatives to incorporate AI into education looked at utilizing the technology to replace instructors, institutions are now moving toward employing AI in teaching and learning to support teachers rather than to replace them (JISC, 2021).

AI will never replace teachers. Teaching is a very complicated and comprehensive activity that requires not only the dissemination of information but also the development of social and emotional skills; thus, AI is unlikely to completely replace teachers and instructors (Kolchenko, 2018). Furthermore, despite some participants' beliefs that AI would eventually replace teachers, Chan and Tsi (2023) concur and state that in their study on the "future role of educators in the face of advancing AI technologies," they concluded that the majority of participants contend that human instructors are irreplaceable because they have special abilities like critical thinking, creativity, and emotions.

The study also emphasizes the value of social and emotional skills acquired via interactions with others, which AI systems cannot yet reproduce (Chan &Tsi, 2023). According to the research, instructors may successfully incorporate AI to improve teaching and learning without considering it to be a substitute, and in order to achieve this, instructors must cultivate AI literacy, comprehend how AI may effectively collaborate with teachers and students while avoiding possible pitfalls, and handle relevant problems like data protection, ethics, and privacy (Chan &Tsi, 2023).

Will (AI) systems change the future of education?

Artificial intelligence can automate basic activities in education, such as classification and grading. AI systems can make educational programs tailor to the need of students. That normally is made through current advanced technology applications and programs. AI enables students to obtain an extra support. This feature works to empower the principles of educational establishments to serve students to the maximum extent. Programs that depend on AI systems let students and teachers have the opportunity to provide useful comments for others to benefit and share experiences. AI systems change the way to find information and interact with it. These types of intelligent systems play a big role in the way we interact with information in our personal and professional lives. Over the past few decades, AI systems have radically changed the manner we interact with information. With newer and more integrated technology, future students may have significantly different experiences in searching and finding facts than today's students (Chan & Tsi, 2023).

AI systems indicate the areas that need improvement in the study courses, because this type of system helps to improve and fill gaps that can occur in educational courses. It helps to ensure

that all students build the same conceptual foundations; instead of waiting for the teacher to listen, students get instant feedback that helps them understand the concept and remind them how to use it in the future (Pabba& Kumar, 2021). AI systems can reduce the fear from learning by trial-and-error methods. AI systems can provide students with a way to learn in a relatively rule-free environment, especially when AI teachers can offer solutions for improvement. In fact, AI systems are the ideal form to support this type of learning because AI systems themselves often learn through the method of trial and error.

The data supported by AI systems can change the manner schools select their students. AI systems can change the teachers' role. That was really expected with technology advancement, particularly with the emergence of the smart devices.AI systems will change the students' learning location, who teaches them, as well as the style of gaining basic skills.AI systems allow students and teachers to grasp the opportunity to choose the proper places for learning and enhance their educational abilities whether at home, school or other places such as Starbucks and the like (McArthur, Lewis & Bishary, 2005).

Empirical Review

There are much previous literature that discussed the topic of artificial intelligence and its impact on higher education, and among these studies, the Fernández, Fernández and Aburto (2019) study reviewed the impact of artificial intelligence on higher education and the study concluded that the coming period will witness the transition from the traditional roles of universities to new ones such as replacing the traditional language with the digital language, and the development of teaching methods in a new way which It requires enhancing students' skills to adapt to social intelligence applications.

Furthermore, despite some participants' beliefs that AI would eventually replace teachers, Chan and Tsi (2023) concur and state that in their study on the "future role of educators in the face of advancing AI technologies," they concluded that the majority of participants contend that human instructors are irreplaceable because they have special abilities like critical thinking, creativity, and emotions. Khare, Stewart and Canada (2018) study attempted to reveal the potential of artificial intelligence to positively influence a student’s success; the study reviewed the form of education when applying artificial intelligence as students will rely more on administrative staff while faculty members at the Institute of Higher Education oversee management systems Learning. The study came to the conclusion that educational institutions will be better able to carry out their main responsibilities of teaching, learning, and research thanks to the uses of artificial intelligence.

Gamoura et al. (2018) study tried to prove that the technical reality as well as the moral and technological barriers prevent suggest the idea of absolute machine freedom in decision-making in the near future, including fears currently mounting on the media and academia, despite the characteristics of AI including automatic actions, self-development and automatic machine learning. To shed light on the realities of artificial intelligence's developments and aspirations between what it has really attained and what it aims to reach, the researchers provided an overview of the field's foundations, characteristics, and some living models. In his dissertation "An Intelligent Tutoring System for Developing Education: Case Study (Israa University)", Abu Hasanein (2018) stated that a smart tutor was created utilizing an intelligent tutoring system (ITS) tool that was enhanced by Prof. Sami Abu Nasser in order to improve the way the computer skills course was taught.

This workshop is a university training course that teaches students of Israa University on different samples of students. After the completion of the course and the evaluation of the lecturers who taught the course and used the system in their teaching process, a set of conclusions and recommendations were reached. The tutor's use of the Artificial Intelligence tools was seen to be important in the development of laboratory teaching and it has positive results in improving the level of scientific department students.

In a study entitled "Educational Uses for Artificial Intelligence in Social Studies," Al-Saud (2016) aimed to uncover the role of AI in the development of teaching strategies and models, with concentration on its applications in academic learning and teaching in Social Studies department. The study concluded with a definition of AI, a distinction between AI and human intelligence, and suggestions to conduct more AI-related studies in the Social Studies field.

A study named "The Readiness of Managerial Leaderships to adopt" was carried out by Alqattan (2012) the Uses for Artificial Intelligence in Educational Organizations" where he tried to fathom the managerial leaders' ability to activate the requirements needed for applying AI in their educational organizations. The results show that there is an effective interest towards adopting artificial intelligence in the managerial leadership of the organizations participating in the study. Like the afore-mentioned studies, the present study subscribes itself in the same research field (AI in education). However, this research is distinct thanks to its method as a futuristic study and its concentration on the potential scenarios as determined by experts' expectations about the future of higher education and AI transformation.

Methodology

This study adopted a cross-sectional survey research design in studying three (3) selected tertiary institutions which constitutes accessible population; however, our study units include the academic staff of the institutions having that our unit of analysis is at individual level of the organization. The study respondents from the institutions constituted the population of the study; from the field survey, we retrieved and analyzed two hundred and fifty nine (259) copies of questionnaire; descriptive statistics was employed in analyzing the demographic data of respondents; also, Spearman's Rank Order Correlations Coefficient from SPSS version 20.00 was the statistical tool utilized to examine the relationship between the dimensions of Artificial Intelligence and future role of lecturers tomorrow and to test hypotheses postulated for the research between the predictor and criterion variables.

Table 1.1: Population and Sample of Study

Name of Institutions	Population	Sample of Academic Staff
1 Novena University Ogume	772	(772/2370)*342 = 111
2 Western Delta University	671	(671/2370)* 342 = 97
3 Edwin Clark University	515	(515/2370) * 342 = 74
4 Michael and Cecilia University	412	(412/2370) * 342 = 60
TOTAL	**2370**	**342**

Source:https://knoema.com/NGEDUSEC2020/educationstatisticsofnigeria?indicator=1000070-number-of-academic-staff-strength.

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

n = 342

Therefore, 342were deemed appropriate to form the sample size using the Taro Yamani's formula, having a population of 2370. 259 was retrieved representing 76% return rate.

4.0 Results and Discussion

A total of 342 sets of questionnaires was distributed to the selected private universities.

Table 1.2: Demographics of Respondents

	Institutions	Frequency	Percent (%)	Valid Percent (%)	Cumulative Percent
Valid	University of Port Harcourt	109	42.1	42.1	42.1
	Rivers State University	95	36.7	36.7	78.8
	Ignatius Ajuru University	55	21.2	21.2	100.0
	Total	259	100.0	100.0	
	GENDER				
	Male	180	69.5	69.5	69.5
	Female	79	30.5	30.5	100.0
	Total	259	100.0	100.0	
	Job Position				
	Lecturer 1 and Above	149	57.5	57.5	57.5
	Below Lecturer 1	110	42.5	42.5	100.0
	Total	259	100.0	100.0	
	DURATION				
	Below 5 years	55	21.2	21.2	21.2
	5-10 years	122	47.1	47.1	68.3
	Above 10 years	82	31.7	31.7	100.0
	Total	259	100.0	100.0	
	AGE				
	25-30 years	64	24.7	24.7	24.7
	31 - 40 years	131	50.6	50.6	75.3
	Above 40 years	64	24.7	24.7	100.0
	Total	259	100.0	100.0	
	Academic Qualification				
	B.A/B.Sc/B.Ed/HND	58	22.4	22.4	22.4
	MBA/MSc/M.Ed/MA	71	27.4	27.4	49.8
	Ph.D/DBA	101	39.0	39.0	88.8
	Others	29	11.2	11.2	100.0
	Total	259	100.0	100.0	

SPSS output, Version 20 – Field Survey, 2024

From the field survey, total number of two hundred and fifty nine (266) copies of structured questionnaire was retrieved but two hundred and fifty nine (259) copies were valid and usable, and was analyzed. Thus, the demographic distribution of respondents is reported in Table 1.2.

Table 1.3: Spearman' rank order correlation coefficient: A test of association between the variables

Correlations						
			Adaptive.Learnn	Web-based	Emotional.AI	Lecturer.Rel
Spearman's rho	Adaptive.Learnn	Correlation Coefficient	1.000	.772**	.773**	.287**
		Sig. (2-tailed)	.	.000	.000	.000
		N	259	259	259	259
	Web-based	Correlation Coefficient	.772**	1.000	.970**	.398**
		Sig. (2-tailed)	.000	.	.000	.000
		N	259	259	259	259
	Emotional.AI	Correlation Coefficient	.773**	.970**	1.000	.225**
		Sig. (2-tailed)	.000	.000	.	.000
		N	259	259	259	259

	Lecturer. Rel	Correlation Coefficient	**.287****	**.398****	**.225****	**1.000**
		Sig. (2-tailed)	.000	.000	.000	.
		N	259	259	259	259
**. Correlation is significant at the 0.05 level (2-tailed).						

SPSS output, Version 20 – Field Survey, 2024

Discussion

Table 1.3 presents Spearman's rank order correlation run to ascertain the relationship between Artificial Intelligence and the future role of lecturers as reported by two hundred and fifty-nine (259) respondents. A weak positive correlation coefficient value was reported between variables which were statistically significant (rho = .287**, p = .000 < 0.05 (alpha value) this suggests that there is weak significant relationship between adaptive and personalized learning and lecturers' relevance; also web-based technology as enabled by AI and lecturers' relevance reported weak values of correlation (rho = .398**, p = .000 < 0.05); accordingly, emotional AI and the criterion variable (lecturers' relevance) reported weak values of correlation (rho = .225**, n = 58, p = .000 < 0.05). The empirical result is supported by Ma and Keng's (2018) findings, which showed how artificial intelligence is affecting academic performance. These consequences are shown in the reduced reliance on human resources in the classroom and the requirement for new skill sets. The challenge of equipping students with the skill sets required to compete in the age of artificial intelligence and preparing them for the impending AI revolution falls on higher education.

The null hypotheses was rejected while the alternative accepted which state that there is significant relationship between the dimensions of Artificial Intelligence and the future role of lecturers' in the private universities in State.
Khare, Stewart and Canada (2018) study attempted to reveal the potential of artificial intelligence to positively influence a student's success; the study reviewed the form of education when applying artificial intelligence as students will rely more on administrative staff while faculty members at the Institute of Higher Education oversee management systems Learning and conclusion that educational institutions will be better able to carry out their main responsibilities of teaching, learning, and research thanks to the uses of artificial intelligence. This is supported by (Chan & Tsi, 2023: Khare, Stewart & Canada, 2018: Gamoura et al., 2018: Al-Saud, 2016).

Conclusion

In light of the above, artificial intelligence has begun to occupy a significant spot in numerous territories, including education. Especially towards raising teachers' competence to use artificial intelligence although the fears abound as it concerns its potency in replacing human resource in the workplace and in this context the education sector. Previous studies have proven the adequacy of human improvement programs. In two decades at the latest, AI systems were occupying most of human life. It is then inevitable to manage them dependent on the measure of information put away and the way they are processed.

Recommendations

The following recommendations are given;

i. There should be increased awareness among specialists of the requirements of applying artificial intelligence in education
ii. There is need to pay apt attention to the challenges arising from the Uses for Artificial Intelligence to the jobs and roles of academics in tertiary institutions

iii. Establish community partnerships with AI-focused businesses. In light of the developments in AI, the researcher concludes by urging academic researchers to carry out additional research on the prospects for education at all levels.
iv. Creating artificial intelligence-based instructional software to improve lecturers' credentials.
v. It is necessary to offer educational training settings that enhance the role that AI applications play in lecturers' professional development.

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Appendix A

Questionnaire

This questionnaire is aimed at evaluating the relationship between Artificial Intelligence andfutureroleof lecturers in private universities in State. Please tick the answers that are most appropriate to the questions or statement.

Section A

1. Name of organization…….
2. Gender of Respondent: Male: ☐ Female ☐
3. Job Position:
   i. Lecturer 1 and above ☐
   ii. Below Lecturer 1 ☐
4. Duration:
   i. Below 5 years ☐
   ii. 5-10 years ☐
   iii. Above 10 years ☐
5. Age:
   i. 25-30 years ☐
   ii. 31-40 years ☐
   iii. Above 4 years ☐
6. Academic qualification:
   i. B.A/B.Sc/B.Ed/HND ☐
   ii. MBA/MSc/M.Ed/MA ☐
   iii. Ph.D/DBA ☐
   iv. Others ☐

Section B

The statements below describe relationship between Artificial Intelligence and future roleof lecturers in private universities in State. Please read each statement carefully, and then indicate the extent to which you agree or disagree by ticking in the box below each on a scale of 4.

	ITEM				
S/N	**Adaptive and Personalized Learning**	**SD**	**D**	**A**	**SA**
1.	A personalized learning experience to the students is offered				
2.	There is the ability of identifying each student's proficiency level and providing them with activities and assessments relevant to them				
3.	Lecturers could combine a customized system that includes self-assessment for the disabled and non-disabled to self-assess themselves				
4.	Through adaptive learning AI systems the learning and materials are adjusted accordingly				

Scale: *SD=Strongly Disagree, D=Disagree, A=Agree and SA=Strongly Agree.*

	ITEM				
S/N	**Web-based Technology**	**SD**	**D**	**A**	**SA**
1.	With web-based enabled systems, AI is being used to grade students automatically				
2.	Autograder program is used to evaluate student work without human involvement.				
3.	AI and virtual reality system are used for automatic grading				
4.	The system evaluates students' proficiency based on their motions using a video monitor and haptic device and classifies them				

Scale: *SD=Strongly Disagree, D=Disagree, A=Agree and SA=Strongly Agree*

	ITEM				
S/N	**Emotional AI**	**SD**	**D**	**A**	**SA**
1.	Affective computing is designed to detect, recognize, and interpret human emotions				
2.	AI system to detect student engagement through their eye and head movements and facial emotions using the laptop camera in an e-learning scenario is developed				
3.	A system to monitor student engagement both online and offline is developed				
4.	AI tool can be used to effectively track students' engagement and achieve results				
	ITEM				
S/N	**Future role of Lecturers**	**SD**	**D**	**A**	**SA**
1.	Attempts to integrate AI in education considered using AI to replace the lecturer				
2.	AI in teaching and learning is being used to aid lecturers rather than replace them				
3.	Teaching requires development of social and emotional skills; thus, AI is unlikely to completely replace lecturers				
4.	Human instructors are irreplaceable because they have special abilities including critical thinking, creativity and emotions				