TRANSFORMING EDUCATIONAL MANAGEMENT THROUGH ARTIFICIAL INTELLIGENCE IN COLLEGES OF EDUCATION IN ZONE C OF BENUE STATE, NIGERIA

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Abstract

This study investigated the level at which artificial intelligence has been adopted in transforming educational management in Colleges of Education in Zone C of Benue State, Nigeria. The study answered three research questions. Descriptive survey research design was adopted in the study. The population was 212 management staff in two public Colleges of Education in the study area. The sample comprised 68 management staff obtained through simple random sampling technique. Two researcher-made instruments: Educational Managers' Artificial Intelligence Awareness Questionnaire (EMAIAQ) and Utilisation of Artificial Intelligence for Educational Management Questionnaire (UAIEMQ) were exposed to validity and reliability checks and used for data collection. While EMAIAQ had Cronbach alpha reliability coefficient of 0.86, UAIEMQ yielded a Cronbach alpha coefficient of 0.79. Data were analysed using mean and standard deviation to answer the research questions. Findings reveal that there was moderate level of AI awareness with a low level of AI utilisation among the management staff of the Colleges of Education and that lack of technical expertise, data security breaches, tendency of excessive dependence on AI and fear of job displacement are the issues affecting the use of AI in management of Colleges of Education. Based on the findings, it was recommended that Government should organise conferences, workshops and seminars to expose administrative staff in Colleges of Education to use AI tools for effective educational management. Government should also provide technological

facilities in Colleges of Education to enhance educational managers' awareness and utilisation of AI tools for effective educational management in Colleges of Education.

Key Words: Educational Management, Transformation, Technology, Innovation, Artificial Intelligence

Introduction

The need to adopt emerging technologies and innovations in the management of educational institutions in Nigeria is becoming very necessary. This is because apart from the dynamic nature of the educational system, Nigeria is being affected by many challenges which ought to be addressed urgently through emerging technologies and innovations like artificial intelligence (AI). Artificial intelligence is technology that utilises machine and machine language to perform functions that would have been executed entirely by human beings. AI is currently the most prominent innovation in the world of technology which is based on enabling computer systems to perform tasks that usually require human intelligence (Mariani, Machado, Magrelli, &Dwivedi, 2023). The field of AI is concerned with the theory and practice of developing systems that simulate the distinctive characteristics of human intelligence. Its main goal is to understand the principles of intelligence in human behaviour, implement them in a machine (Badawi, 2022) and apply to addressing human needs and challenges. With the use of artificial intelligence, machines are capable of learning and analysing data in different situations, showing reactions, and making decisions according to the situations. AI tools such as Chatbots, Quillbot, Chat GPT, DocuExprt among others can be used to enhance the learning process, improve student outcomes and automate educational management tasks.

Educational management is the process of planning, organizing, directing, and controlling resources within an educational institution to achieve specific goals and objectives (Ellis, 2025). It involves various activities such as curriculum development, teacher training, student assessment and school budgeting. Educational management is essential for ensuring that educational institutions run efficiently and effectively to provide quality education to students. Bush and Glover (2014) maintain that educational management is an important field of study that helps educational institutions to meet their goals and objectives. The authors state that effective educational management requires the use of appropriate management

techniques and tools. Artificial intelligence could be an effective tool for transforming educational management practices.

In addition, educational management is a complex and multifaceted field that requires a range of skills and knowledge. Effective educational management involves leadership, teacher development, student assessment, budgeting and resource management. By using appropriate management techniques and tools, educational institutions can improve their efficiency and effectiveness to provide quality education (Igbokwe, 2023). Effective management practices such as curriculum development, teacher training, student assessment, budgeting and resource management can contribute to the improvement of student learning outcomes, enhance the performance of teachers, and ensure the efficient use of resources within educational institutions. This underscores the need to adopt emerging technologies and innovations such as artificial intelligence tools in transforming educational management practices to address the needs and challenges of education in the 21st century.

Several researchers have shown ways the application of AI is evident in the field of educational management. Educational management employs the assistance of AI intelligent tutoring systems which are computer programs that use AI to provide personalized instruction to students and help to identify those who are at risk for early intervention (Zhang and Li, 2021). Other applications of AI in educational management include automating routine tasks such as grading, scheduling and record-keeping thus, freeing up time to focus on more impactful work, such as lesson planning and student engagement (Oztok & Zingaro, 2019).

However, the application of AI in educational management may be affected by many factors which include the potential for bias and discrimination leading to further inequality and injustice (Mason and Rennie, 2018), lack of transparency and interpretability making it difficult for educational managers to make informed decisions to improve their institutions' performance (Velestsianos, 2019), data privacy and security breaches (Akkaya-Kalagci & Yildirim, 2020), and reduction in human interaction and personalisation leading to a less satisfying educational experience (Peters & Besley, 2020). Other concerns are lack of ethical and legal guidelines, technical expertise and resources (Feng & Li, 2024). Such concerns have implications on the adoption of AI in the management of educational institutions. It is on this premise that this study investigated the level of AI awareness and

utilisation among management staff of Colleges of Educations in Zone C of Benue State.

Many empirical studies investigated the level of awareness and utilisation of artificial intelligence in education but a few studies focus on educational management. Jabali and Al-Qahtani (2022) investigated lecturers' degree of awareness of artificial intelligence skills in education and its relationship to teaching experience and training programs. Findings showed that lecturers had a high degree of awareness of artificial intelligence and that experience and training programmes had significant effect on lecturers' degree of AI awareness. Siminto, Akib, Hasmirati and Widianto (2023) investigated educational management innovation by utilising artificial intelligence in higher education. The study found that the application of artificial intelligence can improve the ability of prediction, data analysis, adaptation, and personalization in curriculum management, student performance evaluation, and the provision of learning resources tailored to individual needs. Furthermore, Gaber, Shahat, Alkhateeb, Hassan, Alqatam, Almuhyirah and Kamel (2023) investigated faculty members' awareness of artificial intelligence and its relationship to technology acceptance and digital competencies. Findings revealed that lecturers had a medium level of awareness and that there was no statistically significant relationship between artificial intelligence awareness and technology acceptance among lecturers.

On utilisation of artificial intelligence in educational settings, Al-Subhy (2020) studied the reality of the use of artificial intelligence applications by lecturers and concluded that lecturers' use of artificial intelligence applications in education was very low. In another study, Nazaretsky, Cukurova, Ariely and Alexandron, (2021) found that teachers viewed artificial intelligence technologies and tools as highly valuable; however, they were not sure that they wanted to adjust their teaching methods to employ such technologies. Nyaaba, Kyeremeh, Majialuwe, Owusu-Fordjour, Asebiga and Aingkonge (2024) carried out a descriptive study on awareness, gender usage and views on generative artificial intelligence (AI) in academic research among pre-service teachers in Ghana. Findings revealed that pre-service teachers were familiar with artificial intelligence tools, especially ChatGPT and Google Bard. They learned about these tools through personal searches, recommendations from friends, and social media platforms. Pre-service teachers used AI tools in writing all chapters of their research project. However, findings in a study by Thomas, Gambari, Sobowale and Shehu (2024) revealed that lecturers

rarely used AI. Similarly, Ukeh and Anih (2024) found that lecturers' adoption of AI tools was relatively low. Such empirical findings were made in other locations and may not be appropriately generalised on the management staff in Colleges of Education in Education Zone C of Benue State. As such, the present study was carried out to ascertain the level of awareness and utilisation of AI among the management staff of Colleges of Education in Education Zone C of Benue State.

The study was anchored on unified theory of acceptance and use of technology (UTAUT) propounded by Venkatesh, Morris, Davis and Davis (2003). The theory states that the actual use of technology is determined by behavioural intention. The perceived likelihood of adopting the technology is dependent on the direct effect of four key constructs, namely: performance expectancy, effort expectancy, social influence, and facilitating conditions. The effect of predicators is moderated by age, gender, experience and voluntariness of use (Morris, Davis and Davis, 2003).

The unified theory of acceptance and use of technology is relevant to this study because artificial intelligence is an innovative technology. However, its effective use in educational management largely depends on the extent to which administrative staff become aware of and utilise the technology. The study was therefore, anchored on the theory to ascertain the level of awareness and utilisation of artificial intelligence in management of Colleges of Education in Benue State.

Statement of the Problem

Education is a vital tool for meeting societal needs, tackling challenges and effecting positive change. The standard of education in modern society, however, depends on the quality of teachers available in the educational institutions. This implies that Colleges of Education which are teacher training institutions must be managed properly if the desired quality of teachers are to be produced. There is, therefore, the need to adopt emerging technologies and innovations like artificial intelligence in the management of Colleges of Education in Nigeria. This is necessary because the traditional methods of educational management can no longer cope with the emerging challenges affecting teacher education.

In Educational Zone C of Benue State for instance, teacher education is affected by insecurity, among other challenges. Artificial intelligence (AI) which is the use of computers to perform educational management tasks akin to human intelligence has the potential to address such challenges. However, the extent to which the management staff of Colleges of Educations in Zone C of Benue State are aware of

and have adopted artificial intelligence tools is not known. Besides, the issues affecting the use of AI in transforming educational management in the zone are not known. Therefore, was to investigate the level of AI awareness and utilisation in the management of Colleges of Educations in Education Zone C of Benue State, Nigeria.

Objectives of the Study

Objectives of the study were to:

1. investigate the extent to which the administrative staff of Colleges of Education in Education Zone C of Benue State are aware of Artificial Intelligence for effective educational management.
2. ascertain the extent to which the staff of Colleges of Education in the zone adopt artificial intelligence in the management of Colleges of Educations in Education Zone C of Benue state.
3. find out issues affecting the use of artificial intelligence in the management of Colleges of Education in Education Zone C of Benue State.

Research Questions

The study answered the following research questions:

1. To what extent are the management staffs of Colleges of Education in Education Zone C of Benue State aware of Artificial Intelligence for effective educational management?
2. To what extent have the management staffs of Colleges of Education in Zone C of Benue State adopted artificial intelligence in the management of the Colleges?
3. What are the issues affecting the use of artificial intelligence in the management of Colleges of Educations in Education Zone C of Benue State?

Methodology

This study adopted descriptive survey quantitative design. The study was carried out in two Colleges of Education in Zone C of Benue State, Nigeria. The educational zone comprises Ado, Agatu, Apa, Obi, Ogbadibo, Ohimini, Oju, Okpokwu, and Otukpo Local Government Areas.There are two public Colleges of Education in the zone namely, Federal College of Education, Odugbo located in Apa Local Government Area and College of Education, Oju, in Oju Local Government Area. The population of the study was 212 administrative staff in the two colleges of

education. The sample of 68 management staff was obtained through simple random sampling technique and used for the study. Data was collected using two researcher-made instruments namely, Educational Managers' Artificial Intelligence Awareness Questionnaire (EMAIQ) and Utilisation of Artificial Intelligence in Educational Management Questionnaire (UAIEMQ).

Educational Managers' Artificial Intelligence Awareness Questionnaire (EMAIQ) had two sections. Section A contained instructions and 18 items designed for educational managers to rate their level of AI awareness for effective educational management. Section B contained seven (7) items to obtain data on sources of AI awareness available to educational managers. The items in both sections were rated on a four-point scale with options as follows: High Extent = 4 points, Moderate Extent = 3 points, Low Extent =2 points and Not Aware =1 point.

Utilisation of Artificial Intelligence for Educational Management Questionnaire (UAIEMQ) had sections A-C. Section A contained instructions and 18 items to be rated on a four point scale as follows: High Extent = 4 points, Moderate Extent = 3 points, Low Extent =2 points and Not All =1 point. Section B consisted of 19 items designed to obtain data on the extent to which artificial intelligence is utilised in the management of colleges of education. Section C contained 10 items on issues affecting utilisation of artificial intelligence in management of colleges of education. Items in sections B and C were also to be rated on a four-point scale as in section A.

The instruments were validated by three experts of educational research. The experts made observations on the face and content validity of each item. Chronbach alpha was used to obtain the reliability coefficients of the two instruments. EMAIQ yielded the coefficient of 0.86 while UAIEMQ had the coefficient of 0.79.

The researcher administered both instruments to the management staff in the two Colleges of Education in Zone C of Benue State within four days. Data collected were analysed using mean and standard deviation to answer the research questions. The following points guided the decision: High Extent (HE) = 3.50-4.00, Moderate Extent (ME) = 2.50-3.49, Low Extent (LE)= 1.50-2.49, Not At All /Not Aware (NA)=1.00-1.49.

Results

Research Question 1: To what extent are the staff of colleges of education in Zone C of Benue State aware of Artificial Intelligence for effective educational

management? Data presented in Tables 1 and 2 were used to answer this research question.

Table 1: Mean and Standard Deviation of the Level of Artificial Intelligence (AI) Awareness among Management Staff in Colleges of Education

Item	AI Tool	N	Mean	SD	Remark
1	Chatbots for enrolment and retention	68	2.76	0.855	ME
2	QuillBot	68	2.62	0.853	ME
3	Grammarly	68	2.82	1.141	ME
4	Chat GPT	68	3.03	1.000	ME
5	DocuExprt	68	3.09	0.668	M
6	AI Admission Interview	68	2.59	0.925	ME
7	Microsoft Bing AI	68	2.68	0.912	ME
8	Turnitin	68	2.44	1.050	LE
9	Audiopen.ai	68	1.91	0.866	LE
10	Quizlet	68	2.38	1.101	LE
11	Jasper	68	2.24	1.046	LE
12	Otter.ai	68	2.29	1.031	LE
13	Copilot	68	2.26	0.963	LE
14	Copyspace	68	2.41	0.988	LE
15	Mendeley	68	2.44	1.078	LE
16	Asana AI	68	2.47	1.080	LE
17	Fireflies	68	2.38	0.954	LE
18	Canva	68	2.76	1.075	ME
	Cluster Mean		**2.532**		**ME**

Key: Using mean, High Extent (HE) = 3.50-4.00, Moderate Extent (ME) = 2.50-3.49, Low Extent (LE) = 1.50-2.49, Not Aware (NA) =1.00-1.49

Table 1 revealed that Management Staff of Colleges of Education in Zone C of Benue State are moderately aware of Artificial Intelligence tools namely: Chatbots for enrolment and retention, Quillbot, Grammarly, chat GPT, DocusExprt, AI Admission Interview, Microsoft Bing AI and Canva with the mean ratings within the range of 2.50-3.49. However, the level of their awareness of AI tools such as Tunritin, Audiopen.ai, quizlet, Jasper, Otter.ai, Copilot, Copyspace, Mendeley, Asana AI and Fireflies was to a low extent with the mean ratings below 2.50. The

cluster mean of 2.53 shows that the level of AI awareness among the Management Staff of Colleges of Education in the study area is to a moderate extent.

Table 2: Mean and Standard Deviation of Sources of AI Awareness among Management Staff in Colleges of Education

Item	Source	N	Mean	SD	Remark
19	I learn about use of AI tools from my colleagues.	68	3.24	0.923	ME
20	Artificial intelligence is part of the curriculum in my institution.	68	2.21	1.095	LE
21	I get information on AI from my institutional website.	68	2.59	1.104	ME
22	I come across AI tools from websites of other institutions.	68	2.50	1.187	ME
23	I attend workshops and conferences on use of AI in education management.	68	2.12	0.913	LE
24	I become aware of AI through general purpose search engines.	68	2.62	0.985	ME
25	I read about use of AI from library resources.	68	2.41	1.076	LE
	Cluster Mean		**2.527**		**ME**

Key: Using mean, High Extent (HE) = 3.50-4.00, Moderate Extent (ME) = 2.50-3.49, Low Extent (LE) = 1.50-2.49, Not Aware (NA)=1.00-1.49

Table 2 showed the sources of AI awareness available to the Management Staff of Colleges of Educations in Zone C of Benue State. The table revealed that the staff learnt about use of AI tools from colleagues, institutional websites, websites of other institutions and general purpose search engines to a moderate extent. Meanwhile, their awareness of AI tools as part of the curriculum, workshops/conferences and library resources was to a low extent.

Research Question 2: To what extent have the management staffs of Colleges of Education in Zone C of Benue State adopted artificial intelligence in the management of the colleges?

Table 3: Mean and Standard Deviation of the Extent of AI Tools Utilisation for Educational Management in Colleges of Education

Item	AI Tool	N	*Mean*	*SD*	Remark
1	Chatbots for enrolment and retention	68	2.32	1.121	LE
2	QuillBot	68	2.35	0.981	LE
3	Grammarly	68	2.50	1.022	HE
4	Chat GPT	68	2.71	0.938	HE
5	DocuExprt	68	2.32	1.007	LE
6	AI Admission Interview	68	2.44	1.186	LE
7	Microsoft Bing AI	68	2.29	1.031	LE
8	Turnitin	68	2.44	1.050	LE
9	Audiopen.ai	68	2.35	1.012	LE
10	Quizlet	68	2.24	0.923	LE
11	Jasper	68	2.18	1.029	LE
12	Otter.ai	68	2.09	0.933	LE
13	Copilot	68	2.06	1.013	LE
14	Copyspace	68	2.21	1.095	LE
15	Mendeley	68	2.06	0.983	LE
16	Asana AI	68	2.26	0.931	LE
17	Fireflies	68	2.29	1.031	LE
18	Canva	68	2.47	1.107	LE
	ClusterMean		**2.310**		**LE**

Key: Using mean, High Extent (HE) = 3.50-4.00, Moderate Extent (ME) = 2.50-3.49, Low Extent (LE) = 1.50-2.49, Not Aware (NA)=1.00-1.49

Table 3 presented the mean and standard deviation of AI tools utilisation in the management of Colleges of Education in Benue State. The table showed that the management staff utilise Grammarly and Chat GPT to a moderate extent with the mean ratings of 2.50 and 2.71 respectively. Meanwhile, the staff utilise the rest of the AI tools to a low extent. The grand mean of 2.31 shows that the staff utilise AI tools in the management of their institutions to a low extent.

Table 4: Mean and Standard Deviation of AI Utilisation Based on Aspects of Educational Management in Colleges of Education

Item	Aspect of Educational Management	N	Mean	SD	Remark
19	Lecturer/Staff support	68	2.85	0.925	ME
20	Analysing student data	68	2.74	0.790	ME
21	Predicting trends	68	2.38	1.015	LE
22	Supporting students	68	2.76	0.890	ME
23	Enhancing personalized instruction	68	2.68	0.945	ME
24	Tracking staff performance	68	2.41	1.184	LE
25	Tracking student progress	68	2.50	0.961	ME
26	Managing facilities	68	2.35	1.098	LE
27	Ensuring campus safety	68	2.29	1.115	LE
28	Processing admissions	68	2.29	1.001	LE
29	Management of funds	68	2.09	1.111	LE
30	Providing student services	68	2.32	1.093	LE
31	Streamlining administrative tasks	68	2.44	1.133	LE
32	Management of facilities	68	1.88	1.066	LE
33	Curriculum design and development	68	2.35	1.098	LE
34	Staff recruitment	68	2.03	1.141	LE
35	Tracking student attendance	68	2.06	1.071	LE
36	Tracking staff attendance	68	2.21	1.122	LE
37	Maintaining staff discipline	68	2.21	1.149	LE
	Custer Mean		**2.360**		**LE**

Key: Using mean, High Extent (HE) = 3.50-4.00, Moderate Extent (ME) = 2.50-3.49, Low Extent (LE) = 1.50-2.49, Not Aware (NA) =1.00-1.49

Table 4 showed the mean and standard deviation of AI Utilisation based on aspects of educational management in Colleges of Education in Benue State. The table revealed that the staff moderately utilise AI tools for lecturer/staff support, analysing student data, supporting students, enhancing personalised instruction and tracking student progress. However, the staff utilise AI tools to a low extent in carrying out

the rest of the roles presented in the table. A grand mean of 2.36 showed that the management staff of Colleges of Education in Zone C of Benue State utilise AI tools to a low extent.

Research Question 3: What are the issues affecting the use of artificial intelligence in the management of Colleges of Educations in Zone C of Benue State? Data presented in Table 5 was used to answer this research question.

Table 5: Mean and Standard Deviation of Issues Affecting Utilisation of AI in Management of Colleges of Education

Item	Issue	N	*Mean*	*SD*	Remark
38	Lack of AI resources	68	2.44	1.160	LE
39	Lack of technical expertise	68	2.79	1.149	ME
40	Biases	68	2.47	1.080	LE
41	Data privacy breaches	68	2.44	0.991	LE
42	Data security breaches	68	2.59	1.104	ME
43	Lack of transparency	68	2.29	1.060	LE
44	Dehumanisation/lack of personal touch	68	2.47	1.187	LE
45	Absence of ethical and legal guidelines	68	2.41	1.158	LE
46	Tendency of excessive dependence on AI	68	2.91	1.190	ME
47	Fear of job displacement	68	2.71	1.194	ME
	Cluster Mean		**2.552**		**ME**

Key: Using mean, High Extent (HE) = 3.50-4.00, Moderate Extent (ME) = 2.50-3.49, Low Extent (LE) = 1.50-2.49, Not Aware (NA) =1.00-1.49

Table 5 showed the mean and standard deviation of issues affecting utilisation of AI in management of Colleges of Education in Zone C of Benue State. The table indicated that lack of technical expertise, data security breaches, tendency of excessive dependence on AI and fear of job displacement are the issues affecting the use of AI in management of colleges of education to a moderate extent. Data privacy breaches, lack of transparency, dehumanisation, absence of ethical and legal guidelines are issues affecting utilisation of AI in the management of colleges of education to a low extent.

Discussion of Findings

It was found in this study that the management Staff in Colleges of Education in Zone C of Benue State are moderately aware of artificial intelligence tools for educational management and that they learn about AI tools from colleagues, institutional websites, websites of other institutions and general purpose search engines to a moderate extent. This finding corroborates earlier findings byJabali and Al-Qahtani (2022) that lecturers had a high degree of awareness of artificial intelligence and that experience had significant effect on lecturers' degree of AI awareness. The finding also agrees with Gaber, Shahat, Alkhateeb, Hassan, Alqatam, Almuhyirah and Kamel (2023) that lecturers had a medium level of artificial intelligence awareness.

Another finding of this study revealed that the management staff of Colleges of Education in Zone C of Benue State utilise AI tools in the management of their institutions to a low extent. This finding supports that of Nazaretsky, Cukurova, Ariely and Alexandron,(2021) that teachers viewed artificial intelligence technologies and tools as highly valuable; however, they were not sure that they wanted to adjust their teaching methods to employ such technologies. The finding is also in line with Ukeh and Anih (2024) that lecturers' adoption of AI tools was relatively low. Similarly, Thomas, Gambari, Sobowale and Shehu (2024) also established that lecturers rarely used AI. This finding could be attributed to lack of adequate and functional technological facilities in colleges of education in the study area. Besides, the unwillingness of management staff to adopt emerging technologies and innovations must have accounted for this finding.

Finally, the study revealed that lack of technical expertise, data security breaches, tendency of excessive dependence on AI and fear of job displacement are the issues affecting the use of AI in management of colleges of education to a moderate extent. This finding agrees with Igbokwe (2023) that lack of technical expertise, data security breaches and the tendency of excessive dependence on AI among other factors, impede utilisation of AI tools in Nigerian higher institutions. This finding justifies the moderate level of awareness and the low level of utilisation of AI tools as found in this study.

Conclusion

Based on the findings, it was concluded that the management staff in Colleges of Education in Zone C of Benue State are moderately aware of artificial intelligence tools. However, the level of AI utilisation in the management of Colleges of Education in the zone is low. Finally, lack of technical expertise, data security breaches, the tendency of excessive dependence on AI and fear of job displacement are factors impeding effective utilisation of AI tools in public Colleges of Education in Benue State.

Recommendations

The following recommendations were made based on the findings:

1. Government should organise conferences, workshops and seminars to expose management staff in colleges of education to the use of AI tools. This will not only increase the level of AI awareness among educational managers but also equip them with the required knowledge, skills and expertise to use AI tools for educational management.
2. Government should also provide technological facilities in colleges of education to enhance educational managers' awareness and utilisation of AI tools.
3. The Ministry of education should collaborate with management of colleges of educations to address the problems affecting awareness and utilisation of AI tools for effective educational management. As such educational managers will have the required expertise, ensure data security and address ethical concerns in the use of AI tools without fear of job displacement.

References

Akkaya-Kalayci, T., &Yildirim, S. (2020). Ethics of artificial intelligence in education: A literature review. *Journal of Educational Technology and Society, 23*(3), 84-99.

Al-Subhy, A. (2020). The reality of artificial intelligence applications uses in education by faculty members at Najran University. *Journal of the Faculty of Education, Ain Shams University, 4* (44), 319-368.

Badawi, M. (2022). Application of artificial intelligence in education: Challenges and future prospects. *Journal of the Egyptian Society for Educational Computers, 10* (2), 91-108.

Bush, T., & Glover, D. (2014).*Educational management: Major themes in education.* London: Routledge.

Ellis, S. (2025). What is educational management? A complete overview. Retrieved, May 31st from https://www.theknowledgeacademy.com

Feng, T., & Li, Q. (2024). Artificial intelligence in education management: opportunities, challenges, and solutions. *Frontiers in Business and Management, 16* (3), 49-54.

Gaber, S. A., Shahat, H. A, Alkhateeb, I. A., Hassan, S. A., Alqatam, M. A., Almuhyirah, S. M. &Kamel, M. K. (2023). Faculty members' awareness of artificial intelligence and its relationship to technology acceptance and digital competencies at King Faisal University.*International Journal of Learning, Teaching and Educational Research, 22* (7) 473-496.

Igbokwe, I. C. (2023). Application of Artificial Intelligence (AI) in Educational Management *International Journal of Scientific and Research Publications, 13,* (3), 300-307.

Jabali, N., & Al-Qahtani, S. (2022). The degree of awareness among faculty members of artificial intelligence skills in education and its relationship to experience and training programs at King Khalid University. *Journal of the Association of Arab Universities for Education and Psychology, 19* (3), 92-131.

Liu, Y., Zhao, S., Li, J., & Zhang, B. (2020). Intelligent chatbots in education: A review of recent advances. *Educational Technology Research and Development, 68* (1), 87-104.

Mariani, M., Machado, V.M., Magrelli, V., &Dwivedi, Y. K. (2023).Artificail intelligence in innovation research : A systematic review, conceptual framework, and future research directions. *Technovation, 122*, 1-25.

Mason, M., & Rennie, F. (2018). Ethics and privacy in the adoption of learning analytics: A guide for academic leaders. *EDUCAUSE Review, 53*(6), 36-48.

Nazaretsky, T., Cukurova, M., Ariely, M., &Alexandron, G. (2022).An instrument for measuring teachers' trust in artificial intelligence-based educational technology. Retrieved, August 16, 2024 from https://dl.acm.org>doi

Nyaaba, M., Kyeremeh, P., Majialuwe, E.K., Owusu-Fordjour, C. Asebiga, E., & A-ingkonge, B. (2024). Generative artificial intelligence (AI) in academic

research: A descriptive study on awareness, gender usage, and views among pre-service t'eachers. Retrieved, August 7, 2024 from https://doi.org/10.21203/rs.3.rs.3640721/v2

Oztok, M., &Zingaro, D. (2019). Artificial intelligence in education.Springer.

Peters, M. A., &Besley, T. (2020). AI, ethics and education: The governance of AI and the place of ethics in an age of intelligent machines. *Education Sciences, 10* (11), 313.

Siminto, S., Akib, A., Hasmiati, H., &Widianto, S, D. (2023). Educational management innovation by utilizing artificial intelligence in higher education. Al-Fikrah: *JurnalManajement Pendidikan, 11*(2), 284-296.

Thomas, G., Gambari, A. I., Sobowale, F. M., &Shehu, B. A. (2024). Assessment of lecturers' utilitsation of artificial intelligence for education in a Nigerian university. 1st international conference on artificial intelligence (AI) organized by ICONIC Open University in collaboration with Sokoto State University and Ministry of Innovation and Digital Economy, Sokoto State, 17th -18th February, 2024 at International Conference Centre, Sokoto.

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

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003).*Unified Theory of Acceptance and Use of Technology (UTAUT).* Retrieved on October 3, 2024 from https://doi.org/10.1037/t57185-000

Zhang, J., & Li, S. (2021). An overview of intelligent tutoring systems.*Journal of Educational Technology Development and Exchange, 14*(1), 99-110.