Journal homepage:
https://www.ijedm.com

International Journal of Educational Management, Rivers State University.

Assessment of Awareness and Adoption of Artificial Intelligence Tools for Enhanced Job Performance of Adult Educators in Rivers State-Owned Universities

TAYLOR, Daerego Ilomabo (PhD) [1], JACK, Benson David[2] & WAMI, Kevin C (PhD)[3].

Department of Adult Education and Community Development, Rivers State University, Nigeria.[1,2 &3]

Abstract

The study assessed the awareness and adoption of artificial intelligence tools for enhanced job performance among adult educators in Rivers State-owned universities. Two research questions and two hypotheses guided the study. The study adopted the descriptive survey design. The population of the study was 22 adult educators in the Departments of Adult Education and Community Development, Rivers State University and Ignatius Ajuru University of Education. The entire population of 22 adult educators was studied without sampling because of its small and manageable size. A questionnaire titled "Awareness and Use of Artificial Intelligence Tools for Enhanced Job Performance among Adult Educators Questionnaire" was used for data collection. The instrument was validated by two experts. Cronbach Alpha method was used to test the internal consistency of the instrument which yielded reliability indexes of 0.84 and 0.81. The research questions were answered using mean and standard deviation, and the null hypotheses were tested using t-test statistics at 0.05 level of significance. The study found out that adult educators in Rivers State-owned universities are moderately aware of AI tools. However, the extent of utilization is low. The study also found out that adult educators were concerned about the ethical implications of using AI in education. Based on the findings, it was recommended among others that further research should be carried out on how to tackle the ethical challenges of using artificial intelligence in education.

Keywords: Awareness, Adoption, Artificial Intelligence, Job Performance

Introduction

The theme of the impact of technology on education has been long established. The world over, traditional ways of teaching and learning are giving way for more technologically enhanced means. There is a rapid change in instructional strategies, sporadically shifting from conventional classroom settings to virtual and flipped classrooms which are more favourable and productive for both teachers and learners. Perhaps it was Thomas Edison who made the foremost attempt to predict this change when he stated in 1922 that books would soon be obsolete in schools as the motion picture was "destined" to revolutionize our educational system and that in a few years it would supersede the use of the bound papers (Watters, 2015). Since then, technology has continued to redefine the course of modern education.

In Edison's time, he was basically experimenting the role of the motion picture as a technology in education. Today, more than a hundred years after that novel and seminal guess, the use of educational technology has become ubiquitous, transcending the use of just motion pictures, and attracting multifarious definitions. In simple terms, educational technology entails the integration of technological ideas, resources and devices in enhancing learning activities. The Association of Educational Communications and Technology in Huang, Spector and Yang (2019:8), defined educational technology as "the study and ethical practice of facilitating learning and improving performance by creating, using and managing appropriate technological processes and resources." Educational technology combines the use of computer software, hardware and educational theory to facilitate teaching and learning. Lazar in Nadeem, Rafiq, and Jameel (2023) noted that the practice of educational technology draws from the theoretical knowledge of disciplines such as education, communication, sociology, psychology, computer science and artificial intelligence.

With disruptive innovations in technology, especially in the post COVID-19 era, the need to leverage technological resources in education has become extremely important (Uche, Oluwo &Abraham, 2020). Paradigm shifts in the use of Information and Communication Technology (ICT) have redefined old ways of learning (Orgill & Hervey, 2013). The use of online learning, blended learning, flipped classroom, Zoom application and Google classroom have proven to be substantial methods of delivering instructions. Even more increasingly in demand is the use of artificial intelligence, which is gradually upending the traditional face-to-face knowledge seeking method. (Jack & Nzokurum, 2020)

Like Gates (2023) observed, the era of artificial intelligence has begun. Artificial intelligence (AI) is a term technically used to refer to a model created to solve a certain problem or provide a particular service. The goal of artificial intelligence (AI), a subfield of computer science, is to understand the nature of intelligent behaviour in order to design and build machines that behave similarly to well-informed humans in similar circumstances. Artificial Intelligence (AI) encompasses several domains such as robotics, picture recognition, spoken language recognition, natural language processing, and expert systems for problem solving and decision-making. Artificial intelligence is capable of simulating human consciousness and thought processes through information processing. Although it can think like people and may even be smarter than people, artificial intelligence is not the same as human intelligence (Huang, Spector & Yang, 2019).

Artificial intelligence (AI) as an emerging technology is fast gaining traction in education. AI integration in education can occur in web-based teaching and learning platforms, virtual reality, gamification, animation, interactive video, simulations, video conferencing, audio-visuals, 3-D technology, virtual labs, computer programmes, social media, and mobile applications (Ukoh & Nicholas, 2022). Recent developments in artificial intelligence indicate its use in the automation of teaching, administration and data analysis within the education sector. Ukoh and Nicholas (2022) further noted that the use of artificial intelligence in education has enabled the development of customized/personalized learning, smarter content, and has improved learning effectiveness, and efficiency in administration.

While some technology experts are optimistic about the potential of AI to substitute certain human activities, some (Hess, 2013) believe that technological advances in education such as the use of artificial intelligence can only complement human effort to a great extent. As Lakhani (2023) observed, "AI won't replace humans – but humans with AI will replace humans without AI." The weight of this statement presses home the fact that the use of artificial intelligence has become an indispensable part of the activities of man, especially in education. Recent studies in teaching and learning show an increased use of artificial intelligence in instructional delivery because of its ability to enhance the ways in which educators plan, deliver and evaluate instructions.

Ukoh and Nicholas (2022), for instance, noted that most instructors consider the use of AI as instructional tools, especially as they make their work easier when put to effective use. Corroborating this view, Ayanwale, Sanusi and Adelana (2022) stressed that the use of AI technology proves useful in enabling instructors accomplish their tasks more quickly as well as enhancing their effectiveness and increasing their productivity at work. This is further affirmed by Akpomi, Nwile and Kayii (2022) who believe that the use of artificial intelligence has a great impact in the management of education; albeit some experts have expressed concerns about the ethical issues involved in the use of AI. For instance, Akgun and Greenhow (2021) opined that despite the benefits of AI applications, they still pose societal and ethical challenges such as "perpetuating existing systemic bias and discrimination, perpetuating unfairness for students from mostly disadvantaged and marginalized groups, and amplifying racism, sexism, xenophobia, and other forms of injustice and inequity." Akpomi, Nwile and Kayii (2022) also made similar observations, noting that ethical considerations have posed a great challenge to the use of artificial intelligence in education.

However, Oladosu, Adeaga, Oyedokun and Opaleye (2023) observed that a majority of workers in Nigeria, including teachers and lecturers, still indicate interest in using artificial intelligence systems in their daily works as they believe that it can redefine their economic opportunities. Nwile and Edo (2023:34), even though they suspected that AI may have its negative side, reaffirmed that the use of artificial intelligence tools can "contribute to educational management and administration in respect of accessibility of data through smart devices and computers, simplification of both academic and administrative responsibilities, minimization of the time required to complete difficult tasks, management of a variety of organizational duties effectively, participation in virtual global conferences and absolute mobility and production of knowledge ideas and data." This implies that the use of AI, despite its perceived drawbacks, can be of great advantage to workers in the knowledge economy.

However, irrespective of the numerous advantages it offers, AI still remains an unexplored area for many university lecturers. Alimi, Buraimoh, Aladesusi and Babalola (2021) observed that many university students have poor knowledge of AI tools because of the unawareness of lecturers in the use of these tools. This, according to Lee et al. (2024), is because university educators are typically slow to adapt to new technologies due to resistance to changing teaching practices. Lee et all (2024) further observed that AI is viewed as both an opportunity and a threat by university educators because most educators fear that the influx of sophisticated AI tools could possibly replace humans in the labour market. Amadi-Iwai, Ubulom and Okiridu (2024) buttressed this point, noting that many university lecturers are poorly aware of the usefulness of artificial intelligence in designing course modules, developing and implementing new methods of teaching, setting continuous assessments, and programming customized lesson plan. This is further supported by the claim of Oluwadiya et al. (2024), that sometimes, students' knowledge of AI tools even outwitted that of lecturers in some Nigerian universities. This trend, thus, indicates that there is relative lack of awareness among some university lecturers in the use of artificial intelligence tools.

Koko, Benibo and Bupo (2023) defined awareness as possessing the understanding and know-how of a thing. In this context, it implies the educator's ability to appreciate and use simple artificial intelligence tools. Such appreciation can be useful in planning, administering and evaluating instructions for learners. With the emergence of artificial intelligence, it has become expedient for many adult educators to re-evaluate their knowledge and competence in the use of emerging instructional media. Such re-evaluation becomes even more necessary as most of

these emerging tools are strange to this generation of educators, many of whom are digital immigrants, unlike their students who are digital natives (Prensky, 2001; Friska, 2019).

One such area of artificial intelligence where educators need to re-assess their competence is in the use of generative AI. Commonly used across people of all ages and professions, generative AI refers to all artificial intelligence tools capable of generating new content such as text, images, videos, sounds and slides. The use of generative AI has shown great potential in transforming the field of education, especially in the way instructors plan, administer and evaluate instructions (Abunaseer, 2024). For this reason, some techno-optimists (Nazaretsky, Ariely, Cukurova, & Alexandron, 2022) have recommended that educators should undergo professional development programmes to increase theoretical and practical knowledge about AI. Although Vasoya (2023) warned that the use of artificial intelligence may have its disadvantages to both learners and instructors, the researcher also believed that the risk of using AI can be managed. It becomes important, thus, for adult educators to also leverage the potentials of AI.

An adult educator is one who co-ordinates the process involved in achieving the goals of an adult education programme (Giannoukos, Besas, Galiropoulos, & Hioctur, 2015). Within the university, the adult educator teaches and trains budding practitioners in the field, and also carries out researches and community services related to his/her profession. This enormous task makes it necessary, thus, for the adult educator to leverage quicker, time-saving and precise means of delivering the job at hand. It is to this end that artificial intelligence becomes a viable tool in enhancing the job performance of the adult educator.

Job performance is used to describe the effectiveness and efficiency of the adult educator in terms of delivering his/her task of teaching, researching and performing useful community services related to his field. It is believed that with emerging trends in the use of artificial intelligence, adult educators can also utilize AI in enhancing their job performance, especially as it has also proven useful for their counterparts in other fields (Amadi-Iwai, Ubulom & Okiridu, 2024). This study, thus, examines the awareness and use of artificial intelligence tools for enhanced job performance among adult educators in Rivers State-owned universities.

Statement of the Problem

The rapid advancement of Artificial Intelligence (AI) has introduced transformative tools that have the potential to significantly enhance job performance across various sectors, including

education. However, the adoption of AI in educational institutions, particularly in the context of adult education, remains inconsistent and poorly understood. In Rivers State-owned universities, adult educators are at the forefront of lifelong learning initiatives, yet there is limited empirical evidence on their awareness and utilization of AI tools to enhance their instructional effectiveness and overall job performance.

Despite the growing global emphasis on AI integration in education, the extent to which adult educators in these universities are aware of, and have adopted, AI technologies is unclear. This gap in knowledge poses a significant challenge, as the effective use of AI could lead to improved teaching methodologies, personalized learning experiences for students, and more efficient administrative processes. Furthermore, without a clear understanding of the factors influencing AI adoption among adult educators, efforts to promote these technologies may be ineffective, resulting in underutilization of AI tools and missed opportunities for professional development and instructional improvement.

This study seeks to address this gap by assessing the level of awareness and adoption of AI tools among adult educators in Rivers State-owned universities, with a focus on understanding how these technologies can be leveraged to enhance their job performance. Identifying the barriers and facilitators to AI adoption will provide valuable insights for policymakers, university administrators, and educators, enabling them to develop targeted strategies that support the effective integration of AI in adult education.

Purpose of the Study

The purpose of the study was to examine the extent of awareness and use of artificial intelligence tools for enhanced job performance among adult educators in Rivers State-owned universities. Specifically, the study sought to:

1. Ascertain the extent to which adult educators are aware of artificial intelligence tools for enhanced job performance in Rivers State-owned universities.
2. Determine the extent to which adult educators utilize artificial intelligence tools for enhanced job performance in Rivers State-owned universities.

Research Questions

The following research questions guided the study.

1. To what extent are adult educators aware of artificial intelligence tools for enhanced job performance in Rivers State-owned universities?

2. To what extent do adult educators utilize artificial intelligence tools for enhanced job performance in Rivers State-owned universities?

Hypotheses

The following null hypotheses were formulated and tested at 0.05 level of significance.

Ho_1 There is no significant difference in the mean ratings of adult educators in Rivers State University and Ignatius Ajuru University of Education on the extent to which adult educators are aware of artificial intelligence tools for enhanced job performance in Rivers State-owned universities.

Ho_2 There is no significant difference in the mean ratings of adult educators in Rivers State University and Ignatius Ajuru University of Education on the extent to which adult educators utilize artificial intelligence tools for enhanced job performance in Rivers State-owned universities.

Methodology

The study adopted the descriptive survey design. The population of the study comprised 16 adult educators in the Department of Adult Education and Community Development, Rivers State University and 7 adult educators in the Department of Adult Education and Community Development, Ignatius Ajuru University of Education. The entire population of 23 adult educators were studied without sampling due to the small and manageable size. The instrument used for data collection was a structured questionnaire titled "Awareness and Use of Artificial Intelligence Tools for Enhanced Job Performance among Adult Educators Questionnaire" (AUAITEJPAEQ). The instrument provided responses to the two research questions with 20 question items; 1 – 10 for research question one, and 11 – 20 for research question two, on a 4-point rating scale of "Very High Extent" (VHE) – 4 points, "High Extent" (HE) – 3 points, "Low Extent" (LE) – 2 points and "Very Low Extent" (VLE) – 1 point. Face and content validity of the instrument was determined by two experts in Adult Education and Community Development and one in Measurement and Evaluation. Cronbach Alpha method was used to test the internal consistency of the instrument which yielded reliability indexes of 0.84 and 0.81 for the two clusters of the instrument. All 23 copies of the questionnaire administered were retrieved and used for the study, which indicated 100% retrieval. The research questions were answered using mean and standard deviation, and the null hypotheses were tested using t-test at 0.05 level of significance. The criterion decision rule was that any mean score from 2.50 and above was regarded as High Extent, while the mean score below 2.50 was Low

Extent. Similarly, decision rule for hypotheses was that any hypothesis with t-calculated value less that the t-critical table value was accepted, while any with t-calculated value greater than t-critical table value was rejected.

Results

Research Question 1: To what extent are adult educators aware of artificial intelligence tools for enhanced job performance in Rivers State-owned universities?

Table 1: Mean Responses on the Extent to Which Adult Educators Are Aware of Artificial Intelligence Tools for Enhanced Job Performance in Rivers State-owned Universities.

S/N	Items	RSU Mean	(n=15) SD	Rmks	IAUE Mean	(n=7) SD	Rmks
1	I am familiar with the concept of artificial intelligence (AI).	3.85	0.79	High Extent	3.14	0.71	High Extent
2	I am aware of some AI tools or applications used in education.	3.66	0.83	High Extent	3.15	0.75	High Extent
3	I am aware of some AI-based tools or applications for enhancing my teaching performance.	3.85	0.66	High Extent	2.75	0.82	High Extent
4	I am aware that the use of AI can improve my job performance and educational outcomes.	3.67	0.70	High Extent	3.12	0.98	High Extent
5	I have received some training on how to use AI in my teaching practices.	3.11	0.90	High Extent	3.10	0.84	High Extent
6	My university provides moderate support for integrating AI into teaching.	2.51	1.06	High Extent	2.52	1.66	High Extent
7	Lack of resources is a challenge in adopting AI for teaching in my university.	2.20	0.86	Low Extent	1.86	0.77	Low Extent
8	Resistance to change is a challenge in adopting AI for teaching in my university.	3.20	0.76	High Extent	3.19	0.88	High Extent
9	I believe the use of AI can enhance my effectiveness as an educator.	3.41	0.81	High Extent	3.20	0.93	High Extent
10	I am likely to use AI tools or applications in my teaching in the next 1 – 2 years.	3.72	0.82	High Extent	3.62	0.79	High Extent
	Grand Mean	**3.32**		**Hight Extent**	**2.97**		**High Extent**

Table 2 shows the mean responses of adult educators in the two Rivers State-owned universities on the extent to which adult educators are aware of artificial intelligence tools for enhanced job performance. The table indicated that adult educators in RSU and IAUE are familiar with the concept of artificial intelligence (AI) to a high extent with mean scores of 3.85 and 3.14 respectively. The respondents are also aware of some AI tools or applications used in education with mean scores of 3.66 and 3.15 respectively. They have also used some AI-based tools or applications to enhance their teaching performance to a high extent with mean scores of 3.85 and 2.75 respectively. Thus, they think that AI can improve their job performance and educational outcomes to a high extent with mean scores of 3.67 and 3.12 respectively. The respondents have also received some training on how to use AI in their teaching practices to a high extent with mean scores of 3.11 and 3.10 respectively. Furthermore, they agree to a high extent that their universities provide moderate support for integrating AI into teaching with mean scores of 2.51 and 2.52 respectively. Thus, with mean scores of 2.20 and 1.86, lack of resources is to a low extent a challenge to respondents' adoption of AI for teaching in their universities. However, the respondents accept with mean scores of 3.20 and 3.19 that resistance to change among educators is to a high extent a challenge in adopting AI for teaching in their universities. That notwithstanding, they believe that AI can enhance their effectiveness as educators to a high extent with mean scores of 3.41 and 3.20 respectively. Hence, with mean scores of 3.72 and 3.62, they are to a high extent likely to use AI tools or applications in their teaching in the next 1 – 2 years. Therefore, the grand mean scores of 3.32 and 2.97 on the table reveal that adult educators in Rivers State-owned universities are to a high extent aware of artificial intelligence tools for enhanced job performance.

Research Question 2: To what extent do adult educators utilize artificial intelligence tools for enhanced job performance in Rivers State-owned universities?

Table 2: Mean Responses on the Extent to Which Adult Educators Utilize Artificial Intelligence Tools for Enhanced Job Performance in Rivers State-Owned Universities

S/N	Items	RSU (n=15) Mean	SD	Rmks	IAUE (n=7) Mean	SD	Rmks
1	You use AI tools such as Chat GPT for accessing updated information for my lessons.	3.00	0.81	High Extent	3.02	0.89	High Extent
2	You use AI tools for generating research topics for your papers for publication.	2.15	0.88	Low Extent	2.10	0.76	Low Extent

3	You use chatbots such as ChatGPT and Claudai to enhance your teaching experience by way of helping you find quick and accurate answers to students' questions.	2.20	0.62	Low Extent	2.19	0.67	Low Extent
4	You use AI to automate the grading of students' tests which saves time for other productive activities.	2.10	0.60	Low Extent	2.21	0.98	Low Extent
5	You use AI to generate course outlines for courses assigned to you for more robust content.	2.31	0.73	Low Extent	2.27	0.66	Low Extent
6	You use AI to prepare PowerPoint presentations for lectures and paper presentations	2.12	0.69	High Extent	2.13	0.66	Low Extent
7	Using generative AI tools has generally improved the quality of educational content you provide to your students.	2.55	0.66	High Extent	2.58	0.81	High Extent
8	Using AI slide generators help lecturers adapt their teaching methods to meet diverse students' needs.	2..71	0.77	High Extent	2.67	0.95	High Extent
9	You use AI to aid you in literature review when conducting researchers.	2.50	0.84	High Extent	2.55	0.87	High Extent
10	You use AI to aid in accessing global perspectives in teaching of students.	2.41	1.06	Low Extent	2.34	1.03	Low Extent
	Grand Mean	**2.41**		**Low Extent**	**2.45**		**Low Extent**

Table 3 shows the mean responses of adult educators in the two Rivers State-owned on the extent adult educators utilize artificial intelligence tools for enhanced job performance in Rivers State-owned universities. The analyzed data revealed that majority of respondents agreed with items 1,7,8 and 9 as they had mean scores that showed high extent. While items 2,3,4,5,6 and 10 had mean scores that showed low extent implying majority of the respondents ticked low extent to those items. The grand mean scores of 2.41 and 2.45 for RSU and IAUE respectively indicates that adult educators utilize artificial intelligence tools for enhanced job performance in Rivers State-owned universities to a low extent.

Test of Hypotheses

Ho_1: There is no significant difference in the mean ratings of adult educators in Rivers State University and Ignatius Ajuru University of Education on the extent to which adult educators

are aware of artificial intelligence tools for enhanced job performance in Rivers State-owned universities.

Table 3: T-test result on the mean responses of adult educators in Rivers State-owned universities on the extent to which they are aware of artificial intelligence tools for enhanced job performance.

Respondents	n	Mean	SD	df	t-cal	t-crit	L/sig	Decision
RSU	15	3.32	0.82					
				20	0.30	1.96	0.05	Accepted
IAUE	7	2.97	0.92					

Source: Survey Result, 2024

Table 4 above reveals a t-calculated value of 0.30 which is less than the t-critical value of 1.96. Therefore, the null hypothesis was accepted, which means that there is no significant difference in the mean ratings of adult educators in Rivers State University and Ignatius Ajuru University of Education on the extent to which adult educators are aware of artificial intelligence tools for enhanced job performance in Rivers State-owned universities.

Ho_2 There is no significant difference in the mean ratings of adult educators in Rivers State University and Ignatius Ajuru University of Education on the extent to which adult educators utilize artificial intelligence tools for enhanced job performance in Rivers State-owned universities

Table 4: T-Test Result on the Mean Responses of Adult Educators in Rivers State-Owned Universities on the Extent to which Adult Educators Utilize Artificial Intelligence Tools for Enhanced Job Performance in Rivers State-Owned Universities

Respondents	n	Mean	SD	df	t-cal	t-crit	L/sig	Decision
RSU	15	2.41	0.81					
				20	0.05	1.96	0.05	Accepted
IAUE	7	2.45	0.90					

Table 5 above reveals a t-calculated value of 0.05 which is less than the t-critical value of 1.96. Thus, the null hypothesis was accepted. This implies that there is no significant difference in the mean ratings of adult educators in Rivers State University and Ignatius Ajuru University of Education on the extent to which adult educators utilize artificial intelligence tools for enhanced job performance in Rivers State-owned universities.

Discussion of Findings

The findings of the study revealed that adult educators in Rivers State-owned universities are to a high extent aware of artificial intelligence tools for enhanced job performance. This is because adult educators in RSU and IAUE are familiar with the concept of artificial intelligence (AI) to a high extent and have also used some AI-based tools or applications to enhance their teaching performance. This finding agreed with the findings of Oladosu, Adeaga, Oyedokun and Opaleye (2023) that a majority of Nigerian workers, including teachers and lecturers, have shown interest in using artificial intelligence systems in their daily works as they believe that it can redefine their economic opportunities. This finding also corroborated the findings of Ukoh and Nicholas (2022) that most instructors use AI as instructional tools, especially as they make their work easier when put to effective use. The findings of this study disagreed with the findings of Alimi, Buraimoh, Aladesusi and Babalola (2021), Amadi-Iwai, Ubulom and Okiridu (2024) and Oluwadiya et al. (2024) that many university lecturers are unaware of the use of AI tools. This disagreement could be due to the fact that there was less campaign for artificial intelligence as at the period when the aforementioned authors carried out their research. Between then and the time of the present research, there has been a lot of awareness among educators in the use of artificial intelligence. However, the findings of this study agreed with the findings of Lee et al. (2024) that many educators are slow to adapt to the use of AI tools because of their resistance to change.

The findings of this study also revealed that adult educators utilize artificial intelligence tools for enhanced job performance in Rivers State-owned universities to a low extent. This finding agreed with the findings of Abunaseer (2024) that the use of generative AI has shown great potential in transforming the field of education, especially in the way instructors plan, administer and evaluate instructions. It further corroborates the findings of Nwile and Edo (2023) that, despite its shortcomings, AI can “contribute to educational management and administration in respect of accessibility of data through smart devices and computers, simplification of both academic and administrative responsibilities, minimization of the time

required to complete difficult tasks, management of a variety of organizational duties effectively, participation in virtual global conferences and absolute mobility and production of knowledge ideas and data." It also endorsed the findings of Akpomi, Nwile and Kayii (2022) that the use of artificial intelligence has a great impact in the management of education. Furthermore, the findings of this study revealed that adult educators in the two universities were concerned about the ethical implications of using generative AI in education. This finding agreed with the findings of Akgun and Greenhow (2021) as well as Akpomi, Nwile and Kayii (2022) that the use of AI applications pose great ethical challenges such as "perpetuating existing systemic bias and discrimination, perpetuating unfairness for students from mostly disadvantaged and marginalized groups, and amplifying racism, sexism, xenophobia, and other forms of injustice and inequity."

Conclusion

Based on the findings of this study, it was concluded that adult educators in Rivers State-owned universities have adequate awareness of artificial intelligence and its potential to enhance their job performance. However, many of the educators are slow to accepting the use of AI tools because of the fear of losing their jobs to machines, and also because of the ethical issues involved in using AI.

Recommendations

Based on the findings, the following recommendations were made:

1. Government and university management should organize workshops to sensitize educators on the true potentials of AI in education, while educators should embrace the opportunity to learn more about AI in education.
2. Further research should be carried out on how to tackle the ethical challenges of using artificial intelligence in education.

References

Abunaseer, H. (2024, June 23). *The use of generative AI in education: applications, and impact.* Retrieved from PressBooks: https://www.pressbooks.com

Akpomi, M. E., Nwile, C. B., & Kayii, N. E. (2022). Artificial intelligence, robotics and information and communication technology (ICT) as tools for business and education management. *Research Journal of Mass Communication and Information Technology, 8*(2), 8 - 18.

Amadi-Iwai, P. S., Ubulom, W. J., & Okiridu, O. (2024). Awareness, competence and utilization of artificial intelligence for improved job performance by business educators in South-South Nigeria. *International Journal of Advanced Research and Learning, 3*(1), 37 - 49.

Ayanwale, M. A., Sanusi, I. T., & Adelana, O. P. (2022). Teachers' readiness and intention to teach artificial intelligence in schools. *ScienceDirect*.

Friska, M. C. (2019, May 14). Closing the gap between 'digital native' and 'digital immigrant'. *Medium*.

Gates, B. (2023, March 21). The age of AI has begun. *GatesNotes*.

Giannoukos, G., Besas, G., Galiropoulos, C., & Hioctur, V. (2015). The role of the educator in adult education. *Journal of Education and Learning, 9*(3), 237 - 240.

Hess, R. (2013). Technology alone cannot reform education. In J. Bartos, *What Is the Role of Technology in Education?* (pp. 11 - 13). London: Greenhaven Press.

Huang, R., Spector, J. M., & Yang, J. (2019). *Educational technology: A primer for the 21st century.* Beijing: Springer.

Jack, I. F., & Nzokurum, J. C. (2020). Managing teaching methods of online learning in Nigerian universities in the era of COVID-19: Challenges and prospects. In C. M. Uche, S. O. Oluwuo, & N. M. Abraham, *Management of Education in the Era of COVID-19, social distancing and social connections: Challenges and prospects in Nigeria* (pp. 47 - 66). Port Harcourt: University of Port Harcourt Press.

Lakhani, K. (2023, August 04). AI won't replace humans -- but humans with AI will replace humans without AI. *Harvard Business Review*.

Lee, D., Arnold, M., Srivastava, A., Plastow, K., Strelan, P., Ploeckl, F., . . . Palmer, E. (2024). The impact of generative AI on higher education learning and teaching: A study of educators' perspectives. *ScienceDirect*, 1 - 10.

Nadeem, M., Rafiq, M. A., & Jameel, K. (2023). The role of educational technology in academia. *Encyclopedia of Information Science and Technology*, 1 - 12.

Nazaretsky, T., Ariely, M., Cukurova, M., & Alexandron, G. (2022). Teachers' trust in AI-powered educational technology and a professional development program to improve it. *British Journal of Educational Technolgy*, 1 - 18.

Nwile , C. B., & Edo, B. I. (2023). Artificial intelligence and robotic tools for effective educational management and administration in the state-owned universities in Rivers State. *Faculty of Natural and Applied Science Journal of Mathematics and Science Education, 4*(1), 28 - 36.

Oladosu, D. A., Adeaga, I. I., Oyedokun, O. M., & Opaleye, E. T. (2023). Artificial intelligence and human interactions: Awareness, benefits and challenges in skills acquisitions in Nigeria. *Afropolitan Journals, 11*(1), 33 - 42.

Oluwadiya , K. S., Adeoti, A. O., Agodirin, S. O., Nottidge, T. E., Usman, M. I., Gall, M. B., . . . Zakari, L. Y. (2023). Exploring artificial intelligence in the Nigerian medical

educational space: An online cross-sectional study of perceptions, risks and benefits among students and lecturers from ten universities. *Nigerian Postgraduate Medical Journal, 30*(4), 285 - 292.

Orgill, J., & Hervey, D. (2013). Online learning programs are changing the way students learn. In J. Bartos, *What Is the Role of Technology in Education* (pp. 14 - 16). London: Greenhaven Press.

Prensky, M. (2001, October). Digital Natives, Digital Immigrants. *On the Horizon, 9*(5), pp. 1 - 6.

Uche, C. M., Oluwuo, S. O., & Abraham, N. M. (2020). *Management of education in the era of COVID-19, social distancing and social connections: Challenges and prospects in Nigeria.* Port Harcourt: University of Port Harcourt Press.

Ukoh, E. E., & Nicholas, J. (2022). AI adoption for teaching and learning of physics. *International Journal for Infonomics, 15*(1), 2121 - 2131.

Watters, A. (2015, February 19). *The history of the future of education.* Retrieved from Hack Education: https://www.hackeducation.com