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INFLUENCE OF ARTIFICIAL INTELLIGENCE ON JOB DISPLACEMENT AND RESKILLING IN COLLEGES OF EDUCATION IN ENUGU STATE

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ABSTRACT

This study investigated the influence of artificial intelligence on job displacement and reskilling in Colleges of Education in Enugu State. The study was guided by two research questions. It employed a descriptive survey research design. The population of the study comprised of 43 academic and non-academic staff drawn from Social Studies Departments in Colleges of Education in Enugu State, namely, Federal College of Education, Eha-Amufu, Enugu State College of Education (Technical), and Peaceland College of Education, Enugu State. The study adopted a total enumeration sampling technique, given that the target population was manageable. The researchers deployed a structured instrument titled "Influence of Artificial Intelligence on Job Displacement and Reskilling Questionnaire" for data collection. The instrument was structured into a 4-point-type scale with the response options of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SA), having the numerical values of 4, 3, 2, and 1, respectively. The instrument was validated by three experts; one from Measurement and Evaluation Unit in the Department of Science Education, and two others from the Department of Social Science Education, all in the University of Nigeria, Nsukka. Using the Cronbach Alpha method, the overall reliability coefficients of 0.84 was obtained, indicating that the instrument was reliable and suitable for the study. The data was collected through Google Form, with a few administrations of the instrument in print. Data collected were analyzed using descriptive statistics of mean and standard deviation. Findings of the study showed that reskilling measures are highly needed among staff in the face of rapidly growing artificial intelligence in Colleges of Education in Enugu State. The study also found that artificial intelligence highly influences job displacement in Colleges of Education in Enugu State. Based on the findings of the study, it was recommended that Colleges of Education in Enugu State should establish contemporary reskilling programmes focused on artificial intelligence applications in education, among others.

Keywords*:* Artificial Intelligence (AI), Job Displacement, Reskilling

Introduction

The prevalence of Artificial Intelligence (AI) has revolutionized the global labour market, with noticeable transformations on the modus operandi of tasks performance which has resulted in job displacements, informing the need for reskilling in order to stay relevant in an increasingly digital world.

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Among lecturers, and administrators of colleges of education, the advent of AI is commonly perceived not only as a new set of pedagogical tools but also a structural force that is capable of changing job descriptions, required competencies, and institutional roles (Hedau, 2023; Morandini, et al, 2023). In view of this reality, lecturers and other key administrators in colleges of education are expected to relearn or get reskilled in modern pedagogies so as to be able to integrate, supervise and evaluate AI-aided learning rather than simply to deliver lectures using fast-eroding traditional approaches.

Artificial Intelligence (AI) encompasses the design and advancement of computer systems capable of performing tasks that typically require human intelligence, such as visual perception, speech recognition, decision-making, and language translation. AI refers to an organized system of technologies that simulate complex human functions, including reasoning, problem-solving, teaching and learning (Manyika et al, 2017). It has also been referred to as a set of sciences, theories and techniques whose purpose is to reproduce by a machine the cognitive abilities of a human being (UNESCO, 2021). Going by the perception of UNESCO, AI is mainly designed to outsource information from existing information systems in a more swift, accurate and precise manner just like human brain. Meanwhile, Russell and Norvig (2021) emphasize that AI is the study of agents that receive percepts from the environment and take actions that affect that same environment. Russell and Norvig in their notion believe that what AI produces is simply the reflection of what is already in existence. Within the context of this study, however, AI can be defined as an organized collection of electronic, internet systems to facilitate efficient job delivery and up skilling in an evolving digital globe.

There are widely recognized examples of AI applications around the world, and they include Google Translate, ChaGPT, Netflix`s recommendation system, and autonomous vehicles produced by Tesla. AI has become a key driver in shaping workforce strategies, significantly influencing how college of education approach teaching and learning, including students` assessment. Beyond automation and cost efficiency, the integration of AI in educational industries is closely tied to employee engagement, strategic planning, and organizational development. Although AI increases productivity, especially in teaching and learning, it also eliminates jobs in repetitive and routine tasks, for instance, data entry and assembly line work (Ilmārs et al, 2019; Georgieff & Hyee, 2021; Sonderling et al, 2022; Danso & Hanson, 2023). Compared to previous digital workplace technologies, the findings of a study have shown that application of AI is raising concerns about job displacement in a wider set of tasks across most of the skill and wage spectrum in colleges of education, in such a way as to make workers obsolete (Samoili et al, 2020).

Job displacement pertains to abrupt retrenchment or reshuffling of workers due to shortage of funds, technological innovations, inflations or other natural disasters. Job displacement is also used to describe a gradual or sudden reduction in human job roles as AI-driven systems begin to perform tasks that were traditionally carried out by academic and non-academic

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staff (Danso & Hanson, 2023). Operationally, job displacement refers to the accidental loss of job as a result of workers` failure to meet contemporary requirement of skill sets, or employers` inability to pay staffers in line with their qualifications and skill sets. As AI-powered tools such as automated grading systems, intelligent tutoring platforms, administrative chatbots, and digital learning management systems have become more prevalent, some routine responsibilities, especially those involving repetitive, clerical or predictable tasks are increasingly being taken over by artificial intelligence and machines (Madu, Iliya & Alaba, 2025).

In colleges of education in Enugu State, the preceding observation implies that roles such as data entry clerks, library attendants, assessment officers, and even certain categories of teaching staff may experience reduced relevance or be phased out as AI performs these functions faster, more accurately, and at lower long-term cost. While some scholars argue that AI complements human labor and enables new economic opportunities, others contend that the pace of job creation is insufficient to offset displacement, especially if skill development lags behind technological adoption (Lanamäki et al., 2024; Georgieff & Hyee, 2022). Beyond quantitative impacts, AI also redefines the qualitative nature of work. Routine tasks are increasingly automated, while higher-order functions such as problem-solving, decision-making, and human-AI collaboration grow in importance. This shift underscores the need for reskilling, lifelong learning, digital literacy, and continuous adaptation of the workforce (Mula & Ristiani, 2025). Thus, AI has also created new jobs in fields like data science, AI development, cybersecurity, and educational ethics, as well as personalized medicine (Song, 2024; Mäkelä & Stephany, 2024). These new roles require advanced technical skills and human abilities like creativity, problem-solving, and emotional intelligence (Morandini et al., 2023).

Reskilling refers to the process of acquiring entirely new skills that enable an individual to transition into a different career or job role. According to Hedau (2023), reskilling can be likened to discovering a new toolset, often involving learning unfamiliar competencies such as data analysis or coding, particularly when shifting from unrelated fields like retail. It entails stepping into a new career path equipped with a fresh set of capabilities. Sawant et al. (2022) further emphasized that reskilling typically involves gaining expertise outside one's current field or industry. In the context of this study, reskilling refers to the training and retraining of workers in order to stay relevant in the competitive global labour market. For colleges of education in Enugu State to remain competitive and adaptable amid technological advancements and evolving market demands, they must train and retrain all members of staff with requisite skills in the face of AI in order to facilitate effective and efficient day-to-day academic administration. One of the key reskilling measures is the integration of digital literacy training. Digital literacy training equips educators with the ability to navigate AI-enabled tools, virtual learning platforms, and data-driven educational platforms (Russell & Norvig, 2021). Such training enables lecturers to confidently adopt AI systems for lesson preparation, assessment, and classroom management.

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Another important measure is pedagogical up-skilling, particularly in AI-supported instructional designs. For instance, educators need to acquire competencies in blended learning, adaptive learning technologies, and the use of intelligent tutoring systems to enhance students` learning experiences. Furthermore, colleges of education must invest in curriculum redesign, by embedding AI concepts, digital ethics, computational thinking, and problem solving skills into teacher-training programmes. This ensures that pre-service teachers graduate with the competencies needed to thrive in increasingly automated educational environments. In addition, professional development workshops, seminars, and certification programmes on emerging technologies can help lecturers stay informed about global trends in AI application in education. Equally important is the promotion of collaborative learning and peer mentoring, whereby technologically advanced educators support colleagues who may be struggling to adapt. Empirical evidence shows that workers who undergo reskilling in areas such as data literacy, digital pedagogy, and problem solving are more likely to retain employment and adapt to AI-supported work environments (Brynjolfsson & McAfee, 2017). In the same vein, organizations that invest in continuous reskilling report improved worker productivity and efficiency, as AI complements human skills rather than replacing them (Autor, 2015). On the contrary, findings have shown that reskilling programmes often benefit already-skilled workers, while low-skilled and older workers face barriers such as cost, time constraints, and limited digital access (Acemoghu & Restrepo, 2020). Another empirical evidence indicates that even with reskilling, some occupations experience permanent displacement, particularly those heavily reliant on routine cognitive tasks (Frey & Osborne, 2017). Meanwhile, colleges of education can partner with technological companies and innovation hubs to provide hands-on experience with AI solutions, thereby strengthening practical application skills.

Despite the growing presence of AI in educational practices such as automated assessment systems, digital content creation, and virtual learning environments, there is insufficient empirical understanding of how staff in colleges of education in Enugu State perceive its influence on job displacement and the extent to which reskilling efforts are being implemented. The existence of inadequate institutional policies, inadequate training opportunities, and varying levels of digital literacy further complicate the ability of college workers to adjust to the emerging AI-driven landscape. This situation raises critical questions about whether staff feel adequately prepared to engage with AI technologies, whether their roles are at risk, and how effectively the institutions are supporting capacity development. Consequently, there is a pressing need to investigate the influence of artificial intelligence on job displacement and reskilling within these colleges, as failure to address these concerns may hinder organizational efficiency, impact staff morale, and compromise the quality of primary and secondary school teachers produced by colleges of education in the state.

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Purpose of the Study

The general purpose of the study was to examine the influence of artificial intelligence on job displacement and reskilling in Colleges of Education in Enugu State. Specifically, the study sought to:

1. Ascertain the influence of artificial intelligence on job displacement in Colleges of Education in Enugu State.
2. Identify reskilling measures needed in the face of artificial intelligence in Colleges of Education in Enugu State.

Research Questions

The study was guided by the following research questions:

1. What is the influence of artificial intelligence on job displacement in Colleges of EDUCATION in Enugu State?
2. What are the reskilling measures needed in the face of artificial intelligence in Colleges of Education in Enugu State?

Research Method

The study adopted a descriptive survey research design. The study was conducted in Enugu State. The population of the study comprised of 43 academic and non-academic staff drawn from Social Studies departments in colleges of education in Enugu State, namely, Federal College of Education, Eha-Amufu, Enugu State College of Education (Technical) and Peaceland College of Education, Enugu State. The study adopted a total enumeration sampling technique, given that the target population was manageable. The researchers deployed a structured instrument titled "Influence of Artificial Intelligence on Job Displacement and Reskilling Questionnaire" for data collection. A 4-point rating scale of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD) with values of 4, 3, 2, and 1 was applied in the instrument. The instrument was validated by three experts; one from Measurement and Evaluation Unit in the Department of Science Education, and two others from the Department of Social Science Education, all in the University of Nigeria, Nsukka. In order to establish the reliability of the instrument, 10 copies were administered on Social Studies staffers in Nwafor Orizu College of Education, Anambra State, which is outside the study area. Using the Cronbach Alpha method, the overall reliability coefficients of 0.84 was obtained, indicating that the instrument was reliable and suitable for the study. The data was collected through Google Form, with a few administrations of the instrument in print. To provide answers to the research questions, data collected were analyzed using descriptive statistics of mean and standard deviation.

Presentation of Results

Research Question One: What is the influence of artificial intelligence on job displacement in Colleges of Education in Enugu State?

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Table 1: *Mean and standard deviation of responses on the influence of artificial intelligence on job displacement in Colleges of Education in Enugu State*

S/N	Item Statements	Mean	SD	Decision
	AI has replaced some library functions	2.13	0.69	Reject
2	Chatbots are performing duties previously done by secretaries	3.82	0.44	Accept
3	AI virtual learning platforms have reduced reliance on physical classroom instructors	2.36	0.68	Reject
4	AI-enabled plagiarism detection tools have reduced the need for manual review by academic staff	2.31	0.67	Reject
5	The availability of AI content creation tools has reduced the demand for instructional materials by developers	3.49	0.69	Accept
6	AI-technologies have reduced the demand for part-time lecturers	2.24	0.61	Reject
7	Manual evaluation of students has become redundant since the advent of AI	1.93	0.69	Reject
8	AI integration threatens job security in colleges of education	2.31	0.88	Reject
9	Automation through AI has reduced the need for interns	2.42	0.97	Reject
10	AI-enabled proctoring has reduced the need for invigilators	2.58	0.99	Accept
11	AI-enabled timetable and scheduling has reduced the need for administrative officers	3.18	0.72	Accept
12	AI-based learning management system has reduced the need for ICT support personnel	2.73	0.75	Accept
	Grand Mean	**2.63**	**0.73**	**Accept**

N (43) = Number of Respondents, SD = Standard Deviation

Table 1 shows the mean ratings of respondents on the influence of artificial intelligence on job displacement in Colleges of Education in Enugu State. Results from the table further indicate that artificial intelligence highly influences job displacement in Colleges of Education in Enugu State, with the overall mean rating of 2.63 and the overall standard deviation of 0.73, respectively.

Research Question Two: What are the reskilling measures needed in the face of artificial intelligence in Colleges of Education in Enugu State?

Table 2: *Mean and standard deviation of responses on the extent to which reskilling measures are needed in the face of artificial intelligence in Colleges of Education in Enugu State*

S/N	Item Statements	Mean	SD	Decision
13	Digital literacy training	2.93	0.78	Accept
14	Machine learning	2.76	0.71	Accept
15	Adaptive learning systems	2.69	0.79	Accept
16	Timetable automation learning	2.91	0.85	Accept
17	AI-marking and grading training	2.78	0.79	Accept
18	Data entry and management	3.11	0.83	Accept
19	Data analysis training	2.71	0.59	Accept
20	Data interpretation training	2.51	0.66	Accept
21	Training on Excel Analytics	2.04	0.67	Reject
22	Training on Google Analytics	2.67	0.91	Accept
23	Training on multimedia content creation	3.67	0.48	Accept
24	Training on SPSS-based analysis	2.13	0.69	Reject
	Grand Mean	**2.74**	**0.73**	**Accept**

N (43) = Number of Respondents, SD = Standard Deviation

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Table 2 shows the mean ratings of respondents on the reskilling measures needed in the face of artificial intelligence in Colleges of Education in Enugu State. Results from the table further indicate that reskilling measures are highly needed among staffers in the face of rapidly growing artificial intelligence in Colleges of Education in Enugu State, with the overall mean rating of 2.74 and the overall standard deviation of 0.73, respectively.

Discussion

The findings of the study show that artificial intelligence highly influences job displacement in Colleges of Education in Enugu State. Meanwhile, from the findings of the present study, it can be inferred that artificial intelligence highly influences job displacement, judging from the grand mean rating of the respondents. What this portends is that AI has advanced to the level of displacing people from their jobs in Colleges of Education in Enugu State. Given the influence of AI on job displacement in Colleges of Education in Enugu State, it is advisable for staffers to acquire relevant contemporary skills that will enable them to perform their works more accurately and efficiently in the face of rising artificial intelligence.

In consonance with the preceding findings, Madu, Iliya, and Alaba (2025) found that as AI-powered tools such as automated grading systems, intelligent tutoring platforms, administrative chatbots, and digital learning management systems have become more prevalent, some routine responsibilities, especially those involving repetitive, clerical or predictable tasks are increasingly being taken over by artificial intelligence and machines However, another findings have shown that, despite the noticeable job displacement orchestrated by AI invention, AI has also created new jobs in fields like data science, AI development, cybersecurity, and educational ethics, as well as personalized medicine (Song, 2024; Mäkelä & Stephany, 2024). These new roles mainly require advanced technical skills and human abilities like creativity, problem-solving, and emotional intelligence (Morandini et al., 2023).

Similarly, the study found that reskilling measures are highly needed among staff in the face of rapidly growing artificial intelligence in Colleges of Education in Enugu State. Therefore, it can be deduced from the findings of the present study that AI largely impact job displacement in Colleges of Education in Enugu State, making it ideal and contemporarily imperative for those institutions to incorporate reskilling measures that would help to boost the skill sets of staffers order to stay relevant and consistent with international best practices, particularly in the face of rapidly growing technological innovations. In line with the above findings, empirical evidence has showed that workers who undergo reskilling in areas such as data literacy, digital pedagogy, and problem solving are more likely to retain employment and adapt to AI-supported work environments (Brynjolfsson & McAfee, 2017). On the contrary, another study found that even with reskilling, some occupations still experience permanent displacement, particularly those heavily reliant on routine cognitive tasks (Frey & Osborne, 2017).

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Educational Implications

The findings of the study suggest that the existing curricula of colleges of education in Enugu State are inadequately aligned with AI-driven realities. There is a pressing need to integrate courses on artificial intelligence, digital literacy, computational thinking, and educational technology to prepare future teachers for emerging roles rather than sticking painstakingly to the obsolete ones. The high need for reskilling implies that pre-service teacher training alone is insufficient. Colleges of education must institutionalize continuous professional development programmes focused on AI tools, digital pedagogy, and adaptive teaching strategies to help academic and non-academic staff stay relevant in the job market.

Conclusion

The study examined the influence of artificial intelligence on job displacement and the extent to which reskilling measures are required in Colleges of Education in Enugu State. The findings revealed that artificial intelligence has largely altered work processes, leading to a significant increase in the possibility of job displacement, particularly in routine academic and administrative functions. Furthermore, the study concluded that reskilling measures are highly needed, to enable staff and prospective teachers to adapt effectively to AI-driven changes. The strong demand for reskilling underscores existing gaps in digital competence, AI literacy, and modern pedagogical skills within Colleges of Education in Enugu State. Thus, without deliberate and sustained reskilling interventions, these gaps may continue to widen, thereby threatening staff employability, instructional effectiveness, and the overall relevance of teacher education programmes.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. Colleges of Education in Enugu State should establish structured and continuous reskilling programmes focused on digital literacy, artificial intelligence applications in education, and modern pedagogical skills to enable staff to adapt to AI-driven changes and reduce job displacement.
2. Government and institutional stakeholders should provide adequate ICT facilities, reliable internet connectivity, and digital learning tools to support effective reskilling initiatives and the integration of AI into teaching, learning, and administration.
3. Colleges of Education should develop clear policies on technology adoption, staff retraining, and role transition, while also partnering with educational technology organizations and professional bodies to facilitate capacity building and sustainable reskilling efforts.

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