



The use of Artificial Intelligence (AI) tool by lecturers in the teaching and learning of English language in Federal College of Education (Technical) Omoku and Federal College of Education (Technical) Umunze

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Article Info	ABSTRACT
<p>Corresponding Author: Augusta Chiedu Assimonye E-mail: augusta.assimonye@fcetumunze.edu.ng</p>	<p>In recent years, the integration of Artificial Intelligence (AI) in education has transformed how teachers and students interact with learning materials. However, in many teacher education institutions in Nigeria, the use of AI tools in language instruction remains limited and uneven. Lecturers often rely on traditional methods, which restrict students' exposure to innovative learning technologies that could enhance writing, grammar, comprehension, and communication skills. This gap raises concern about how effectively lecturers are adopting AI to support English Language teaching and learning in Colleges of Education. The study used a descriptive survey design to explore how lecturers and students perceived the use of artificial intelligence in teaching English Language. It was conducted in the Federal Colleges of Education (Technical) at Omoku in Rivers State and Umunze in Anambra State, involving forty-four participants—seventeen lecturers and twenty-seven final-year students. Data were collected through a validated and reliable structured questionnaire analyzed using mean and standard deviation to determine agreement levels on issues relating to AI use in English Language education. The results revealed that lecturers moderately used artificial intelligence (AI) tools in teaching English Language in the Federal Colleges of Education (Technical) at Omoku and Umunze. Findings showed strong agreement that AI supported grammar and punctuation correction (Mean = 3.57, SD = 0.78) and provided instant feedback on assignments (Mean = 2.96, SD = 0.52). The grand mean (3.02, SD = 0.74) indicated moderate adoption. Similarly, AI usage extent was modest (Grand Mean = 2.64, SD = 0.085), mainly in grammar (Mean = 2.50) and listening comprehension (Mean = 2.60), suggesting gradual but growing integration. The study concluded that while AI has begun to improve teaching effectiveness, its application remains limited. It recommended increased institutional support, lecturer training, and infrastructure development to promote full AI integration in English Language education.</p> <p>Keywords: Artificial Intelligence, English Language, Teaching and Learning, Lecturers, Federal College of Education</p>

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INTRODUCTION

The rapidly evolving landscape of technology and industry demands that educational institutions continually adapt to provide students with relevant skills and knowledge. In English education programme, artificial intelligence (AI) skills are essential for preparing students to enter and succeed in the dynamic business world. However, these programs face significant challenges that hinder the effectiveness of teaching and learning processes, ultimately impacting students' preparedness for the competitive job market. Artificial Intelligence (AI) is rapidly transforming various industries, including education. AI as an aspect of information and communication technologies (ICTs) is being used in educational system to enhance teaching and learning process, improve student outcomes, and streamline administrative tasks with numerous challenges. In recent years, AI has also made inroads into the education sector, particularly in educational management (Igbokwe, 2023, p. 300-308). AI can help improve the teaching and learning process, enhance teacher's performances, student outcomes, and automate administrative tasks but with track problems of dehumanisation of making humans as if they lack mental capacity and loss of personal touch with the needed interactions among staff and students in the educational system.

Artificial Intelligence (AI) is a branch of computer science focused on creating systems capable of performing tasks that would typically require human intelligence. Bupo and Akpomi (2023, p. 2) defined Artificial intelligence as the replication of human intelligence patterns by computer systems, codes, or machines to act and reason like humans. This implies that computers or machines are made to think like humans and act rationally to solve problems. China's robotics industry, powered by Artificial Intelligence, has advanced significantly, replacing humans in repetitive and more dangerous tasks. AI replicates human intelligence patterns in computer systems, codes, or machines to act and reason like humans. Artificial intelligence is the application of scientifically methods and procedures in creating intelligent machines, robots through intelligent computer programs that can replicate human and simplify daily tasks. These tasks include problem-solving, understanding natural language, recognizing patterns, learning from experience, and making decisions for effective teaching and learning. According to Huang et al. (2023, p. 28), incorporating AI into educational models, especially for English language learning, represents a revolutionary change that has fundamentally altered English Language skills of students in tertiary institutions.

In Nigeria, the teaching of English Language has traditionally been teacher-centered, relying heavily on lectures and limited student interaction. English proficiency—comprising listening, speaking, reading, and writing—is crucial for academic success and professional advancement (Odey & Umeh, 2021). However, many students continue to struggle with communication, comprehension, and pronunciation due to interference from indigenous languages and inadequate instructional resources (Ezeaku & Ohamobi, 2018). As the language of instruction in Colleges of Education, mastery of English is vital for effective learning across disciplines (Ohamobi, Akulue & Okonkwo, 2021). Listening, as the foundation of communication, requires learners to decode meaning, tone, and context. Yet, most Nigerian students face difficulties in listening comprehension due to limited exposure

to standard English beyond the classroom and dominance of local dialects (Ezugoh, Onuorah & Ohamobi, 2019). Recent educational innovations emphasize integrating technology to bridge this gap. Artificial Intelligence (AI) tools, such as speech recognition systems and intelligent tutoring platforms, enable students to engage with authentic spoken English in real time, improving pronunciation and comprehension (Enwereji, Ohamobi & Nwokeji, 2022). Such AI-driven approaches align with broader strategies promoting innovation and quality assurance in Nigerian teacher education (Manafa, Ohamobi & Osegbue, 2020), making English learning more interactive and effective.

Speaking skills requires fluency, accuracy, and confidence in oral expression. However, students in Colleges of Education often face challenges such as mispronunciation, code-switching, and lack of confidence in formal contexts. According to Yusuf and Bakare (2022, p. 67), integrating digital platforms that provide speech analysis and instant corrective feedback can improve learners' pronunciation and oral fluency. AI chatbots and virtual assistants also create opportunities for simulated conversational practice, reducing fear of classroom judgment. Reading skills extends beyond decoding words; it entails comprehension, interpretation, and critical analysis of texts. Weaknesses in vocabulary and reading speed are common among Nigerian students, limiting their academic achievement. AI applications such as adaptive e-books and text-to-speech systems can personalize reading activities based on learners' levels, thereby fostering comprehension and vocabulary growth (Okafor & Musa, 2023, p. 52). This adaptation helps overcome the "one-size-fits-all" limitation of traditional classroom teaching.

Writing is arguably the most complex of the language skills as it requires correct grammar, logical organization, and coherent expression. Nigerian students often struggle with grammar, punctuation, and essay organization. According to Eze and Onuoha (2023, p. 119), poor writing skills among undergraduates are linked to inadequate feedback and overdependence on teacher-centered instruction. AI-powered grammar checkers, plagiarism detectors, and automated essay scoring systems provide timely feedback, helping learners to refine their writing skills independently.

Artificial Intelligence (AI) has emerged as a promising solution to these challenges. AI tools such as grammar checkers, speech recognition systems, intelligent tutoring systems, and automated translation platforms provide learners with instant feedback and personalized practice opportunities. These tools can strengthen writing by detecting grammatical errors, improve pronunciation through speech analysis, and support reading comprehension with adaptive learning algorithms (Okonkwo & Ade-Ibijola, 2021, p. 45). Such innovations demonstrate AI's potential to complement traditional teaching methods and enhance English language acquisition. While these four skills have been widely acknowledged as the pillars of language proficiency, there is still limited empirical research on how AI tools specifically support the integrated development of these skills in Colleges of Education, particularly in semi-urban areas such as Omoku and Umunze. Thus, this study is carried out to investigate use of Artificial Intelligence (AI) tool by lecturers in the teaching and learning of English language in Federal College of Education (Technical) Omoku and Federal College of Education (Technical) Umunze.

Objectives

1. examine the use of artificial intelligence (AI) tool by lecturers in the teaching and learning of English language in Federal College of Education (Technical) Omoku and Federal College of Education (Technical) Umunze
2. examine the extent of artificial intelligence (AI) tools in teaching and learning of English language in Federal College of Education (Technical) Omoku and Federal College of Education (Technical) Umunze

Research Questions

The following research questions will guide the study:

1. What are the use of artificial intelligence (AI) tool by lecturers in the teaching and learning of English language in Federal College of Education (Technical) Omoku and Federal College of Education (Technical) Umunze?
2. To what extent are artificial intelligence (AI) tools used in teaching and learning of English language in Federal College of Education (Technical) Omoku and Federal College of Education (Technical) Umunze?

METHOD

The study adopted a descriptive survey research design, which was suitable for obtaining information on the opinions, attitudes, and perceptions of individuals. This design was chosen because the research focused on gathering the views of respondents regarding the use of artificial intelligence (AI) in the teaching and learning of English Language. The descriptive survey design enabled the researcher to collect factual data that represented the existing situation of lecturers and students concerning the application of AI in education. The study was carried out in the Federal College of Education (Technical), Omoku, Rivers State, and the Federal College of Education (Technical), Umunze, Anambra State. According to the National Population Commission (2006), Omoku had an estimated population of about 190,751 people. It is located in the northern part of Rivers State, near the boundaries with Delta and Imo States, and serves as the headquarters of the Ogba/Egbema/Ndoni Local Government Area. Omoku is one of the major cities of the Ogba people, who speak the Ogba dialect of the Igburu language. The community is well known for its cultural heritage and agricultural practices, though recurring flooding has often hindered agricultural productivity. The Federal College of Education (Technical), Omoku, is the only tertiary institution in the town and served as one of the study sites.

Umunze, located in Orumba South Local Government Area of Anambra State, also served as a study area. The town is home to the Federal College of Education (Technical), Umunze, which is affiliated with Nnamdi Azikiwe University, Awka. Umunze is a semi-urban community with a strong educational culture and serves as a hub for teacher education in southeastern Nigeria. Both colleges were selected because they run similar English Language Education programs and have comparable academic environments suitable for investigating the use of artificial intelligence in teaching and learning. The population of the study consisted of all lecturers in the School of Language Studies and twenty-seven (27) final-year degree students of English Language Education for the 2024/2025 academic session in the two institutions. Data obtained from the Deans' offices (2025) showed that

the total number of participants was forty-four (44), including seventeen (17) English Language lecturers and twenty-seven (27) final-year students from both colleges. Since the population was small and manageable, the entire population was studied, eliminating the need for sampling techniques.

Data were collected using a structured questionnaire titled Use of Artificial Intelligence Tools by Lecturers in Teaching and Learning of English Language Questionnaire (UAITLTLQ). The instrument was designed to address the research questions and consisted of two main sections. Section A obtained demographic information about the respondents, while Section B contained twenty (20) items related to the main variables of the study. The questionnaire employed a four-point Likert scale, with response options of Strongly Agree (4), Agree (3), Disagree (2), and Strongly Disagree (1). This format facilitated the quantitative analysis of respondents' attitudes and perceptions toward the use of AI in English Language teaching. The validity of the instrument was ensured through face and content validation. The researcher sought expert review from the project supervisor and two English Language lecturers from the Federal College of Education (Technical), Omoku. The experts assessed the clarity, relevance, and suitability of the questionnaire items. Their suggestions and corrections were incorporated into the final version of the instrument to ensure that it accurately reflected the study objectives.

To establish the reliability of the instrument, a pilot test was conducted using fifteen (15) final-year English Language lecturers from Ignatius Ajuru University of Education, Rumuolumeni. The results were analyzed using the Cronbach Alpha method to determine internal consistency. This process confirmed that the questionnaire items consistently measured what they were intended to measure. For the data collection, the validated questionnaires were administered personally by the researcher with the assistance of one trained research assistant. This ensured that all respondents from both Omoku and Umunze completed and returned their questionnaires, guaranteeing a high response rate and reliable data. The data collected were analyzed using mean scores and standard deviation. These statistical tools helped to summarize and interpret the data. The decision rule stated that any item with a mean score of 2.50 or above was considered "Agreed," while items below 2.50 were "Disagreed." The formula for calculating the mean was $X = \sum fx/n$, and the standard deviation was computed as $SD = \sqrt{\sum(x - \bar{X})^2 / N}$. The interpretation of mean scores followed this range: 3.50–4.00 = Strongly Agree, 2.50–3.49 = Agree, 1.50–2.49 = Disagree, and 1.00–1.49 = Strongly Disagree.

RESULTS

Research Question One

What are the use of artificial intelligence (AI) tool by lecturers in the teaching and learning of English language in Federal College of Education (Technical) Omoku and Federal College of Education (Technical) Umunze?

Table 1: Mean and Standard deviation on the use of artificial intelligence (AI) tool by lecturers in the teaching and learning of English language in Federal College of Education (Technical), Omoku and Umunze N=44

S/N	Items	X	SD	Decision
1	Lecturers use AI tools to provide instant feedback on students' written assignments.	2.96	0.52	A
2	AI tools are applied by lecturers to support grammar and punctuation corrections during essay writing.	3.57	0.78	SA
3	AI tools are used by lecturers to facilitate interactive classroom discussions and engagement	2.43	0.89	A
4	Lecturers integrate AI chatbots to answer students' questions outside the classroom.	2.94	0.81	A
5	AI tools are used by lecturers to facilitate interactive classroom discussions and engagement.	3.2	0.71	A
Grand Mean		3.02	0.74	A

Table 1 presents the mean and standard deviation on the use of artificial intelligence (AI) tools by lecturers in the teaching and learning of English Language in the Federal College of Education (Technical), Omoku and Umunze. The findings show that lecturers moderately make use of AI tools in their teaching practice. Specifically, the result indicates that lecturers strongly agree that AI tools are applied to support grammar and punctuation corrections during essay writing (Mean = 3.57, SD = 0.78), which suggests that tools such as Grammarly and Quillbot are commonly utilized to enhance students' written communication. Additionally, lecturers agree that AI is used to provide instant feedback on students' assignments (Mean = 2.96, SD = 0.52) and to integrate chatbots that assist students outside the classroom (Mean = 2.94, SD = 0.81). These findings reflect the usefulness of AI in extending learning support beyond the traditional classroom, offering students continuous engagement. The results also show that lecturers use AI to encourage classroom discussions and student engagement (Mean = 3.20, SD = 0.71), although the relatively moderate mean suggests that this practice is not yet fully maximized. Generally, the grand mean of 3.02 (SD = 0.74) indicates that while lecturers in the institution are adopting AI tools, the usage is more inclined toward writing support and feedback provision than toward broader classroom interactivity. This implies that AI integration is gradually improving teaching and learning of English Language in the institution, but there remains room for further training and adoption to maximize its benefits in all aspects of English skills development.

Research Question Two

To what extent are artificial intelligence (AI) tools used in teaching and learning of English language in Federal College of Education (Technical) Omoku and Federal College of Education (Technical) Umunze?.

Table 2: Mean and Standard deviation on extent artificial intelligence (AI) tools are used in teaching and learning of English language in Federal College of Education (Technical) Omoku and Federal College of Education (Technical) Umunze N=44

S/N	Items	X	SD	Decision
6	AI tools are frequently used in teaching English grammar and mechanics	2.50	0.91	A
7	AI platforms are often applied to improve students' listening comprehension	2.60	0.88	A
8	AI tools are regularly adopted to support collaborative learning in English language classes	2.49	0.86	A
9	Students are consistently exposed to AI tools during their English language lessons.	2.71	0.76	A
10	The overall use of AI in teaching and learning English is significant in the College.	2.9	0.87	A
Grand Mean		2.64	0.85	A

Table 2 presents the mean and standard deviation on the extent artificial intelligence (AI) tools are used in the teaching and learning of English Language in the Federal College of Education (Technical), Omoku and Umunze. The results generally reveal a moderate level of application, with a grand mean of 2.64 (SD = 0.85), indicating that while AI tools are being used, their integration is not yet extensive. The findings show that lecturers agree that AI tools are applied in teaching English grammar and mechanics (Mean = 2.50, SD = 0.91), as well as for enhancing students' listening comprehension (Mean = 2.60, SD = 0.88). This suggests that AI tools are helping to strengthen both the structural and receptive skills of English learning. Similarly, lecturers affirm that students are consistently exposed to AI tools in English lessons (Mean = 2.71, SD = 0.76), though the relatively modest mean value implies that exposure is not regular or widespread. The overall use of AI in teaching and learning English was also rated fairly significant (Mean = 2.90, SD = 0.87), which underscores its growing but not yet dominant role in language instruction. Overall, the results suggest that while AI adoption in English language teaching in the college is evident, its use remains at a developing stage, mostly concentrated on grammar, comprehension, and limited classroom exposure. There is therefore a need for deeper institutional support and lecturer capacity-building to expand AI's role in promoting comprehensive English skills development.

Discussion

What are the use of artificial intelligence (AI) tool by lecturers in the teaching and learning of English language in Federal College of Education (Technical) Omoku and Federal College of Education (Technical) Umunze?

The results from Table One show that lecturers in the Federal College of Education (Technical), Omoku and Umunze, are moderately adopting artificial intelligence (AI) tools in teaching English language, with a grand mean of 3.02 (SD = 0.74). The findings indicate that lecturers strongly agree that AI tools are most applied in grammar and punctuation corrections during essay writing (Mean = 3.57), reflecting the popularity of tools such as

Grammarly and QuillBot. Similarly, AI is used to provide instant feedback on assignments (Mean = 2.96) and to integrate chatbots for student support outside the classroom (Mean = 2.94). However, AI's role in interactive classroom engagement is moderately rated, suggesting that while beneficial, it is not yet fully leveraged for dynamic classroom interaction. These findings are consistent with Kuddus (2022), who emphasize that AI tools improve teaching efficiency by supporting grammar accuracy, instant feedback, and error detection, thereby enhancing student writing competence. In a similar vein, Eze and Nwosu (2023) argued that AI applications extend learning opportunities beyond classroom walls by providing continuous student engagement through chatbots and interactive platforms, which helps bridge gaps in lecturer-student communication. Both scholars reinforce the study's observation that AI is increasingly useful in feedback provision and writing support. On the other hand, Fitria (2023) cautions that while AI can aid lecturers in grammar correction and assignment feedback, over-dependence may reduce students' ability to develop independent critical thinking and editing skills. He stresses that relying heavily on AI tools could unintentionally weaken learners' analytical engagement with language. This position challenges the current findings by suggesting that although AI adoption is beneficial, it may create unintended pedagogical limitations if not balanced with traditional teaching strategies. The findings highlight that AI is moderately integrated into English teaching by lecturers in Omoku, particularly in writing and feedback support, but less so in interactive classroom dynamics. While scholars support its usefulness in improving efficiency and extending learning beyond the classroom, concerns remain about potential over-reliance, emphasizing the need for balanced adoption.

To what extent are artificial intelligence (AI) tools used in teaching and learning of English language in Federal College of Education (Technical) Omoku and Federal College of Education (Technical) Umunze?

The findings of this study reveal that artificial intelligence (AI) tools are moderately used in teaching and learning of English language in the Federal College of Education (Technical), Omoku and Umunze, as indicated by a grand mean of 2.64 (SD = 0.85). The results suggest that while AI is contributing to the teaching of grammar, listening comprehension, and exposure to technology-enhanced learning, its integration is still at a developmental stage.

This outcome aligns with the argument of Okonkwo and Akintoye (2021) who maintain that AI enhances learning outcomes in language education by improving structural skills such as grammar and receptive abilities like listening comprehension. They argue that moderate use often precedes wider adoption as both teachers and students adjust to the technology. Similarly, Aina and Olatunji (2022) support the view that AI tools foster collaborative learning and personalized exposure in English classrooms, particularly by creating interactive opportunities that traditional methods often fail to provide. These perspectives reinforce the findings that AI is increasingly significant in promoting language development, though its usage is not yet fully optimized.

However, not all scholars agree with the optimistic stance on AI adoption. Eze and Nwosu (2023) argued that AI tools, while promising, are underutilized in many Nigerian higher education institutions due to infrastructural deficits, inadequate training, and limited

access. They suggest that without adequate institutional frameworks and investments, AI cannot significantly transform language education. This position contrasts with the study's findings, which show that even with limited adoption, AI tools are beginning to play a meaningful role in English instruction at the college. The findings imply that while AI has begun to shape English language teaching at the Federal College of Education (Technical), Omoku and Umunze, there is a strong need for policies, training, and infrastructure to push adoption from a moderate to a more extensive level.

CONCLUSION

The study concluded that the use of Artificial Intelligence (AI) tools by lecturers in the teaching and learning of English Language in the Federal Colleges of Education (Technical), Omoku and Umunze, is gradually emerging but remains at a moderate level. The findings showed that lecturers primarily used AI tools for grammar correction, punctuation support, and providing feedback on students' written work, indicating that AI is mostly applied to improve writing accuracy and communication skills. However, the use of AI for broader instructional purposes such as interactive learning, oral communication practice, and classroom engagement is still limited. This moderate level of adoption suggests that while lecturers recognize the value of AI in enhancing English Language teaching, factors such as limited awareness, inadequate training, and insufficient technological resources may hinder its full utilization. The study therefore emphasized the need for targeted capacity-building programmes to train lecturers on diverse AI applications in language instruction. It also highlighted the importance of institutional investment in digital infrastructure and policy support to encourage the effective integration of AI tools in teacher education. With proper training, technological support, and institutional commitment, AI tools can significantly transform the teaching and learning of English Language, promoting creativity, efficiency, and personalized learning among both lecturers and students.

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