THE ROLE OF ARTIFICIAL INTELLIGENCE IN TEACHING ENGLISH LANGUAGE IN TERTIARY INSTITUTIONS IN IMO STATE: THE STRATEGIES AND CHALLENGES

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ABSTRACT

This study examined the role of artificial intelligence in teaching English Language in tertiary institutions in Imo State, assessing its strategies and challenges. Artificial Intelligence (AI) is rapidly transforming various sectors, including education, by enhancing teaching and learning experiences. The following subheads among others were explored in the context of carrying out this research: concept of artificial intelligence and concept of English Language. Roles of artificial intelligence in teaching English Language in tertiary institutions as mentioned in the study included: personalised learning, automated assessment/feedback and chatbots/virtual assistants. Furthermore, the study mentioned the strategic ways of using artificial intelligence to teach English Language in tertiary institutions to include among others: implementing ai-powered personalised learning systems and utilising AI for automated assessment/feedback. Limited contextual understanding and lack of human interaction/engagement among others were mentioned as some of the challenges of using artificial intelligence to teach English Language in tertiary institutions. More so, the study highlighted the mitigating strategies to the challenges of using artificial intelligence to teach English Language in tertiary institutions to include among others: securing funding/cost-effective solutions and improving technological infrastructure. The study concluded that Artificial Intelligence (AI) has the potential to revolutionize English language teaching in tertiary institutions in Imo State by enhancing instruction, assessment, and personalized learning. One of the recommendations made was that the government, educational institutions, and private stakeholders should invest in the necessary technological infrastructure, such as high-speed internet, AI-powered learning platforms, and digital tools, to facilitate the effective use of AI in teaching English.
Keywords: Artificial Intelligence, English Language, Tertiary Institutions and Imo State

INTRODUCTION

Artificial Intelligence (AI) is rapidly transforming various sectors, including education, by enhancing teaching and learning experiences. In the field of language education, AI-powered tools such as chatbots, intelligent tutoring systems, and natural language processing (NLP) applications have revolutionised the way students acquire and refine language skills (Gutiérrez, 2023). In tertiary institutions, particularly in Imo State, Nigeria, where English is both a subject and a medium of instruction, the integration of AI holds immense potential for improving language proficiency among students. However, despite its promising benefits, the implementation of AIdriven strategies in English language teaching (ELT) faces several challenges, ranging from inadequate infrastructure to resistance from educators.

The incorporation of AI in English language teaching introduces a range of innovative strategies that enhance both instruction and assessment. AI-powered language applications, such

as Grammarly and ChatGPT, assist students in refining their writing and comprehension skills by providing real-time feedback (Almashy, Saleh, Saleh, Ahmed, and Warda, 2024). Additionally, speech recognition software, such as Google's Speech-to-Text, allows students to improve their pronunciation and fluency through interactive exercises. AI-driven learning management systems (LMS) also personalise learning experiences by adapting lesson content to individual student needs, thereby improving engagement and retention (Olaoye, Olusegun, Flypaper, Oluwaseyi, and Brightwood, 2024). These advancements make AI an invaluable tool for tertiary institutions striving to enhance language proficiency among students.

Despite these advantages, several challenges hinder the effective implementation of AI in English language education in Imo State. One of the major obstacles is the lack of adequate technological infrastructure, including internet connectivity, access to AI-powered tools, and reliable electricity supply (Seun, Adebayo, Omotosho, and Olajide, 2021). Many tertiary institutions struggle with outdated facilities, making it difficult for educators and students to fully leverage AI technologies. Furthermore, the high cost of AI-powered educational tools limits their accessibility, particularly in underfunded public institutions.

Another critical challenge is the reluctance of educators to embrace AI-assisted teaching methods. Many instructors perceive AI as a threat to traditional pedagogical approaches, fearing that automation may diminish their role in the classroom. Additionally, some educators lack the necessary digital literacy to effectively incorporate AI-driven tools into their teaching strategies. Without proper training and capacity building, the potential of AI in ELT remains largely untapped, creating a gap between technological advancement and practical implementation in tertiary institutions.

Moreover, ethical concerns surrounding AI adoption in education cannot be overlooked. Issues such as data privacy, algorithmic bias, and the over-reliance on technology in language learning pose significant risks (Luckin et al., 2016). For instance, AI applications that rely on large datasets may inadvertently reinforce linguistic biases, potentially affecting language instruction and assessment accuracy. Ensuring ethical AI integration requires a well-defined policy framework that balances technological innovation with responsible usage.

CONCEPT OF ARTIFICIAL INTELLIGENCE

Artificial intelligence (AI) is the field of computer science focused on creating machines capable of performing tasks that typically require human intelligence, such as learning, problemsolving, and decision-making. According to Akpan and Clark (2024), cited in Adolf and Nkanta (2025), artificial intelligence (AI) is the study of how the human brain makes decisions, learns new things, and thinks through difficulties. The goal of artificial intelligence is to enhance computer abilities related to human understanding, including language intelligence, learning, reasoning, and problem-solving. Lion and Ekefre (2024) defined artificial intelligence (AI) as a term that describes computer programs that are able to carry out sophisticated operations that were previously limited to human performance, such as problem-solving, thinking, and decisionmaking.

Furthermore, Ikechukwu and Echerenachukwu (2024) mentioned that artificial intelligence (AI), in its broadest sense, is intelligence exhibited by machines, particularly computer systems, as opposed to the natural intelligence of living beings. The term artificial intelligence (AI) describes computer programs that are able to carry out sophisticated operations that were previously limited to human performance, such as problem-solving, thinking, and decision-making (Ufot, 2024). Akpan and Clark (2024) defined artificial intelligence (AI) as the study of how the human brain makes decisions, learns new things, and thinks through difficulties. The goal of artificial

intelligence is to enhance computer abilities related to human understanding, including language intelligence, learning, reasoning, and problem-solving.

Moreover, King and Obot (2024) defined artificial intelligence (AI) to mean the idea and practice of creating computer systems that can do tasks like speech recognition, decision-making, and pattern recognition that traditionally needed human intelligence. Bassey and Owushi (2023) added that artificial intelligence can be understood as the collection of technologies that enable machines to sense, comprehend, act, and perform several functions matching those of humans. Artificial intelligence is a technology that, when used alone or in conjunction with other technologies, allows computers and other machines to mimic human intelligence and problemsolving abilities (Ebirim, Amah, Iwuji and Obi, 2023).

CONCEPT OF ENGLISH LANGUAGE

English is a language that was originally the language of the people of England. According to Linus and Omojunikanbi (2022), the English language is an Indo-European language in the West Germanic language group. The English language is the system of production of meaning for the expression of living by English people who were originally from Germany, but the language has spread to many parts of the world where it is used as a second, third, or foreign language (Sanuvickybless, 2021 cited in Luke, Hanson, and Enang, 2022). Today, English is the main language in the United Kingdom, Ireland, the United States of America, Canada, Australia, New Zealand, and more than fifty other countries.

The English language is closely related to the Frisian, German, and Dutch (in Belgium, called Flemish) languages. English originated in England and is the dominant language of the United States, the United Kingdom, Canada, Australia, Ireland, New Zealand, and various island nations in the Caribbean Sea and the Pacific Ocean (Potter, 2020). English has ceased to be an English language in the sense of belonging only to people who are ethnically English. Use of English is growing country by country internally and for international communication (James, 2021).

ROLES OF ARTIFICIAL INTELLIGENCE IN TEACHING ENGLISH LANGUAGE IN TERTIARY INSTITUTIONS

In tertiary institutions, AI plays a crucial role in teaching the English language, offering innovative approaches to language acquisition and proficiency. With advancements in AI-driven technologies, educators and students alike benefit from automated tools and intelligent systems that enhance learning experiences.

Personalised Learning: AI facilitates personalised learning by adapting to individual student needs. AI-powered language learning applications analyse students' progress and customise lessons accordingly (Kopczynski and Silvia, 2024). This approach ensures that learners receive appropriate instruction based on their strengths and weaknesses, allowing for a more effective and engaging learning experience.

Automated Assessment and Feedback: AI-powered tools provide instant feedback on students' assignments, grammar, pronunciation, and writing skills. Platforms such as Grammarly, Turnitin, and AI-driven essay evaluators assess students' work, highlight errors, and offer corrective suggestions, thus improving learning efficiency and reducing teachers' workload (Dong, 2023).

Chatbots and Virtual Assistants: AI-powered chatbots and virtual assistants serve as interactive language tutors. These tools engage students in real-time conversations, helping them practise speaking and writing skills. Chatbots like Duolingo's AI tutor provide instant corrections and encourage continuous learning outside the classroom.

Speech Recognition and Pronunciation Improvement: AI-based speech recognition systems, such as Google Speech-to-Text and ELSA Speak, help students refine their pronunciation. These tools analyse spoken words, identify mispronunciations, and provide corrective feedback, thus enhancing spoken English proficiency (Ghafar, Salh, Abdulrahim, Farxha, Arf and Rahim, 2023).

AI-Driven Content Generation: AI assists in creating engaging and adaptive learning materials. Intelligent systems generate reading comprehension passages, quizzes, and vocabulary exercises based on students' proficiency levels. This automated content creation saves educators time and ensures varied learning resources for students.

Translation and Interpretation Support: AI translation tools such as Google Translate and DeepL assist non-native English learners in understanding complex texts. These tools help students bridge language gaps, making English learning more accessible and less daunting.

Adaptive Learning Platforms: AI-driven adaptive learning platforms, such as Coursera and EdTech AI solutions, modify content delivery based on students' progress. These platforms use data analytics to track performance and suggest tailored learning paths to enhance English proficiency.

STRATEGIC WAYS OF USING ARTIFICIAL INTELLIGENCE TO TEACH ENGLISH LANGUAGE IN TERTIARY INSTITUTIONS

In tertiary institutions, AI can be strategically utilised to enhance the teaching and learning of the English language. By leveraging AI-driven tools and technologies, educators can create more personalised, efficient, and engaging learning experiences.

Implementing AI-Powered Personalised Learning Systems: AI can be used to develop personalised learning experiences tailored to individual student needs. Adaptive learning platforms analyse students' strengths and weaknesses, providing customised lessons, exercises, and feedback to enhance their language proficiency (Gligorea, Cioca, Oancea, Gorski, Gorski & Tudorache, 2023).

Utilising AI for Automated Assessment and Feedback: AI-driven tools such as Grammarly, Turnitin, and AI essay evaluators can be used to provide instant feedback on students' writing, grammar, and pronunciation. These tools help students improve their skills through real-time corrections while reducing teachers' workload.

Integrating AI-Driven Chatbots and Virtual Tutors: AI-powered chatbots and virtual tutors can simulate real-life conversations and provide instant responses, helping students practise English in an interactive manner. These tools can be programmed to offer explanations, quizzes, and corrective feedback (Turki, 2020).

Enhancing Pronunciation with AI Speech Recognition Tools: Speech recognition software, such as Google Speech-to-Text and ELSA Speak, can help students refine their pronunciation by analysing spoken words and providing corrective feedback. These tools make pronunciation practice more effective and engaging (Rahman, 2023).

Creating AI-Generated Learning Content: Educators can use AI tools to generate customized learning materials, including reading comprehension texts, quizzes, and vocabulary exercises. This ensures that students have access to diverse and appropriate content tailored to their proficiency level.

Leveraging AI for Real-Time Translation and Interpretation: AI translation tools like Google Translate and DeepL can assist non-native English learners in understanding difficult texts, making the learning process more accessible and inclusive (Rapa, Saja, and Azmi, 2024).

Employing AI-Based Adaptive Learning Platforms: Institutions can adopt AI-driven adaptive learning platforms, such as Coursera and EdTech AI solutions, to track students' progress and provide tailored content that aligns with their learning needs.

Incorporating Gamification Through AI: AI-powered gamification tools enhance student engagement by integrating interactive learning experiences, including language-learning games, virtual simulations, and AI-generated quizzes (Nguyena, Kremantzis, Essien, Petrounias, and Hosseini, 2024).

THE CHALLENGES OF USING ARTIFICIAL INTELLIGENCE TO TEACH ENGLISH LANGUAGE IN TERTIARY INSTITUTIONS

Artificial Intelligence (AI) has emerged as a transformative tool in education, offering personalised learning experiences, automated assessments, and interactive teaching methods. However, despite its potential, integrating AI into English language instruction in tertiary institutions presents several challenges. The following are some of the ways of using artificial intelligence to teach the English language in tertiary institutions as mentioned by numerous scholars, including Dugošija (2024).

Limited Contextual Understanding: AI-powered language learning tools rely on algorithms and large datasets to provide feedback and instruction. However, they often struggle with contextual understanding, nuances, and cultural variations in language use. Unlike human instructors, AI lacks the ability to fully grasp idiomatic expressions, regional dialects, and context-dependent meanings, leading to potential misunderstandings or inappropriate feedback.

Lack of Human Interaction and Engagement: Language acquisition is a social process that benefits from interaction, discussion, and real-world practice. AI-based tools, though capable of providing exercises and assessments, cannot fully replicate the depth of human communication. Students may miss out on essential aspects such as non-verbal cues, tone, and emotional nuances, which are critical in mastering English.

Technical Limitations and Errors: Despite advances in natural language processing (NLP), AI still encounters difficulties in accurately assessing student responses, particularly in spoken language evaluation. AI-driven grammar and writing correction tools may flag errors incorrectly or fail to recognise creative or unconventional language use. Additionally, speech recognition software may struggle with diverse accents and pronunciation variations, leading to inconsistent feedback.

High Implementation Costs: Integrating AI into English language teaching requires substantial financial investment in software, hardware, and training. Many tertiary institutions, particularly in developing countries, may lack the necessary infrastructure or budget to implement AI-based

learning systems effectively. Maintenance and updates further add to the financial burden, making widespread adoption challenging.

Ethical and Privacy Concerns: The use of AI in education raises concerns about data privacy and security. AI-powered tools collect vast amounts of student data to personalise learning experiences, but this data must be safeguarded to prevent misuse or breaches. Additionally, AI algorithms can inadvertently reinforce biases present in training data, leading to unfair assessments or recommendations.

Resistance from Educators and Students: The transition to AI-assisted learning can be met with resistance from both educators and students. Teachers may fear job displacement or struggle to adapt to AI-driven methodologies, while students may find AI-driven instruction impersonal or less engaging compared to traditional classroom interactions. Training educators to effectively integrate AI tools into their teaching methods is crucial for overcoming this resistance.

Limited Customisation for Diverse Learning Needs: AI-based language learning systems are often designed with generalised algorithms that may not cater to individual student needs. Learners with disabilities, those from non-traditional educational backgrounds, or those who require specialised learning approaches may find AI-driven instruction inadequate. The rigidity of AI systems can limit their effectiveness in addressing diverse learning styles.

MITIGATION STRATEGIES TO THE CHALLENGES OF USING ARTIFICIAL INTELLIGENCE TO TEACH ENGLISH LANGUAGE IN TERTIARY INSTITUTIONS

The following are the mitigation strategies to the challenges of using artificial intelligence to teach English language in tertiary institutions as mentioned by numerous scholars, including Binu (2024):

Securing Funding and Cost-Effective AI Solutions – Institutions can seek financial support from government agencies, private organisations, and EdTech companies to reduce implementation costs. Utilising open-source and cloud-based AI tools can also lower expenses while ensuring quality learning experiences.

Improving Technological Infrastructure – Ensuring reliable internet access, providing affordable digital devices, and establishing AI-enabled digital labs can enhance AI integration in language teaching, particularly for students in underserved areas.

Teacher Training and Professional Development – Conducting AI training workshops and certification programmes equips educators with the skills needed for effective implementation. Encouraging continuous learning through professional development ensures teachers stay updated with AI advancements.

Ensuring Data Privacy and Ethical AI Use – Implementing strong data protection policies in compliance with global privacy laws such as GDPR and FERPA safeguards student and faculty data. Partnering with ethical AI vendors and educating students and staff on responsible AI usage further strengthens security measures.

Balancing AI with Human Interaction – AI should complement rather than replace human instruction. Promoting blended learning models that integrate AI-driven activities with interactive classroom discussions helps maintain student engagement and interpersonal communication skills.

Monitoring and Improving AI Accuracy – Regular evaluation and updates of AI tools ensure accuracy and cultural inclusivity. Teachers should oversee AI-generated content to correct biases and inaccuracies, maintaining the quality and reliability of language instruction.

CONCLUSION

Artificial Intelligence (AI) has the potential to revolutionise English language teaching in tertiary institutions in Imo State by enhancing instruction, assessment, and personalised learning. AI-powered tools, such as chatbots and speech recognition software, improve students' language proficiency, while intelligent tutoring systems offer real-time feedback. However, challenges such as inadequate infrastructure, resistance from educators, and ethical concerns hinder effective implementation. Addressing these barriers through strategic investments, training, and policy frameworks is crucial. This study underscores the need for a balanced approach to AI adoption, ensuring it enhances learning outcomes while maintaining ethical and pedagogical integrity.

RECOMMENDATIONS

1. The government, educational institutions, and private stakeholders should invest in the necessary technological infrastructure, such as high-speed internet, AI-powered learning platforms, and digital tools, to facilitate the effective use of AI in teaching English.
2. Tertiary institutions in Imo State should incorporate AI-assisted learning models into their English language curriculum. This includes using AI-driven tools for grammar correction, pronunciation enhancement, and personalised learning.
3. Institutions must establish policies to ensure the ethical use of AI in language teaching, with a focus on protecting student data and preventing algorithmic biases. Compliance with international data protection regulations, such as GDPR, should be enforced to safeguard the privacy of students and faculty members using AI-powered educational platforms.

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