ARTIFICIAL INTELLIGENCE IN LANGUAGE LEARNING: ASSESSMENT OF ACCESSIBILITY AND USABILITY IN NIGERIAN SECONDARY SCHOOLS

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Abstract
The study sought to assess the accessibility and usability of Artificial Intelligence in Nigerian public secondary schools. The population of the study was all public secondary school in Ondo state while the study sample consisted of four hundred (400) senior secondary school students in Ondo West Local Government Area of Ondo State. The research design used for the study was descriptive research of a survey type. A self-structured questionnaire of Likert- type four point rating scale was used to gather data from the respondents. Findings revealed that secondary school students' accessibility to artificial intelligence usage in language learning is low with the mean score of 2.19 and the average mean of 1.59 showed that language students' use of artificial intelligence is very low. The study concluded that many Nigerian public secondary schools students do not have access to artificial intelligence for language learning, and this has made the usability of AI a mirage in Nigerian secondary schools. The study recommended that; school managements should encourage secondary school students in the use of Artificial intelligence (AI), and the use of AI has the potential of improving students English language skills if properly managed. The stakeholders in collaboration with government should provide internet facilities, computers as well as enabling environment that will encourage the use of artificial intelligence for language learning in public secondary schools

Keywords: Artificial Intelligence, Language, Assessment, Secondary Schools Students, Learning

Introduction

In the twenty -first century, the process of teaching and learning has drifted from the traditional chalk and talk to a modernized system. Teaching and learning can now take place without physical contact between the tutor and the students. This is possible with the use of technology via computer. The computer can as well perform some other functions which include, data processing, data storage, communication, control, simulation, graphics, sound generating, word processing, spreadsheet, database management, web browsing, gaming and scientific computing. In recent time, discovery shows that computer can as well perform the functions of artificial intelligence whereby, the system performs human intelligence tasks such as driving, automatic language translation content recommendations, image recognition, read and write texts, spam filters, games and so on. Hence, AI is a way of making computers, softwares and robot think and perform the functions of human beings. It refers to the process of manipulating computer such that it performs tasks that typically require human intelligence and cognition, such

tasks like learning, problem- solving and decision–making. Kaur & Gill (2019) states that artificial intelligence (AI) is a digital attempt to achieve human-level intelligence by using different computations of machines. It is a series of advanced technologies that allow humans to feel, comprehend, function, and learn from machines. Human actions such as learning, planning, making decisions, and knowing language can be done by Artificial Intelligence (AI) (Sridhar, 2018). In the same vein, Joshi (2019) stated that AI may not mean designing an incredibly smart computer that solves all problems, but rather building a machine that is capable of human-like action. It is a series of advanced technologies that allow humans to feel, comprehend, function, and learn from machines. It can be said that Artificial intelligence (AI) is a branch of computer science that emphasizes the ability to think and act like humans. It is helped by machines to find solutions to complex problems in a more human-like fashion

The major categories of AI include:

1. Narrow AI- This is used to perform some specific tasks like spam keeping out of inbox, helping to find a location, with smart phones, and playing games
2. General AI: It is a more advanced form that involve visual and language processing, understanding context and has a more advanced ability to perform human tasks
3. Artificial Super AI: Research is in progress in ensuring the super human tasks Artificial intelligence is not only relevant in the field of education,it can also be applied in the area of health care, finance, transportation, manufacturing, customer service *etc*

Artificial Intelligence (AI) in education has gained significant attention in recent years, with a growing number of studies examining the potential benefits and challenges of integrating AI-based technologies into the curriculum. In the field of language education, several studies have explored the potential of AI to support language learning processes. Teaching and learning English also has become easier with the development of technology and digital platforms. These now offer the opportunity to improve English language skills. This means that if we have a machine for teaching English, perhaps we may not need any English teachers in the classroom, or English education (Shin, 2018).

Studies revealed that AI provides a personalised learning experience which includes; language assessment with automated grading and feedback, enhancing immersive language practice through chatbot and language process tools. However, there are types of AI relevant for language teaching and learning which includes;

- Natural Language Processing (NLP) It centres on enabling the AI to understand, interprete and generate human language. It enables computer s to deduce meaning, sentiment, context and relationships from textual data, sentimental analysis, text summarization, chatbots language translation language generation more effective communication between human and machines
- Machine Translation- the computer has the capacity to translate one language to the another, recognise speech by converting spoken words into text, text to speech
- Chatbots- these are computer programmes that simulate human conversation Natural Language Processing in language learning

whereby the chatbots engage learners in conversation practice by allowing them to interact with the target language. This type of AI enables learners to practice the four language skills; listening, speaking, reading and writing.

- Virtual Language Tutors- these are the types of AI system that act as personalised language instruction. They tailor learning experiences to individual needs and goals thereby assessing learner's proficiency levels, identify strengths and weaknesses and create customised learning paths. The AI powered language learning platform can adjust a lesson's difficulty based on the learner's proficiency, recommend contents and exercises as well as adopt teaching strategies that can optimise the learning experience for each learner. The AI system can provide immediate feedback and assessment on pronunciation, grammar, and vocabulary usage.
- Gamification and immersive experiences- AI integrates elements of gamification into language learning such that learning becomes fun, immersive and engaging. Such games include puzzles and quizzes which are challenging, rewarding and motivating.(Wang, 2019) in his research titled "Research on Artificial Intelligence Promoting English Learning Change " revealed that there is the relationship between Artificial Intelligence and English teaching in the following aspects: 1. Artificial intelligence changes the atmosphere in which English is learned. Artificial intelligence offers a good learning atmosphere for immersive English learning. Through integrating and logically interpreting information such as images, sound, and text in an intelligent device, English learning becomes more stereoscopic and visual. Students communicate with AI through the interface between man and computer, which not only improves the validity of language environments. This statement is also supported by (Zilberman, 2019) that AI has a significant ability in the following ways:
- It creates a personalized atmosphere in which adult learners use all their senses to concurrently exercise English skills in conjunction with their present level of English or occupational needs or wishes.
- Artificial Intelligence optimizes the teaching impact of English. AI will provide a real simulation dialog platform for the teaching and learning of English in English. We will help students make better use of English words, spoken English, and English writing, and develop their comprehension skills. Not only can the cultural and customs awareness of the various English-speaking countries collected in AI be used to communicate and connect with students, but it can also significantly enhance the interest of students in learning English.
- Artificial Intelligence increases the practical skill of the students in English class. Artificial Intelligence (AI) is currently the hotspot technology material of social science within the industry. The application of science and technology in English Language Teaching (ELT) requires that teachers and students understand the ability to work the system and solve problems in time. Therefore, if AI is applied to English learning, it has the potential of increasing the practical operational capacity of the

students. According to Gawate (2019) in his article entitled "Artificial Intelligence (AI) Based Instructional Programs in Teaching-Learning of English Language" states that AI-based English language teaching and learning instructional programs have many advantages which includes:

1. Friendly need-based instructional programs for learners. The AI-based teaching software combines aim learners and their contextual needs. It is laid down with the learners' clear expectations and exact criteria. English language teaching-learning misleads to no endpoint without analyzing learners' needs.
2. Qualitative contents: through Artificial Intelligence, it is possible to create qualitative teaching-learning material that operates on all levels of language such as hearing, speaking, reading, and writing.
3. Supplementary teacher and student support system. As an external support mechanism, AI plays a critical function for students and teachers of the English language. AI, when it incorporates humanized knowledge, will do this at anytime and anywhere with precise assistance. While AI-based services are built-in, the position of educators is not denied
4. Fast feedback system: AI-based systems can be built to learn English in a variety of ways to get feedback. It can be used in AI-based instructional programs to quantify and interpret the input according to the needs of the students, such as gradation, review, cross verification, and in-depth presentation. All facets of the students' success are assessed.
5. Changing the teacher's role as a guide and director. It is difficult to change the position of the instructor as a guide and director and exclude the teacher from the method. AI-based systems only modify the teacher's role in the ELT process. Students should be led and assisted by teachers. The teacher can handle and manage such an AI-based program that needs a few manual modifications, and teachers can do it. AI-related instructional services can only be an aid in teaching-learning of the English language.
6. Connectivity globally. For some AI-related instructional systems, it gives students all the possibilities. Owing to Artificial Intelligence, spatial and time constraints are solved. It is possible to exchange knowledge from quality organizations as well as from organizations. This is truly incredible access to AI-based instructional software. With the help of facial recognition, voice recognition, and movements of the students, it allows remote access. In short, all student behaviours can be managed with AI-based applications.
7. Teaching-learning personalization in English. As per the demand and needs of the students, the course can be created. It can be student-centred in its personalization.
8. The AI-based learning platform helps learners to learn at their speed, to repeat topics, and to highlight items that they have issues with to involve them with

activities, to cater to their interests.

With the foregoing, there is a clear indication that the use of AI in some other countries have proven to be effective and efficient in the teaching and learning language. Hence, the aim of this paper is to find out accessibility and usability of artificial intelligence in language learning in Nigerian secondary schools with the focus on public secondary schools in Ondo West Local Government Area of Ondo State.

The following research questions were raised to guidethe study

1. Are students accessible to artificial intelligence for language learning?
2. What is the students' level of usability of artificial intelligence for language learning?

Methodology

The study adopted a descriptive research design of a survey type. The population for the study were all secondary school students in Ondo metropolis while the study sample involved four hundred (400) students randomly selected from ten secondary schools in Ondo West Local Government area of Ondo state. The instrument used to carry out the study was a self- structured questionnaire of Likert- type four point rating scale of strongly agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD), with the rating of 4,3,2,1 respectively, of the mean of 2.5 as the benchmark.

The face and content validity of the instrument was ascertained by experts in the field of education while the reliability was ensured as he instrument was subjected to trial testing on forty students who were not part of the study. This was done in an interval of two weeks of which data collected was subjected to statistical analysis using Cronbach Alpha and the result yielded 0.81 which considered the instrument adequate for the study.

Results

RQ1: Are students accessible to artificial intelligence for language learning?

Table 1 showing result of accessibility of students to artificial intelligence in language learning

SN	ITEM	SA	A	D	SD	X	R
1	There is internet service in my school	132	91	58	119	2.59	A
2	I have access to AI –powered language learning tools and resources	35	27	179	159	1.85	D
3	I have access to smartphone, laptop or computer to utilize AI powered language learning apps and platform	67	83	131	119	2.25	D
4	I have basic digital literacy skills to navigate and use AI –powered language learning tools effectively	89	77	101	133	2.31	D
5	I can afford the cost of subscription that is required for the usage of AI –powered language learning tools and resources	55	43	131	171	1.96	D
	Average mean			2.19			

X<2.5

Result of table 1 item 1 showed that secondary schools in Ondo West Local Government Area has internet services with the mean score of 2.59,the mean score of 1.85 in item 2 showed that students do not have access to AI-powered language tools and resources, the mean score of 2.25 in item 3 revealed the students access to smartphone, laptop or computer to utilize AI powered language learning apps and platform, students' having

basic digital literacy skills to navigate and use AI –powered language learning tools effectively revealed a mean score of 2.31 in item 4, in item 5, affordability of the cost of subscription that is required for the usage of AI –powered language learning tools and resources showed a mean score of 1.96. However, the average mean score of 2.19 is lesser than the benchmark of 2.5, this indicates that the accessibility level of students to artificial intelligence usage in language learning is low.

RQ2: What is the students' level of usability of artificial intelligence for language learning?

Table 2 showing results of students' usability of artificial intelligence for language learning

SN	ITEM	SA	A	D	SD	X	R
1	I use language learning APPs regularly	15	25	201	159	1.74	D
2	I use Virtual Learning APPs for language learning	11	23	177	189	1.14	D
3	I use Chatbots to do my assignments often	15	9	233	143	1.74	D
4	Translation tools assist me in better understanding of vocabulary and pronunciation	13	15	199	173	1.67	D
5	I regularly use machine translation when having problems with language translation and interpretations	7	11	211	171	1.64	D
	Average mean			1.59			

X< 2.5

The result of table 2 item 1 showed the mean score of 1.74 indicating that students do not regularly use language learning APPs, 1.14 mean score in item 2, revealed the extent to which students use Virtual Learning APPs for language learning, students use of chatbots for language learning revealed a mean score of 1.74 in item 3, students' use of Translation tools in better understanding of vocabulary and pronunciation has a mean score of 1.67 in item 4 ; and students' regular use machine translation when having problems with language translation and interpretations has a mean score of 1.64. However, the average mean of 1.59 is lesser than the benchmark of 2.5, this showed that language students' level of usability of artificial intelligence is very low.

Discussion

The result of table 1 revealed that students' accessibility to AI for language learning is low. The mean score of 2.19 which is less than the benchmark of 2.5 is an indication that students' accessibility to AI for language learning in ondo west is poor. This corroborateswith the view of Bulus (2024) that Students' ability to explore digital resources such as AI depends on their access to digital technologies. Pazmino and Alvarado-Lucas (2023) posit that artificial Intelligence (AI) can potentially enhance language learning outcomes by offering personalized learning experiences, improving speaking and listening skills, and increasing student's engagement. (Wang, 2019) posit that the reform of English teaching and learning can be effectively promoted through artificial intelligence machine learning, intelligent search, and natural language processing. The findings of the study corroborates with the findings Pazmino and Alvarado-Lucas (2023) that there is limited infrastructure, lack of access to the internet or the necessary hardware to support AI-based technologies to support AI-based

technologies in Ecuadorian schools. However, if AI are not authorised for use in Nigerian secondary schools, it will be difficult for students to enjoy the benefits of using this modern device for language learning.

The result of table 2 revealed that the students' usability of artificial intelligence for language learning is very low. The average mean of 1.59 is lesser than 2.5 which is the benchmark. This corroborates with the assertion of Ball (2024) that the effective integration of AI technologies into teaching and learning is hampered by several factors such as problems with availability and accessibility, epileptic power supply, a lack of knowledge or skills, funding, inadequate professional development, disinclination to change, unreliable internet connections. Also, (Thomaz and Breazeal, 2008; Bittencourt et al., 2009; Cavus, 2010) corroborated the findings that many Nigerian school is still facing the challenges of limited internet access in some regions, infrastructure challenges and limited awareness which makes the adoption of AI systems such as Teachable robots, Web-based Educational systems, and Learning Management Systems slower.

Conclusion

Based on the findings of the study, it was concluded that many Nigerian public secondary schools students are not accessible to artificial intelligence for language learning, and has made the usability of AI a mirage in Nigerian secondary schools.

Recommendations

The following recommendations are made:

- The school managements should encourage secondary school students in the use of Artificial intelligence (AI) as it is becoming a crucial component of contemporary educational systems that has the potential to improve learning approaches and personalize learning experiences
- If properly managed, the use of AI has the potential of improving students' English language skills.
- Government with the collaboration of stakeholders should provide internet facilities, computers as well as enabling environment that will encourage the use of artificial intelligence for language learning in public secondary schools
- As the world is now a global village, Nigerian students should not be left out in the global world. They should be encouraged to have access and use AI wisely for activities that would enhance their academic progress

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