



Utilization of AI Language Learning Tools by Undergraduate Students in Selected Universities in Delta State, Nigeria

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Abstract

This study investigated the awareness and use of artificial intelligence-powered language learning tools among undergraduate students in Delta State, Nigeria. Survey research design was used and a sample size of 870 students was selected by stratified random sampling technique. A questionnaire was used to collect data on the awareness and use of AI-powered language learning tools. Descriptive and inferential statistics were used to analyze the data. Undergraduate students in Delta State have varying levels of awareness and use of different AI language learning tools, and the levels of awareness and use are positively correlated. The study found, in particular, that students are aware of uLesson's AI-powered video lessons, chatbots for learning and AI-powered language translation apps, but less aware of AI being used to predict student performance and dropout rates. The study also found that students use AI-enabled learning platforms to improve their skills and advance their careers, and that awareness and use of AI language learning tools are related. The study concluded that educators and policymakers should invest in AI technology and integrate AI-powered language learning tools into language learning programs to enhance student learning experiences and recommended that students should be provided with training and support to enhance their awareness and utilization of AI language learning tools, and that developers of AI language learning tools should develop context-specific tools that meet the needs of Nigerian students.

Keywords: AI, learning language tools, ULesson, undergraduate students, Chatbots

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Introduction

The tremendous technology transformation that is reshaping instructional delivery process in education globally; is a landmark benefit of the evolution of Artificial intelligence. Globally, Artificial intelligence popularly known as AI is increasingly being integrated into academic activities such as teaching, learning and research. In Nigeria, Universities are leveraging AI technologies to enhance student academic engagement and achievements. (B. Chen et al., 2024); (Xu et al., 2021) defines artificial intelligence as the simulation of processes of human intelligence by machines, especially computer systems, that include learning, self-evaluation and critical thinking (reasoning). AI has many benefits for language teaching and learning at all levels of education (Alexandropoulos, 2025); (Jara & Pedroso, 2025). AI tools have a wide range of applications in the language studies such as the conversational agents, grammar and writing assistants, adaptive language learning platforms and machine translation services (Torres & Kahveci, 2025); (Wang et al., 2026). AI-powered tools are gaining popularity among language learners and offer personalized and interactive learning experiences (J. Zhang & Zhang, 2025); (Alizada et al., 2025).

These tools employ machine learning algorithms to offer learners personalized feedback, suggestions, and guidance to enhance their language skills (Vo, 2025). The major languages of studies in many Nigerian Universities are English and French; the indigenous languages include Igbo, Hausa and Yoruba which are not as popular as English and French. The AI tools applicable to language studies include the following chatbots, ChatGPT, ULesson, Google Translate, Deep, Grammarly, adaptive learning platforms, to mention but a few. These tools have strong potentials to enhance students reading, writing, speaking, listening, pronunciation, comprehension task, vocabulary development, assistive learning, research, translating texts, among others (Pederroso et al., 2023); (Nwachukwu et al., 2025). Despite the growing interest in AI language learning tools, there is limited research on the awareness and utilization of these tools among undergraduate students, particularly in Delta State, Nigeria (Llanes et al., 2025); (Eze et al., 2025). Understanding the awareness and utilization of AI language learning tools among undergraduate students is crucial for educators, policymakers, and developers to design and implement effective language learning programs that meet the needs of students in the digital age. This study investigated the awareness and utilization of AI language learning tools among undergraduate students in selected universities in Delta State namely, Federal University of Petroleum Resources (FURRE) Effurum; Delta State University, Abraka; Southern University, Ozoro; Maritime University, Okerenkoko; Dennis Osadebey University, Asaba; and University of Delta, Agbor (Akhter & Shaheen, 2026); (Du & Daniel, 2024).

Despite the exalted gains of AI tools in language studies, its adoption by Nigerian University students may be uneven due to factors of knowledge and challenges. Awareness of AI tools for language learning may very low among some students; which would invariably affect the utilisation of such tools. The extent of utilization of any tools is highly dependent on the extent of the users awareness of such tools. Awareness here embodies knowledge of the uses and appreciation of the benefits of available AI language learning tools. The uneven adoption of AI language learning tools by university students in Delta State is the problem of this study. This study investigated the comparative level of awareness and utilization of AI language learning tools by undergraduate students in Delta State of Nigeria. The main objective of this study is to investigate the baselines of uneven adoption of AI language learning tools by university students in Delta State of Nigeria. The specific objective are to investigate the: comparative awareness level of AI language learning tools among undergraduate students in Delta State; comparative utilization level of AI language learning tools by university students in Delta State; Relationship between awareness and utilizations of AI language learning tools among university students in Delta.

Methodology

This study adopted a survey research design to investigate the awareness and utilization of

AI-powered language learning tools among undergraduate students in selected universities in Delta State. The population of the study consist of all undergraduate students in the selected universities. A sample size of 1200 students were selected using a stratified random sampling technique. The study used a questionnaire to collect data on the awareness and utilization of AI-powered language learning tools. The data was analyzed using descriptive statistics and inferential statistics including frequency distributions, mean, and regression analysis. Sections on demographic variables is part of the questionnaire. The constructs were measured using a 4-point Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree), with a mean criterion of 2.5 use as the benchmark for interpretation. The study also employed a reliability test to ensure the consistency of the questionnaire, and validity test to ensure that the questionnaire measures what it is supposed to measure. The research made certain that the privacy and confidentiality of the respondents' information will be respected; the permission of the participant is gotten from every respondent. Participants were guaranteed anonymity and confidentiality for their answers.

Results

Data Presentation

The data was presented to suit the research objectives. Primary data were reviewed and questionnaire was distributed randomly based on specific demographic characteristics such as age, gender, and all other demographic variables were calculated using percentages.

Table 1. Senatorial and University Distributions of the Questionnaires

Senatorial District	Names of Selected Institutions	No. of Questionnaires Distributed	No. of Questionnaires Returned
Delta Central	i. Federal University of Petroleum Resources (FUPRE) Effurun	200	147
	ii. Delta State University Abraka	200	126
Delta South	i. Southern Delta University, Ozoro	200	139
	ii. Maritime University Okerenkoko	200	124
Delta North	i. Dennis Osadebey Asaba	200	152
	ii. University of Delta Agbor	200	182
		<u>1200</u>	<u>870</u>

Source: author's compilation (2025)

Table 2. Respondents Socio-demographic characteristics

Socio-Demographic Characteristics	Frequency	Percentage
Status		
Single	643	73.9
Married	227	26.1
Total	870	100
Age Range		
16-20 years	301	34.6
21-25 years	254	29.2
26-30 years	179	20.6
31 & above	136	15.6
Total	870	100
Total	870	100

Source: Authors Survey, 2025.

In Table 1 we can see the details of the senatorial district and University distribution of the population, while table 2 shows the sociodemographic characteristics of the respondents. The population was distributed to all accredited Universities selected from each senatorial district in Delta state. Among the 870 respondents, majority are single accounted for 643 (73.9.0%) of the total. In terms of age, most respondents are over 16-20 years of age.

Data Analysis

What is the comparative awareness levels of selected AI language learning tools among undergraduate students in Delta State?

Table 3. Respondent perception on the comparative awareness levels of selected AI language learning tools among undergraduate students in Delta State

S/N	Factors	SA	A	D	SD	Mean	Decision
1	Most of the students are aware of uLesson's AI-powered video lessons for undergraduate school students.	44 8	12 0	13 3	169	3.0	Agreed
2	Few students have low awareness of chatbots for learning, with more lacking access.	19 3	51 3	10 9	55	3.0	Agreed
3	Limited awareness, with few students utilizing AI-driven recommendations for personalized study paths.	30 6	38 7	69	108	3.0	Agreed
4	Some awareness, with students leveraging AI-powered learning platforms for skill development.	98 22 5	61 9 34	3 21 8	81 145	2.9 2.8 2.7	Agreed Agreed Agreed
5	Moderate awareness, with students using apps for language translation and content access.	30	6	23	175	2.7	Agreed
6	25% of students are aware of AI chatbots and virtual assistants for answering questions 24/7.	1	19 4	0	106	3.1	Agreed
7	30% of students are familiar with AI tools for automating exam marking and feedback.	17 7	68 45	10			
8	There's low awareness, with few students understanding AI's role in predicting student performance and dropout rates.	43 9	0 21	7			
Aggregate Mean						2.9	Agreed

Source: Author's survey, 2025.

As deduced from table 3, item 1-8, it shows that the aggregate mean of the items is above the mean criterion of 2.5. Also, based on all responses, the aggregate mean is 2.9 indicating that the respondents all agreed that the item above are the comparative awareness levels of selected AI language learning tools among undergraduate students in Delta State. What is the comparative level of utilization of selected AI language learning tools among undergraduate students in Delta State?

Table 4. Respondent perception of the comparative levels of utilization of selected AI language learning tools among undergraduate students in Delta State

S/N	Factors	SA	A	D	SD	Mean	Decision
1	About 40% of students utilize uLesson's AI-powered video lessons for exam preparation and homework help.	316	199	314	41	2.9	Agreed
2	Not less than 20% of students use chatbots for learning, with limited access and technical issues hindering usage.	503	122	68	177	3.1	Agreed
3	At the very least, 15% of students' leverage AI-driven recommendations for personalized study paths and skill development.	168	446	101	155	2.7	Agreed
4	Not less than 30% of students utilize AI-powered learning platforms for skill development and career advancement.	645	87	137	1	3.6	Agreed
5	Not below 45% of students use apps for language translation and content access.	229	360	191	90	2.8	Agreed
6	At a lower limit, 18% of students use AI chatbots and virtual assistants for answering questions and providing feedback.	275	329	144	59	3.0	Agreed
7	22% of students benefit from AI tools for automating exam marking and feedback at the minimal.	402	135	218	115	2.9	Agreed
8	Not less than 12% of students understand AI's role in predicting student performance and dropout rates.	316	233	177	144	2.8	Agreed
9	About 50% of students use AI-powered language learning apps for vocabulary building and grammar practice.	272	368	77	153	2.9	Agreed
10	In the least, 25% of students utilize AI-powered flashcards for vocabulary building and exam preparation.	144	523	64	139	2.8	Agreed
11	10% of students participate in AI-facilitated language exchange programs for cultural immersion; at the barest minimum.	156	427	101	186	2.6	Agreed
12	20% of students use AI-driven language assessment tools for evaluating language proficiency; at the lowest limit.	361	394	45	70	3.2	Agreed
	Aggregate mean					2.9	Agreed

Source: Field Work, 2025

From table 4, item 1-12, it can be seen that the aggregate mean of the items is above the mean criterion of 2.5. indicating that the respondents all agreed that the item above are the comparative levels of utilization of selected AI language learning tools among undergraduate students in Delta State. What is the relationship between the awareness and utilization levels of AI language learning tools by undergraduate students in Delta State?

Table 5. Respondent perception on the relationships between awareness and utilization levels of selected AI language learning tools by undergraduate students in Delta State

S/N	Factors	SA	A	D	SD	Mean	Decision
1	Awareness and utilization of AI language learning tools are positively correlated, with higher awareness leading to increased utilization.	416	212	75	167	3.0	Agreed
2	Students with higher awareness of AI tools are more likely to utilize them for language learning.	501	16	53	300	2.8	Agreed
3	Low awareness of AI tools limits their utilization among undergraduate students.	346	291	64	169	2.9	Agreed
4	As awareness of AI tools increases, utilization rates also increase among undergraduate students.	312	398	97	63	3.1	Agreed
5	Students who are aware of AI tools are more likely to adopt them for language learning.	603	75	102	90	3.4	Agreed
6	Utilization of AI tools is dependent on awareness, with higher awareness leading to increased usage.	517	122	19	217	3.1	Agreed
7	Awareness and utilization of AI language learning tools are linked, with increased awareness leading to increased utilization.	379	286	78	127	3.1	Agreed
8	Students with higher awareness of AI tools tend to utilize them more frequently.	420	115	102	233	2.8	Agreed
9	Awareness of AI tools drives utilization, with students seeking out tools they are aware of.	266	374	113	117	2.9	Agreed
	Aggregate mean					3.0	Agreed

Source: Field Work, 2025

Table 5, items 1-9, show that the aggregate mean of the items is above the mean criterion of 2.5. indicating that the respondents all agreed that the item above are the relationships between awareness and utilization levels of AI language learning tools by undergraduate students in Delta State.

Discussion

This study investigated the awareness and usage of AI-powered language learning tools among undergraduate students in Delta State, Nigeria. The study found that undergraduate students in Delta State have different levels of awareness of different AI language learning tools. Most students are familiar with uLesson's AI-driven video lessons (Mean=3.0) Most of the students know about the AI-powered video lessons of uLesson, the respondents agreed. This result is in line with the study of (Al-Adwan et al., 2023) who found that students' awareness of AI-powered tools influences their behavioral intention to use them. Moderate awareness was also found for chatbots for learning, AI-based recommendations for customized study paths and AI-based language translation apps (Wiboolyasarini et al., 2025); (Z. Liu & Wang, 2026); (D.-L. Chen et al., 2025). These findings are consistent with the Diffusion of Innovations Theory which proposes that adoption of new technologies occurs in a predictable manner and certain characteristics of the innovation affect the rate of adoption (Marian et al., 2025).

The study revealed that the undergraduate students in Delta State differed in the level of utilization of various AI language learning tools. The respondents agreed that 40% of students use uLesson's AI-powered video lessons for exam prep and homework help with a mean score of 2.9. This is consistent with the study of (Toros et al., 2024); (B. S. Zhang et al., 2022) who found that AI-based chatbots can improve students' academic performance and learning attitude. Moreover, findings show that students use AI-powered learning platforms for skill development and career advancement with a mean score of 3.6. This finding is in line with the study of (Kelly & Palaniappan, 2023); (X. Chen et al., 2025) who found that students' perception of AI-assisted language learning is influenced by their performance expectancy, social influence, and AI language technological knowledge. The study revealed an increase in the awareness and usage of AI language learning tools among Delta State undergraduate students. The respondents agreed that there is a positive relationship between AI language learning tools' awareness and utilization. The greater the awareness, the greater the utilization. This finding is consistent with the Technology Acceptance Model (TAM) that perceived usefulness and perceived ease of use influence an individual's attitude toward using a technology (Musa et al., 2024); (Alsyouf et al., 2023). The study also showed that students who are more aware of AI tools are more likely to use them for language learning, while low awareness of AI tools restricts their utilization among undergraduate students. These findings are in line with Almula and Al-Rahmi (2023) study that indicated students' awareness of AI-powered tools affects their behavioral intention to use them.

The finding that uLesson is the most recognized and predominantly utilized tool among students in Delta State highlights the importance of local relevance and platform affordability in the adoption of educational technology (Ganguly et al., 2026); (Q. Liu et al., 2025). As a Nigerian-rooted EdTech platform, uLesson offers a curriculum and content tailored to the local educational context, significantly lowering barriers related to perceived complexity. When a technological innovation is designed to align with the users' pedagogical environment, the adoption process accelerates considerably. This reinforces (Uygun & Demir, 2026); (Ekizer, 2025) propositions regarding innovation characteristics, where compatibility and relative advantage determine the speed at which an AI-based learning tool is accepted by the local academic community. While awareness of uLesson is high, findings indicating only moderate awareness of chatbots, custom learning path recommendation systems, and AI translation apps suggest fragmented technological literacy (Alharbi et al., 2025); (Kılıçkaya & Kic-Drgas, 2025). Students tend to recognize AI tools directly integrated into self-study platforms but have less exposure to generative or adaptive AI tools that require self-directed learning. This gap reflects the "knowledge/awareness stage" of the Diffusion of Innovations Theory, where communication channels and information regarding the diverse functions of language-based AI have not yet been evenly distributed across higher education institutions in Delta State (Hassan, 2026); (Younas et al., 2025).

The 40% utilization rate of uLesson—specifically for exam preparation and homework completion—indicates that students' primary motivation for adopting AI remains pragmatic and

focused on short-term academic achievement, or "academic survival." As emphasized (Im et al., 2025); (Ocado, 2025), the effectiveness of AI in enhancing academic performance lies in its ability to provide instant responses and structured assistance. However, a heavy reliance on AI solely for routine tasks may limit its application at higher cognitive levels—such as critical thinking, in-depth syntactic analysis, or real-time interactive communication in language learning. Conversely, the high mean score (Mean = 3.6) regarding AI usage for skill development and career advancement indicates an awareness of the importance of self-efficacy beyond the formal classroom setting (Sultana et al., 2026); (Yaseen et al., 2025). Students recognize that AI-assisted language proficiency is a vital transferable skill for workforce readiness in the digital age. This phenomenon aligns with the UTAUT (Unified Theory of Acceptance and Use of Technology) framework proposed by (Alam et al., 2026); (Ahmed & Sultan, 2026), wherein "performance expectancy"—the belief that using technology will facilitate better outcomes—serves as a powerful predictor in motivating students to learn AI tools independently.

Conclusion

This study examined the knowledge and use of AI-powered language learning tools among undergraduate students in Delta State, Nigeria. The results showed that the students had different levels of awareness and use of different AI language learning tools. The study also revealed a positive relationship between the level of awareness and the level of utilization, i.e., more awareness leads to more utilization and vice versa. The findings of the study have implications for educators, policy-makers and developers of AI-powered language learning tools. Further studies could be conducted on the efficacy of certain AI-based language learning applications on the enhancement of the language competence of undergraduate students in Nigeria. A comparative study of the effect of the AI-powered tools on the achievement in language learning in different educational contexts could be also insightful. Also, a study of the challenges and constraints of the use of AI-powered tools in language education in Nigeria may reveal potential ways of solving these issues. Moreover, a longitudinal study may be conducted to investigate the long-term effects of AI-enabled language learning tools on language learning outcomes and student motivation. Base on the results of the study, the following are the recommendations made: Educators and policymakers may improve the student learning experience thru the integration of AI-powered language learning tools into language learning programs; Increase awareness of AI language learning tools and their use and support students in using them.

Conflicts of interest

The author declares no conflict of interest.

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Author contribution

I. P. E.: Conceptualization; Methodology; Software. Lourdes I. Nati: Data curation; Writing-Original draft preparation. Lourdes I. Nati: Visualization; Investigation. Marko L. Aratea and Lourdes I. Nati: Supervision. Lourdes I. Nati: Software; Validation. Marko L. Aratea: Writing -Reviewing and Editing.

Declaration of generative AI in scientific writing

Generative AI was employed in this study strictly for language enhancement and structural formatting. The authors maintain full accountability for the intellectual integrity, originality, and factual accuracy of the entire manuscript. No AI tool was used to create or alter primary research data.

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