

UTILIZATION OF ARTIFICIAL INTELLIGENCE IN FACILITATING ENGLISH LANGUAGE TO LIFELONG LEARNERS

OLADIPO, Adeyeye Olubodun (PhD)

Department of Adult Education,
Federal University, Oye - Ekiti,
Nigeria.

email: oladipo.olubodun@fuoye.edu.ng

Orcid: 0000000189486257

Tel: +2347060643327

&

APENA, Temilola Taiwo (PhD)

Department of Educational Foundations
National Open University of Nigeria

email: tapena@noun.edu.ng

Orcid:0000-0001-9197

Tel: +2348033922807

Abstract

A descriptive quantitative survey research approach was adopted. A self-administered questionnaire was used in the study to gather primary data from respondents. Two research questions and one hypothesis was formulated to guide the study. Participants who are currently benefiting or had benefited from lifelong learning or in-service professional development programme activities in Ibadan North formed the population of the study. Multistage sampling procedure was employed in the participant selection process. The targeted group was initially identified using the convenience/accidental sampling technique, and 738 individuals were subsequently chosen across Ibadan North using snowball technique. The research instrument was vetted by experts in the Department of Adult Education and the Tests and Measurement Unit in National Open University. The 18 items instrument was then trial tested in Ogun state. The reliability coefficient of the instrument was calculated using Cronbach Alpha's measure and the instrument yielded a reliability index of 0.86. Therefore, the instrument was generally regarded as valid and reliable. The data collected were statistically analyzed using descriptive statistics of mean and standard deviation to answer the research question raised while inferential statistics such of t-test and Analysis of Variance (ANOVA) were used to test the hypotheses at the 0.05 level of significance. This study thus established that, lifelong learners' perceived the integration of artificial intelligence in facilitating English language learning as impactful. It is therefore recommended that Lifelong learners should endeavour to meet up with the dynamism of technology.

Keywords: Lifelong learners, Artificial intelligence, English language, Ibadan North, utilization.

Introduction

English language has been recognized as a convenient medium of communication, due to its acceptability and wider coverage, with respect to simplicity of words formation, sequential order of tenses, general uniformity globally, ease of writing and comprehension across different organizations, races, countries and continents (Crystal, 2003, & Kibe, 2014). The positive influence of English language makes it suitable for diverse purposes, including making early childhood education more meaningful, adequately interactional and goal oriented towards socioeconomic development (Betty, 2013). Olubodun and Apena (2023) affirmed that English language has become one way of ascertaining learners' achievement in schools.

Teaching lifelong learners English language can be very tasking, but with the availability of Artificial Intelligence (AI), the task of facilitating this language to lifelong learners may become less stressful. AI has the ability to improve the teaching and learning of English language to lifelong learners. It has the capacity to help them in the area of personalized learning. Artificial Intelligent powered language learning platforms can well adapt to the needs of individual and proficiency levels of learners. AI can bring about interactive and varied teaching experiences for learners (Osisanwo, 2022). These methods can engage them in conversational practice, grammar exercises, and vocabulary drills and getting immediate feedback and suggestions for improvement. Artificial Intelligence has speech recognition technology that can help lifelong learners to practice their pronunciation and receive real-time feedback. Learners are able to compare their pronunciation to native speakers and get assistance on specific areas to work on.

Watson (1999) posited that artificial intelligence may assist the dissemination of education related messages, but learners with low technological proficiency may not be able to act as demanded, if they do not comprehend and internalize the content of the disseminated messages uniformly. Artificial Intelligence is a newer form of computer and programming assisted technological device aimed at improving work input and output, as well as supporting the improvement of learning and discovery in various endeavours (West & Alen, 2019). The authors also explained that it is not surprising that the utilization of artificial intelligence is rapidly adopted in Lifelong Learning, because it accommodates the use of English language without much restraint. Artificial intelligence is the simulation of human intelligence processes by machines, especially computer systems. Specific applications of AI include expert systems, natural language processing, speech recognition and machine vision.

Furthermore, the both asserted that the impact of artificial intelligence in Lifelong Learning is only made possible through the use of various types of artificial intelligence technologies that are readily available for education purposes such as the use of adaptive learning tools, tools that measure attention, empathy, and emotion, virtual assistant chatbots, tools for automatic writing evaluation, personalized learning platforms, intelligent language learning apps, personalized content creation platforms etc.

The use of artificial intelligence has been considered a noble invention that is capable of shaping one's perceptions and beliefs, as it makes work easier and saves time (David, 2019). However, it is more of a coin with two sides, signifying that not all individuals (in this case; lifelong learners and/or English language teachers) or learning environment actually permits its adoption and utilization in the teaching of English language to learners. This implies that, there are several impediments against the use of artificial intelligence in the facilitating English language to lifelong learners in Ibadan North Local Government Area.

Nigeria as a country is plagued with poor electricity supply (Ibadan is not exempted). In the words of Oguguo (2020), the inadequate supply of electricity in Nigeria has its negative massive impact on the creation and growth of businesses, as well as the adoption and utilization of artificial intelligence in facilitating English language to adult education students in Ibadan. To this end, this complete effective power of adopting and lifelong learners' intelligence is further limited, and this implies that adopting artificial intelligence in facilitating English

Language to lifelong learners is a better innovation, but the inadequacy of electricity and high cost of fuel to power generating sets will definitely reduce its positive impact to a greater extent.

Inadequate technological literacy is a major constraint among adults which has led to loss of productivity, just as the utilization of English-language in communication seem onerous for some in Africa (Ibadan is inclusive), as Western education was brought to Africa by the European colonial powers (Negash, 2011). Therefore, to arouse the interest of adult education students in Ibadan, there will be absolute need for adequate technological literacy for artificial intelligence to enhance meaningful social and education revolution among adult education students in Ibadan Apena, Sobowale and Ojeomogha (2012). (Omorodion, 2021).

The rigidity of Nigeria's educational curriculum has been criticized as an obstacle to the adoption and utilization of certain technological aids, as both the instructors and many lifelong learners lack adequate technological literacy to optimally function as required Apena (2023) and (Okoroma, 2006). Nonetheless, a gradual introduction and inclusion of artificial intelligence in facilitating English language to lifelong learners can reclaim and revive their interest in learning, and in so doing, improve the educational success of indigenous students (Simon & Heinz, 2004; Juliet, 2019).

It has been suggested that Western-educated elites in Africa are clinging to unworkable colonial language policies in order to perpetuate their own political power over the majority of citizens. Moreover, Simon and Heinz (2004) asserted that the adoption of variety of media facilitating English language to lifelong learners will guarantee national unity, economic progress, but the very fact that local languages are widely taught in secondary and post-secondary schools in Africa could be sending a strong message that African languages and culture is of higher value.

Bamgbose (1991) stated that the language of instruction in any society influences hegemony and power, thus not providing instruction in the mother tongue is tantamount to the social and cultural inferiority of the culture, if the use of mother tongue is denied, it will conversely imply a heritage of colonialism. For instance, Jeanette (2003) affirmed that book donation programs to Somalia has significantly devalue the speaking and learning of Somali language, as more Somalis have become literate in English in recent times.

A major benefit of artificial intelligence in facilitating English language to lifelong learners is that it enhances human ability to communicate with others through the use of words, gestures, and/or other communication tools (Jeanette, 2003). The inevitable advantage of adding artificial intelligence to the teaching and learning of English language is that it gradually helps to build up international relations and consciousness in individuals ahead of time (David, 2019). According to the author, the adoption of artificial intelligence in the teaching English language will play an important role in self-reliance of the lifelong learners towards global interaction and communication along with the progress of learning.

This adoption of artificial intelligence in facilitating English language to lifelong learners forms a stronger medium of awareness for both the present and future generation, as it boost curiosity to learn and carry simple basic tasks without the supervision of an instructor (Juliet, 2019). Thus, the beneficial role of adopting artificial intelligence in facilitating English language in

lifelong learning is of great benefit to learners, as they can study anywhere at their own pace, set their own study goals, and follow a personalized syllabus (David 2019).

Besides, Fawaz (2023) posited that the adoption of artificial intelligence in facilitating English language in lifelong learning also helps to develop engaging games, quizzes, and other activities that tailor lessons to learners' interests, as well as generate bit-size learning through low-storage study materials and other lessons in digital format. This way, learners and instructors can leverage the entire study material without taking up much space in the system. It is not vain to state that utilization of artificial intelligence in the planning and teaching of English language offers several benefits, including improved accessibility, tutoring, automated grading and administration, and streamlined workflows that provide learners with high-quality education and relieve instructors of fatigue (Fawaz, 2023).

The instructors gets the privilege of a feedback in real time through the use of artificial intelligence in facilitating, which would be particularly beneficial for larger class sizes, thereby saving time and energy in the preparation of lesson plans and selection of teaching materials, as well as allowing learners to easily comprehend what is being taught. Lifelong learning simply connotes a brand or system of both formal and informal education designed to meet the educational needs of adults who have missed desired education in their early stage of life (Jesusegun, 2021).

Thus, this provided system of education requires “extraordinary teaching skill, special and flexible curriculum, specific learning materials etc.,” which are needed to attain optimum education that will make learners to be self-reliant, society-fit and value providing wherever he/she gets to, hence specialized educational approach is ensured to enable them learn key skills and foundational concepts that they have missed in their early life (Piaget, 1997; Jesusegun, 2021). Adult Education is provided in Nigeria to instigate an egalitarian society that permits critical developmental milestones, ranging from social-emotional skills to the beginnings of numeracy, literacy, and critical thinking (Sally, 2013). The core areas where AI technology is being developed and utilized for learners include:

- a) Vision: refers to emotional recognition to detect confusion and engagement, with identity management applications for testing and virtual learning.
- b) Voice: refers to text-to-voice interfaces that are utilized to support learning activities, particularly literacy and language learning.
- c) Natural Language: connotes deciphering human language during a complex artificial intelligence challenge. However, this technique often emerges in assessment, feedback, and plagiarism detection.
- d) Algorithms: this “machine learning” is being applied to create personalized, adaptive learning paths for students.
- e) Hardware: through the adoption of artificial intelligence in the teaching of English language in adult education programme, smart devices, robotics, laboratory technology, and software systems can be powered. To this end, for reliability and validity of this study, a survey was carried out to explore the factors and benefits of adopting artificial intelligence in facilitating English Language to lifelong learners in Ibadan North Local Government Area.

Aim and Objectives of the Study

The broad aim of the study is to explore lifelong learners' perception of the impact of the integration of artificial intelligence in facilitating English language learning.

The **specific objectives** of this study are to

1. assess age differences in lifelong learners' perception of the impact of the integration of artificial intelligence in facilitating English language learning.
2. educational level differences in lifelong learners' perception of the impact of the integration of artificial intelligence in facilitating English language learning.

Research Question: As a result of the research problem and the objectives stated above, this study examined the question:

1. What is the lifelong learners' perceived impact level of the integration of artificial intelligence in facilitating English language learning?

Hypotheses

H₀₁: There is no significant age difference in lifelong learners' perceived impact level of the integration of artificial intelligence in facilitating English language learning.

H₀₂: There is no significant educational level difference in lifelong learners' perceived impact level of the integration of artificial intelligence in facilitating English language learning.

H₀₃: There is no significant gender difference in lifelong learners' perceived impact level of the integration of artificial intelligence in facilitating English language learning.

Methodology

This study adopted a descriptive quantitative survey research approach. A self-administered questionnaire was used in the study to gather primary data from participants who are currently benefiting or had benefited from lifelong learning or in-service professional development programmes. The questionnaire requested the lifelong learners' perceived impact level of the integration of artificial intelligence in facilitating English language learning.

All participants who have benefited from lifelong learning or in-service professional development programme activities in Ibadan North made up the study's targeted group. The reason for the choice of this group of people is partly because they are currently benefiting or had benefited from lifelong learning or in-service professional development programme activities. This group was chosen in order to gain firsthand knowledge of the perceived impact level of the integration of artificial intelligence in facilitating English language learning among lifelong learners.

A multistage sampling procedure was employed in the participant selection process. The targeted group was initially identified using the convenience/accidental sampling technique, and 738 individuals were subsequently chosen across Ibadan North using snowball technique. The researcher-designed questionnaire titled "Artificial Intelligence and Lifelong Learning (AILL)" served as the study's instrument. It consisted three sections, A and B. Section A consisted personal information about the respondents while section B consisted statement items concerning how impactful is the integration of artificial intelligence in facilitating English language learning among lifelong learners. The statements were rated on a four-point rating scale of Highly Impactful (HI), Impactful (I), Less Impactful (LI), and Never Impactful (NI). Scores are 4, 3, 2, 1, for HI, I, LI and NI respectively for positively worded items while reverse was the case for negatively worded items.

To ensure validity of the instrument, the research instrument was vetted by experts in the Department of Adult Education and the Tests and Measurement Unit in National Open University. This was to ensure that the questionnaire items adequately cover all the component variables of the research questions and hypotheses stated in terms of content, relevance, scope of coverage, language of presentation, clarity of expression and overall adequacy. The 18 items instrument was then pilot tested in Oyo state. The reliability coefficient of the instrument was calculated using Cronbach Alpha's measure and the instrument yielded a reliability index of 0.86. Therefore, the instrument was generally regarded as valid and reliable.

The study used a self-administered questionnaire to gather primary data. The researcher engaged the services of five trained assistants to help with the administration and collection of the instrument. The research assistants were adequately briefed on the mode of administration and retrieval of the questionnaire. Data were gathered through filling out the questionnaire and administering it on the spot.

To make meaningful deductions, the data collected were statistically analyzed using descriptive statistics of mean and standard deviation to answer the research question raised while inferential statistics such of t-test and Analysis of Variance (ANOVA) were used to test the hypotheses at the 0.05 level of significance. Never Impactful ($\bar{x} \leq 1.0$), Less Impactful ($\bar{x} \leq 2.0$), Impactful ($\bar{x} \leq 3.0$), and Highly Impactful ($\bar{x} \leq 4.0$) were the ratings assigned to the mean score values.

Analysis and Results

The Tables below show the analysis of data and results of the study.

Table 1: Socio-demographic Attributes of the Respondents

		Freq.	%
Respondents' Gender	Male	318	43.1
	Female	420	56.9
	Total	738	100.0
Respondents' Age	21-30 Years	44	6.0
	31-40 Years	332	45.0
	41-50 Years	101	13.7
	51-60 Years	101	13.7
	61-70 Years	117	15.9
	Above 70 Years	43	5.8
	Total	738	100.0
Respondents' Employment Status	Employed	391	53.0
	Unemployed	217	29.4
	Retired	59	8.0
	Student	71	9.6
	Total	738	100.0
Respondents' Educational Level	Less Than High School	58	7.9
	High School Graduate	260	35.2
	College/Technical Training	101	13.7
	Bachelor's Degree	216	29.3
	Master's Degree	73	9.9
	Doctorate/Professional Degree	30	4.1
	Total	738	100.0

Table 1 shows the socio-demographic attributes of the respondents. 318 (43.10%) of the respondents were males while 420 (56.90%) were females. 44 (6.00%) were between the age range of 21 - 30 years, 332 (45.00%) were within the age range of 31 – 40 years, 101 (13.70%) were within the age range of 41 – 50 years, 101 (13.70%) were between the age range of 51 - 60 years, 117 (15.90%) were between the age range of 61 - 70 years, while the remaining 43 (5.80%) were above 70 years. On respondents' employment status, 391 (53.00%) were employed, 217 (29.40%) were unemployed, 59 (8.00%) were retired, while the remaining 71 (9.60%) were students. Regarding respondents' educational level, 58 (7.90%) had less than high school certificate, 260 (35.20%) were high school graduate, 101 (13.70%) were college/technical trained, 216 (29.30%) had bachelor's degree, 73 (9.90%) had master's degree, while the remaining 30 (4.10%) had doctorate/professional degree.

Answering the Research Question

Result of the research question was obtained from using descriptive statistical analysis of mean score and standard deviation. Never Impactful ($\bar{x} \leq 1.0$), Less Impactful ($\bar{x} \leq 2.0$), Impactful ($\bar{x} \leq 3.0$), and Highly Impactful ($\bar{x} \leq 4.0$) were the ratings assigned to the mean score values.

Research Question 1: What is the lifelong learners' perceived impact level of the integration of artificial intelligence in facilitating English language learning?

Table 2: Descriptive Statistics of lifelong learners' perceived impact level of the integration of artificial intelligence in facilitating English language learning.

SN		Mean	SD	Decision
1.	Integration of artificial intelligence influences overall learning experience as a lifelong learner.	3.06	0.96	Impactful
2.	AI technologies enhances ability to grasp complex concepts in English Language.	3.15	1.02	Impactful
3.	The use of AI improves motivation to engage in lifelong learning activities.	3.12	0.96	Impactful
4.	AI-assisted learning increases confidence in acquiring new skills.	3.20	0.91	Impactful
5.	Artificial intelligence made personalized learning paths more accessible for lifelong learners.	3.12	0.94	Impactful
6.	AI technologies positively impacts adaptability to new information and technologies.	3.35	0.86	Impactful
7.	Integration of AI makes learning more convenient and flexible for lifelong learner.	3.18	0.90	Impactful
8.	AI-supported learning resources impacts interest in exploring diverse topics for lifelong learning.	3.29	0.85	Impactful
9.	AI technologies plays crucial roles in adapting educational content to the needs of lifelong learners.	3.30	0.87	Impactful
10.	Integration of artificial intelligence improves ability to stay updated with current information and trends.	3.23	0.96	Impactful
11.	AI-assisted learning positively influences problem-solving skills in various areas.	3.32	0.87	Impactful
12.	Integration of artificial intelligence is essential for the continuous development of lifelong learners.	3.24	0.92	Impactful
13.	Integration of artificial intelligence tools is acceptable and beneficial.	3.18	0.94	Impactful
14.	AI technologies are helpful in facilitating a more personalized learning experience.	3.18	0.92	Impactful
15.	Incorporating artificial intelligence into studying modes is impactful.	3.28	0.97	Impactful
16.	AI-supported assessments enhance the efficiency and accuracy of evaluating performance.	3.36	0.88	Impactful
17.	AI improves overall engagement in the learning process.	3.22	0.91	Impactful
18.	Artificial intelligence contributes to adapting teaching materials to better suit individual student needs.	3.32	0.90	Impactful
Grand Value		3.23	0.92	Impactful

The Research question 1, revealed that lifelong learners' perceived impact level of the integration of artificial intelligence in facilitating English language learning. Items explored spanned through the statements 'Integration of artificial intelligence influences overall learning experience as a lifelong learner to Artificial intelligence contributes to adapting teaching materials to better suit individual student needs as shown on table two. The aggregate mean rating of 3.20 with the standard deviation of 0.92 indicated that lifelong learners perceived the integration of artificial intelligence in facilitating English language learning as impactful.

Testing the Hypotheses

Hypotheses were tested using inferential statistics of t-test and Analysis of Variance (ANOVA) at 0.05 level of significance.

H₀₁: There is no significant age difference in lifelong learners' perceived impact level of the integration of artificial intelligence in facilitating English language learning.

Table 3: ANOVA of lifelong learners' perceived impact level of the integration of artificial intelligence in facilitating English language learning based on age.

	N	Mean	Std. Dev.	Std. Error	F	p-value	Decision
21-30 Years	44	54.9545	1.64182	0.24751	4.02	0.00	Significant. Rejected H₀₁
31-40 Years	332	58.1476	6.65956	0.36549			
41-50 Years	101	59.6535	6.47060	0.64385			
51-60 Years	101	57.9604	5.37014	0.53435			
61-70 Years	117	57.7009	5.91063	0.54644			
Above 70 Years	43	58.7442	2.41121	0.36771			
Total	738	58.1016	6.03938	0.22231			

From Table 3, the F-value is 4.02 with the p-value of 0.00 at 0.05 levels of significance. Since the p-value is less than the level of significance set for the study (0.05) the hypothesis is therefore not accepted. Thus, there is significant age difference in lifelong learners' perceived impact level of the integration of artificial intelligence in facilitating English language learning. This shows that, lifelong learners' perceived impact level of the integration of artificial intelligence in facilitating English language learning differed based on age.

To determine the actual sources of significant differences observed in Table 3, Scheffe post hoc test was employed and the result is as presented in table 4.

Table 4: Scheffe's Post Hoc pairwise Comparison of lifelong learners' perceived impact level of the integration of artificial intelligence in facilitating English language learning based on age

(I) Respondents' Age	(J) Respondents' Age	Mean Difference (I-J)	Std. Error	Sig.
21-30 Years	31-40 Years	-3.19304	.95915	.051
	41-50 Years	-4.69892*	1.07991	.002
	51-60 Years	-3.00585	1.07991	.172
	61-70 Years	-2.74631	1.05726	.241
	Above 70 Years	-3.78964	1.28200	.121
31-40 Years	21-30 Years	3.19304	.95915	.051
	41-50 Years	-1.50587	.67937	.427
	51-60 Years	.18719	.67937	1.000
	61-70 Years	.44674	.64276	.993
	Above 70 Years	-.59660	.96895	.996
41-50 Years	21-30 Years	4.69892*	1.07991	.002
	31-40 Years	1.50587	.67937	.427
	51-60 Years	1.69307	.84129	.543
	61-70 Years	1.95261	.81201	.329
	Above 70 Years	.90928	1.08862	.983
51-60 Years	21-30 Years	3.00585	1.07991	.172
	31-40 Years	-.18719	.67937	1.000
	41-50 Years	-1.69307	.84129	.543
	61-70 Years	.25954	.81201	1.000
	Above 70 Years	-.78379	1.08862	.991
61-70 Years	21-30 Years	2.74631	1.05726	.241
	31-40 Years	-.44674	.64276	.993

	41-50 Years	-1.95261	.81201	.329
	51-60 Years	-.25954	.81201	1.000
	Above 70 Years	-1.04333	1.06616	.966
Above 70 Years	21-30 Years	3.78964	1.28200	.121
	31-40 Years	.59660	.96895	.996
	41-50 Years	-.90928	1.08862	.983
	51-60 Years	.78379	1.08862	.991
	61-70 Years	1.04333	1.06616	.966

H₀₂: There is no significant educational level difference in lifelong learners' perceived impact level of the integration of artificial intelligence in facilitating English language learning.

Table 5: ANOVA of lifelong learners' perceived impact level of the integration of artificial intelligence in facilitating English language learning based on educational level.

	N	Mean	Std. Dev.	Std. Err.	F	p-value	Decision
Less Than High School	58	61.8966	5.18666	.68104			
High School Graduate	260	57.4346	5.01345	.31092			Significant.
College/Technical Training	101	54.7624	5.76220	.57336			
Bachelor's Degree	216	59.8519	5.90910	.40206	20.21	0.00	Rejected
Master's Degree	73	58.5890	7.88782	.92320			H ₀₂
Doctorate/Professional Degree	30	54.0000	3.05129	.55709			
Total	738	58.1016	6.03938	.22231			

Results in Table 5 showed that, the F-value is 20.21 with the p-value of 0.00 at 0.05 levels of significance. Since the p-value is less than the level of significance set for the study (0.05) the hypothesis is therefore not accepted. Thus, there is significant educational level difference in lifelong learners' perceived impact level of the integration of artificial intelligence in facilitating English language learning. This shows that, lifelong learners' perceived impact level of the integration of artificial intelligence in facilitating English language learning differed based on educational level.

To determine the actual sources of significant differences observed in Table 5, Scheffe post hoc test was employed and the result is as presented in Table 6.

Table 6: Scheffe's Post Hoc pairwise Comparison of lifelong learners' perceived impact level of the integration of artificial intelligence in facilitating English language learning based on educational level.

(I) Respondents' Educational Level	(J) Respondents' Educational Level	Mean Difference (I-J)	Std. Error	Sig.
Less Than High School	High School Graduate	4.46194*	.82490	.000
	College/Technical Training	7.13418*	.93586	.000
	Bachelor's Degree	2.04470	.84009	.315
	Master's Degree	3.30751	.99919	.053
	Doctorate/Professional Degree	7.89655*	1.27748	.000
High School Graduate	Less Than High School	-4.46194*	.82490	.000
	College/Technical Training	2.67224*	.66603	.007
	Bachelor's Degree	-2.41724*	.52297	.001

College/Technical Training	Master's Degree	-1.15443	.75242	.798
	Doctorate/Professional Degree	3.43462	1.09532	.081
	Less Than High School	-7.13418*	.93586	.000
	High School Graduate	-2.67224*	.66603	.007
	Bachelor's Degree	-5.08948*	.68475	.000
Bachelor's Degree	Master's Degree	-3.82666*	.87265	.002
	Doctorate/Professional Degree	.76238	1.18115	.995
	Less Than High School	-2.04470	.84009	.315
	High School Graduate	2.41724*	.52297	.001
	College/Technical Training	5.08948*	.68475	.000
Master's Degree	Master's Degree	1.26281	.76904	.747
	Doctorate/Professional Degree	5.85185*	1.10680	.000
	Less Than High School	-3.30751	.99919	.053
	High School Graduate	1.15443	.75242	.798
	College/Technical Training	3.82666*	.87265	.002
Doctorate/Professional Degree	Bachelor's Degree	-1.26281	.76904	.747
	Doctorate/Professional Degree	4.58904*	1.23193	.017
	Less Than High School	-7.89655*	1.27748	.000
	High School Graduate	-3.43462	1.09532	.081
	College/Technical Training	-.76238	1.18115	.995
	Bachelor's Degree	-5.85185*	1.10680	.000
	Master's Degree	-4.58904*	1.23193	.017

H₀₃: There is no significant gender difference in lifelong learners' perceived impact level of the integration of artificial intelligence in facilitating English language learning.

Table 7: t-test Analysis of lifelong learners' perceived impact level of the integration of artificial intelligence in facilitating English language learning based on gender

Respondents' Gender	N	Mean	Std. Dev.	Std. Err. Mean	df	t	p-value	Decision
Male	318	56.6069	5.90136	.33093	1	5.99	0.01	Significant.
Female	420	59.2333	5.90157	.28797	736			Rejected
H₀₃								

Tables 7 shows $t_{(1,736)} = 5.99$ with P-value of 0.01 computed at an alpha level of 0.05. Since the p-value was less than the alpha level of 0.05, the null hypothesis was hereby rejected. This shows that there is significant gender difference in lifelong learners' perceived impact level of the integration of artificial intelligence in facilitating English language learning.

Discussion of Findings

This study has established that, lifelong learners' perceived the integration of artificial intelligence in facilitating English language learning as impactful. However, their perceptions were age different, educational level bias and gender dissimilar. These findings are in agreement with the findings of Shiohima (2021) who asserted that attention continuously on lifelong learning models, particularly those with the current education credentialling, is contributing to increase chances of education and training institutions to plan and organise academic programmes globally for intended learners. There are diverse ways of teaching and learning, opportunities also abound for self-development and fulfillment of individuals

aspirations. Bolton, Matsau & Blom (2020) also asserted that flexible learning route such as alternative admission, supplemental instruction, distance or blended learning, and part-time or time-flexible learning that were ‘in the past believed to be “substitute”, are now widely viewed as being “conventional” practices’ In the same vein Shiohira & Dale-Jones, (2019) opined that emerging platforms that allow learning information to be validated more more genuinely than ever before has improved learning tremendously. Resultantly, qualifications frameworks are being shaped by new perspectives on digital credentials (Keevy & Chakroun, 2018). Globally, the impact of AI on development is positive and helps to stabilize all areas of human endeavours.

The results support the view of Shiohima (2021) who observed that the Beijing Consensus states a commitment to using AI to build lifelong learning opportunities for all, across formal, non-formal and informal learning sectors. The document places AI platforms and learning analytics as ‘key technologies’ for ‘integrated lifelong learning systems to enhance personalized learning anytime, anywhere and potentially for anyone’ and implores that attention be focused on the needs of older people and those having challenges in digital life.

The result which is in line with the findings of Negash (2011), who affirmed that learners of English language surely have prospect, if the issues of teaching English language to learners in today's world are adequately taken care of, through the adoption of artificial intelligence in curriculum by English Language Teacher. Similarly, Betty (2013) reiterates that English language teachers essentially need to adjust their instructional materials and teaching methods so as to accommodate the utilization of artificial intelligence in the overall education of adult learners.

However, these findings are at variance with those of Daniel (2023) who observed that major risk of AI in education is that of privacy and cheating especially when all data will be available on the machine and a chatbot can also write up to ten pages essay within seconds thereby denying confusing the teacher on whether or not the assignment is done by person who it was assigned to. Yang (2023) also argued that in using AI for teaching there may be learners’ over reliance on machine translation as an alternative tool for learning a language. Tuomi (2018) also explained the temptation of using machine translators for assignments instead of learning the language personally which may consequently cause their inability to truly acquire linguistic skills and better proficiency.

Conclusion

Teaching lifelong learners’ English language can be very tasking, but with the availability of Artificial Intelligence (AI), the task of facilitating this language to lifelong learners may become less stressful as AI has the ability to improve the teaching and learning of English language to lifelong learners. AI no doubt improves teaching learning situation by making the facilitators’ job easy, realizing objective in real time with large class and aids learners to study, understand and carry out assignments without stress.

It is therefore not surprising that the utilization of artificial intelligence is rapidly adopted in Lifelong Learning as being impactful even by the learners who have less time for study due to a number of domestic, careers, religions, political, social responsibilities and commitments. The adoption which is devoid of age or gender will reduce attrition (one of the challenges of adult learning) to a large extent because AI will make learning to be easy, convenient and safe time.

Recommendations

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

1. The rigidity of Nigeria's educational curriculum should be reviewed by stakeholders to accommodate current trends in the teaching industry.
2. Lifelong learners should strive to meet up with the dynamism of technology.
3. Government at various levels should allocate resources to support educational programs specifically designed for the use of AI technologies in facilitating learning.
4. Lifelong learners' technological literacy should be urgently ascertained.

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