

## Awareness and Utilization of Artificial Intelligence Tools Among Undergraduate Students with Disabilities in Federal Universities in South East, Nigeria

**Raphael, Faithful Onyedikachi, Theresa Ofoegbu & Efido B. S. Okechukwu**

Department of Arts Education, University of Nigeria, Nsukka

**Corresponding Author:** blessed.efido@unn.edu.ng

### Abstract

The study examined the awareness and utilization of Artificial Intelligence tools among undergraduate students with disabilities in federal universities in South East, Nigeria. Three research questions guided the study using descriptive survey design. The population of this study comprised 105 undergraduate students with disabilities in federal universities in South East, Nigeria which also makes up the sample. Reliability estimate of 0.94 was obtained using Cronbach Alpha for the instrument titled: Awareness and Utilization of AI among undergraduate students with disabilities Questionnaire. Data collection was through questionnaire. The findings of the study revealed high level of awareness of AI among undergraduate students with disabilities in federal universities in South East. The extent to which undergraduates with disabilities utilize AI was discovered to be low. Furthermore, high cost of ICT facilities and AI enabled gadgets as well as difficulty in finding localized contents of AI are challenges encountered among undergraduates with disabilities in South East, Nigeria. The study recommended that government and school administrators of universities should organize seminars or workshops to maintain the high level of awareness in the use of AI among students including those with disabilities. Government and school administrators should organize workshops to increase the level of awareness and the utilization of AI among students with disabilities. Lecturers and students with disabilities should be encouraged to adequately use AI. Government and school administrators should address challenges to the utilization of AI such as providing power supply, ICT facilities and latest AI enabled infrastructure to compensate students with disabilities.

**Keywords:** Awareness, Utilization, Artificial Intelligence, Undergraduate students, Federal universities, Disabilities, All-inclusive Education.

### Introduction

Life in the university is full of difficulties. The difficulties become doubled for students with the challenge of disabilities which necessitates the intervention of technology. Undergraduate students with disabilities express a variety of emotional, cognitive, behavioural and social responses to this significant loss which negatively affects their academic performance in universities. Sharon, et. al (2015), defines disability as the condition of lacking perception leading to physiological or psychological issues and restricted capabilities to perform human activities. According to Anna (2022), disability is a term that describes loss of biological organs of the body (World Health Organization (WHO) (2017). Furthermore, it is associated with a wide range of causes, which can generally be classified as hereditary

or the result of an accident or disease or age-related factors.

Statistics has glaringly shown the multiplied difficulties of disabled students especially in cases of visual impairment. According to the World Health Organization (WHO, 2017), disabilities affects approximately 1.3 billion people worldwide and they also estimated that 19 million children worldwide have visual disability. Twelve million children out of this number are a result of refractive errors. Regrettably, 1.4 million children are irreversibly blind. In Nigeria, the specific number of children with disabilities is not known. Sustaining disabilities may have a substantial impact on various life domains such as academics, work, interpersonal relations, mobility and social and mental well-being (Genute et.al, 2014). More so, various intervention schemes and ICT innovations

have been introduced to address or alleviate the situation which includes the intervention of Artificial Intelligence tools.

Inclusion and accessibility in education are critical for ensuring equal learning opportunities for students with disabilities. Among these, students with disabilities face significant challenges in accessing textual content, learning materials, and language-related academic tasks. However, the integration of Artificial Intelligence (AI) into education has opened new avenues for addressing these barriers. Artificial intelligence refers to the development of systems and machines that can simulate intelligent human behavior, such as learning, reasoning, and problem-solving. It involves the use of algorithms and complex mathematical models to enable machines to learn and improve their performance autonomously and the fundamental purpose of AI is to enable machines to exhibit traits specific to human intelligence. Furthermore, Artificial Intelligence (AI) is a branch of science which deals with helping machines finding solutions to complex problems in a more human-like fashion. Kamble and Shah (2018) affirmed that AI involves borrowing characteristics from human intelligence, and applying them as algorithms in a computer friendly way and it deals with the development of intelligent computer systems, which are capable to perceive, analyze, and react accordingly to the inputs from humans who are considered as the most intelligent and smart species on earth. Hence it can be said that AI is the closest reality to human intelligence.

Artificial intelligence has something to offer to everyone including the disabled. AI-powered tools offer personalized, interactive, and multi-sensory learning experiences that enhance the learning outcomes of students with visual impairment, particularly in various disciplines. Artificial Intelligence (AI) is revolutionizing education by transforming how knowledge is accessed, processed, and applied. For students with disabilities, AI offers unique opportunities to overcome diverse barriers and engage meaningfully with educational content across all fields of study. With the integration of AI into learning environments, disciplines such as science, mathematics, humanities, vocational studies amongst others are becoming more accessible and interactive, thereby promoting inclusive education (Gong & Wang, 2022; Adebisi & Oladipo, 2022). Due to the huge role universities play in an individual's life including those with disabilities and the society at

large, it is therefore necessary to examine the level of awareness and utilization artificial intelligence among undergraduate students with visual impairment.

The concept of AI can be traced to 1956, when the name was coined, although at that point work had been under way for about five years. However, the study of intelligence is one of the oldest disciplines. For over 2000 years, philosophers have tried to understand how seeing, learning, remembering, and reasoning could, or should, be done. The advent of usable computers in the early 1950s turned the learned but armchair speculation concerning these mental faculties into a real experimental and theoretical discipline. Many felt that the new "Electronic Super-Brains" had unlimited potential for intelligence Obi & Olawale (2023). AI therefore can also serve as assistants in various aspects expected of humans with various disabilities. Basically, two types of assistants are considered for humans, manual (in the form of robots), and digital (Chatbots) which can perform risky, repetitive, and troublesome tasks. The task of developing such machines is accomplished by minutely studying the human behavior and implementing the logic in the form of algorithms resulting in inventions of software, devices, robots, etc., making human race smarter. The relevance of artificial intelligence cuts across all fields and disciplines which include mathematics (used for developing algorithms), biology, philosophy, psychology, neuroscience (for studying human mind and its behavior), statistics (for handling huge data), computer science (to run the algorithm for implementing the concepts) and language as well. According to Alsudairy & Eltantawy (2024) the concept of trusting machine as a replica of human can also be traced with the invention of turing test in which the machine is tested irrespective of the knowledge of examiner upon the instructions given considering it as human and if it passes the test, the machine is considered as intelligent. This justifies why AI has affected many aspects of the society with no exemption for students with disabilities in all fields thereby presenting a new modern era in this digital revolution (Dabi & Golga, 2024).

In Language and Literature, disciplines such as English, Literature, and Languages, visually impaired students benefit from AI tools that provide the following; Text-to-Speech (TTS) is one which converts literary texts, poems, and novels into spoken word (e.g., Voice Dream Reader, Read Aloud). Speech-to-Text (STT) is another which allows

students to orally dictate essays, comprehension answers, or creative writing (e.g., Google Speech-to-Text). Also, there is the conversational AI: Chatbots like ChatGPT simulate discussions about literary themes, grammar, or pronunciation. These tools promote reading comprehension, writing fluency, and auditory learning strategies. Furthermore, another application is in the area of Science, Technology, Engineering, and Mathematics (STEM). STEM subjects are traditionally visual and data-heavy, but AI help bridge the accessibility gap: AI-Based Graph Interpreters: Tools like SAS Graphics Accelerator convert graphs into audio descriptions. Tactile AI Devices: Devices like the Dot Pad render images, equations, and diagrams into tactile feedback. Voice-Controlled Coding Assistants: AI platforms like Amazon Alexa for Education or Code Jumper allow visually impaired students to learn programming using voice commands and audio cues. Science Simulators: Some AI-powered platforms read lab procedures aloud and describe experimental outcomes verbally. These innovations enhance comprehension in physics, chemistry, mathematics, and computer science.

It is also applied in the area Social Sciences and Humanities. In fields like History, Government, Philosophy, and Religious Studies, AI tools provide the following: Automatic Audio Summarization: Simplifies long texts or historical documents into audio summaries. AI Tutors: Chatbots can explain abstract philosophical ideas or historical events through dialogue. Speech-Based Research Assistants: AI voice assistants can search academic databases and read out relevant scholarly materials. This promotes critical thinking and engagement with textual analysis and theoretical discussions. While in Business, Management, and Economics, visually impaired students utilize AI and aids in converting data into audio tones or spoken summaries to analyze economic trends or business reports. Smart Spreadsheets: AI tools like Google Sheets + Voice Over read and summarize financial data. Virtual Tutors: AI tutors explain business models, financial concepts, or management theories in conversational formats. Simulation Games: Some AI-powered business simulation apps now include auditory instructions and spoken feedback. This enhances decision-making, analysis, and entrepreneurship education. In the area of Arts and Music and other creative disciplines, AI enhances accessibility through the following; AI Composition Tools: Applications like AIVA and Amper Music assist visually impaired music students

in composing and arranging songs. Auditory Art Descriptions: AI can describe visual art pieces or interpret artistic elements for blind learners. Musical Notation Translators: Converts sheet music into Braille music or audio explanations. These tools ensure that creative expression is inclusive and accessible to all learners. Despite the wide range of AI tools available, the extent of awareness and utilization remains uncertain among students with disabilities.

The awareness of AI-powered assistive technologies in universities remains uneven across different regions. Particularly, low- and middle-income countries are still suffering setback in the level of awareness and utilization. In high-income nations, universities are more likely to provide institutional support for accessible AI tools such as screen readers (e.g., JAWS, NVDA), AI personal assistants (e.g., Alexa, Siri), and specialized apps like Seeing AI (WHO, 2019). However, in many developing countries, including parts of Africa and Asia, the utilization of such tools is limited due to financial constraints, inadequate infrastructure, and limited investment in inclusive technologies (Adebiyi & Oladipo, 2022). However, even when AI tools are available with a high level of awareness, utilization rates among students with disabilities can vary based on digital literacy, training, and cultural perceptions. Studies show that some students are unaware of the full capabilities of AI tools at their disposal or lack the confidence to use them effectively without support (Alamri, 2021). In contrast, when students are provided with proper orientation and peer mentoring, AI tools significantly enhance their academic engagement, confidence, and autonomy (Abdel-Aziz & Younis, 2020). For example, visually impaired students in Nigerian universities reported low but increasing use of tools such as TalkBack, VoiceOver, Seeing AI, and text-to-speech applications for reading lecture notes and preparing assignments (Adebiyi & Oladipo, 2022). However, there remains a gap in finding out the level of utilization of more advanced AI technologies like Braille-to-speech converters, AI-supported learning management systems, or tactile displays. The utilization of AI tools have been bedeviled with a number of challenges.

The challenges associated with the utilization of AI in universities have been reported to vary across regions of the world. Cost remains a major barrier and seems to be a common factor. The utilization of AI requires access to ICT tools and internet. According to Ogunode (2020) many AI tools are highly available in

private universities but others such as OrCam devices or premium screen readers come at a high cost, making them inaccessible to many students in low-income settings or among low income earners (Ghavifekr & Nor, 2019). This therefore suggests that students who come from low socio-economic will find it difficult to access or utilize AI tools. It can be said that federal universities enroll this category of students. However, it is not certain, hence the need for this study to ascertain the availability and utilization of AI tools among undergraduate students with disabilities in federal universities in South East, Nigeria. The study will be anchored on Technology Acceptance Model (TAM). The Technology Acceptance Model (TAM) is a widely used theoretical framework for understanding how users come to accept and use a technology. Proposed by Fred Davis (1986), TAM is rooted in the Theory of Reasoned Action (TRA) and posits that an individual's intention to use a technology is primarily determined by two factors: Perceived Usefulness (PU) – the degree to which a person believes that using a particular technology will enhance their performance and Perceived Ease of Use (PEOU) – the degree to which a person believes that using the technology will be free of effort. Disabled students are more likely to adopt AI tools if they perceive them as beneficial to their learning especially when it is available to them. AI tools can assist students with disabilities access course materials, navigate digital environments, and engage with content independently (Gong & Wang, 2022). If these tools and the technology that enables its access are available, it will positively affect their orientation making them to discover the benefits and in turn significantly enhance their academic performance, their acceptance and use of AI will increase. From the foregoing, it is evident that the utilization of artificial intelligence in education is a transformative force for equity and inclusion. For students with disabilities, it unlocks new possibilities across disciplines—enabling them not only to participate but to thrive in diverse academic fields. Through deliberate investment, awareness, and accessibility initiatives, AI can become a cornerstone of inclusive learning in higher education globally as it is already seen in developed countries but the case of South East is uncertain. From this foregoing, the researcher seeks to examine the extent of awareness and utilization of Artificial Intelligence tools among undergraduate students with disabilities in universities in South East.

## Statement of the Problem

Generally, students with disabilities face variety of challenges that negatively rubs off on their academic performance. Life in the university is heralded with a wide range of crippling hurdles which triples with the difficulties emanating from disabilities. Amidst the different studies that have been executed to address the situation, it still persists. However, an ICT innovation such as Artificial Intelligence has been considered to address the difficulties faced by undergraduate students with disabilities in higher learning.

Artificial intelligence (AI) is the use of machines to simulate human intelligence. AI is revolutionizing education by transforming how knowledge is accessed, processed, and applied. For students with disabilities, AI offers unique opportunities to overcome barriers and engage meaningfully with educational content across all fields of study. With the integration of AI into learning environments, disciplines such as science, mathematics, humanities, vocational studies amongst others are becoming more accessible and interactive, thereby promoting inclusive education and multi-sensory learning experiences. Studies have shown that undergraduates in different parts of the world have embraced the use of AI but the case of undergraduate students with disabilities in South East is uncertain. Amidst these huge benefits AI offers there seem to be a low level of awareness and utilization of AI amongst undergraduate students with disabilities in South East, Nigeria which can be attributed to the challenges they face. Therefore, the problem of this study is to ascertain the extent of awareness and utilization of Artificial Intelligence among undergraduate students with disabilities in federal universities in South East, Nigeria.

## Purpose of the Study

The main purpose of this study is to examine the level of awareness and utilization of Artificial Intelligence tools amongst undergraduate students with disabilities in universities in South East, Nigeria. Specifically, the study is geared towards identifying the;

1. level of awareness of AI tools among undergraduate students with disabilities in federal universities in South East, Nigeria.
2. extent of utilization of AI tools among undergraduate students with disabilities federal universities in South East, Nigeria.



- challenges associated with the utilization of AI tools among undergraduate students in federal universities in South East, Nigeria.

### Research Questions

The following research questions guided the study;

- What is the level of awareness of AI tools among undergraduate students with disabilities in federal universities in South East?
- What is the extent of utilization of AI tools among undergraduate students with disabilities in federal universities in South East?
- What are the challenges associated with the utilization of AI tools among undergraduate students in federal universities in South East?

### Methods

This study adopted descriptive survey design. The population comprises 105 undergraduate students with disabilities in federal universities in South East, Nigeria in the 2024/2025 academic session (Disability Data Initiative, 2024). This population includes 105 students with disabilities from University of Nigeria, Nsukka and Nnamdi Azikiwe which are the two federal universities in South East, Nigeria. A total of 75 from university of Nigeria, Nsukka and a total of 30

students in Nnamdi Azikiwe University. The whole population of 105 will make up the sample due to its manageable size. The questionnaire was used as the sole instrument for collecting data for this study. The questionnaire was developed by the researchers titled “Awareness and Utilization of AI among Undergraduates with Disabilities. Questionnaire” (AUAUD). The questionnaire has two sections, containing 3 clusters. The questionnaire was constructed using the Likert scale and based on a four-point rating scale. The real limits of the response categories which also serve as the decision rule include; the response option of cluster 1: very high level, high level, low level and very low level. For cluster 2, Very High Extent (VHE): 3.50 – 4.00, High Extent (HE) 2.50 – 3.49, Low Extent (LE) 2.50 – 3.49, and Very Low Extent (VLE). For cluster 3: Strongly Agree (SA): 3.50 – 4.00, Agree (A): 2.50 – 3.49, Disagree (D) 1.50-2.49, and Strongly Disagree (SD): 0.50 – 1.49. It was face validated by three experts. One in Educational Technology and the second is in Special Education, the third in Measurement and Evaluation. Reliability estimate of 0.94 was obtained using Cronpach Alpha. Coded data were analyzed using descriptive statistics such as mean and standard deviation.

### Results

#### Research Question 1

**Table 1: Mean scores and standard deviation of the level of awareness of AI tools among undergraduate students in federal universities in South East, Nigeria.**

S/N	Item Statement	$\bar{X}$	S.D	Decision
1	I have prior knowledge of AI	2.50	.81	High level
2	I am aware that AI can enhance my academic performance if utilized properly.	2.53	.68	High level
3	I am aware of AI tools available in my university	2.51	.68	High level
4	I know of AI tools used in the classrooms or department	2.43	.68	Low level
5	I am aware of the latest AI tools to assist in my assignments	3.10	.88	High level
6	I know of AI tools and sites for academic materials	2.55	1.05	High level
7	I am aware AI tools like Chatgpt that facilitate self paced learning	2.96	.85	High level
8	I am aware I can use AI tools to access open online journals.	2.80	.76	High level
9	I am aware that AI are accessed in different formats	2.76	.76	High level
<b>Cluster Mean</b>		<b>2.99</b>	<b>0.91</b>	<b>High level</b>

The result in table 1 shows the mean scores and standard deviation of the level of awareness of AI tools among students with disabilities. The table reveals that the students agreed on all the items except

item 4. The agreed items satisfy the 2.50 stated benchmark. This implies that the respondents have prior knowledge of AI and aware that AI can enhance their academic performance if utilized properly. They

are aware that AI tools are available in my university. They know of AI tools used in the classrooms or department. They are aware of the latest AI tools to assist in their assignments. They know of AI tools and sites for academic materials and are aware AI tools like Chatgpt that facilitate self paced learning. They are aware they can use AI tools to access open online journals. They are aware that AI are accessed in

different formats such as text, audio, video and image format. On the other hand, item 4 was rejected implying that respondents are not aware of AI tools used in their classrooms or department. As revealed in the cluster mean of 2.99, it is evident that there is a highlevel of awareness of AI among undergraduate students with disabilities in South East.

## Research Question 2

**Table 2: Mean scores and standard deviation of the extent of utilization of AI tools among undergraduate students in federal universities in South East, Nigeria**

	Item Statement	$\bar{X}$	S.D	Decision
22	Talkback	2.75	.94	High Extent
23	AI braille	2.34	.76	Low Extent
24	AI readers	2.28	.75	Low Extent
25	Text to speech	3.16	.79	High Extent
26	Speech to text technology	2.61	.87	High Extent
27	AI virtual assistant	2.19	.98	Low Extent
28	AI smart assistive devices	2.31	1.01	Low Extent
29	AI powered assistive technology like Siri	2.22	.77	Low Extent
30	Screen readers like JAWS	2.61	.84	High Extent
31	Writing assistants like Grammarly and paraphrasing tools	2.25	.94	Low Extent
32	AI composition tools like AIVA	2.34	.76	Low Extent
33	AI Robotic tutors	1.68	.75	Low Extent
<b>Cluster mean</b>		<b>2.20</b>	<b>Low Extent</b>	

The result in table 3 shows the mean scores and standard deviation of the extent of utilization of AI tools among students with disabilities. The table reveals that the students agreed to a low extent on all items except items 22, 25, 26, 30. This implies that while others are utilized to a low extent, there is a high

extent of utilization of AI tools such as talkback, speech to text technology, text to speech and screen readers like JAWS.Overall, the cluster mean of 2.20 shows the low extent of utilization of AI tools among students with disabilities.

## Research Question 3

**Table 3: Mean scores and standard deviation of the challenges associated with the utilization of AI tools among undergraduate students in federal universities in South East**

	Item Statement	$\bar{X}$	S.D	Decision
22	Many AI lack functional Frequently-Asked-Question (FAQs)	3.68	.55	Agree
23	I lack the knowledge of appropriate AI tools in my discipline	3.23	.85	Agree
24	It is time consuming to load some free AI web pages	3.26	.78	Agree
25	Lack of localized and quality AI resources in my discipline	2.43	.56	Disagree
26	Unreliable power supply for the use of AI tools	3.53	.81	Agree
27	Lecturers in the department do not actively encourage the use of AI tools	2.33	.54	Disagree
28	I hardly find localized contents of AI	3.60	.56	Agree
29	High cost of maintaining electronic gadgets discourages my use of AI	3.43	.81	Agree

30	My lecturers usually insist on the purchase of some recommended textbooks which discourage the use of AI	3.18	.55	Agree
31	My institution has made little or no investment in AI	3.13	.45	Agree
32	I find it difficult to find contents in AI or topics of my interest	2.27	.38	Disagree
33	It is not easy to adapt AI content to meet my research needs	2.34	.26	Disagree
34	I prefer to work individually and I hard use AI materials developed by others	1.53	.51	Disagree
35	My low ICT competence affects my use of AI	3.33	.54	Agree
<b>Cluster mean</b>		<b>2.94</b>		<b>Agree</b>

The result in table 4 shows the mean scores and standard deviation of the challenges associated with the utilization of AI tools among students with disabilities. The table reveals that the students agreed to all items except items 25, 32, 33 and 34. This implies that the respondents agreed that many AI lack functional Frequently-Asked-Question (FAQs) forum which discourage their use of AI, they lack the knowledge of appropriate AI tools in my discipline. Also, they find time consuming to load some free AI web pages. There are other challenges such as unreliable power supply for the use of AI tools, difficulty in finding localized contents of AI, there is high cost of maintaining electronic gadgets discourages their use of AI. The lecturers usually insist on the purchase of some recommended textbooks which discourage the use of AI and also their institution has made little or no investment in AI. Their low ICT competence also affects my use of AI. Overall, the cluster mean of 2.94 shows there are challenges associated with the utilization of AI tools among students with disabilities.

## Discussion

The findings of research question one show the level of awareness of AI tools among students with disabilities in federal universities in South East. It was revealed that there is a high level of awareness of AI among students in federal universities in Enugu state. They have prior knowledge of AI and aware that AI can enhance their academic performance if utilized properly. They are aware that AI tools are available in my university. They know of AI tools used in the classrooms or department. They are aware of the latest AI tools to assist in their assignments. They know of AI tools and sites for academic materials and are aware AI tools like Chatgpt that facilitate self paced learning. They are aware they can use AI tools to access open online journals. They are aware that AI are accessed in different formats such as text, audio,

video and image format. Adebisi & Oladipo (2022) affirmed this findings pointing out that the awareness of AI keeps growing increasingly high accommodating everyone including students with disabilities ho are conversant with how AI can be used to simulate human intelligence and cover up their disabilities. In fact AI is visible the blind and perceptible to the deaf. Furthermore, according to Wiche and Ogunbodede (2021) AI is gaining more popularity among scholars and students in Nigeria generally.

Furthermore, the findings also revealed that there is a low extent of AI utilization among students with disabilities. This implies that while other AI are utilized to a low extent, there is a high extent of utilization of AI tools such as talkback, to text technology, text to speech and screen readers like JAWS. The result contradicts the findings of Perifanou & Economides (2021). who revealed high extent of utilization of AI among undergraduates. Alamri, (2021) affirms these findings revealed low extent of AI tools such as TalkBack, VoiceOver, Seeing AI, and text-to-speech application and claimed the extent of utilization vary based on digital literacy, training, and cultural perceptions. The author further affirmed that full capabilities of AI tools at the disposal disabled students are not utilized because they lack the confidence to use them effectively without support. Adebisi & Oladipo (2022) corroborated this findings revealing the high extent of utilization AI tools such as Text-to-Speech (TTS) such as Voice Dream Reader, Read Aloud, Speech-to-Text (STT) such as Google Speech-to-Text) and conversational AI such as Chatbots like ChatGPT.

The study also revealed challenges associated with use of AI among students with disabilities in federal universities in South East Nigeria. The challenges include AI lacking functional Frequently-Asked-Question (FAQs) forum which discourage their use of AI, they lack the knowledge of appropriate AI tools in my discipline. Also, they find time consuming

to load some free AI web pages. There are other challenges such as unreliable power supply for the use of AI tools, difficulty in finding localized contents of AI, high cost of maintaining electronic gadgets discourages their use of AI. The lecturers usually insist on the purchase of some recommended textbooks which discourage the use of AI and also their institution has made little or no investment in AI. Their low ICT competence also affects their use of AI. This in line with the findings of Onah & Okafor (2023) who revealed challenges to the utilization of AI such as inability of disabled students to access ICT tools and internet high cost of AI tools such as OrCam devices or premium screen readers.

## Conclusion

There is a high level of awareness of AI among students in federal universities in South East, Nigeria but the extent of its utilization is low. There are also challenges associated with use of AI among undergraduate students with disabilities such as high cost ICT facilities and AI enabled gadgets as well as difficulty in finding localized contents of AI in South East, Nigeria.

## Recommendations

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

1. Government and school administrators of universities should organize seminars or workshops to maintain the high level of awareness in the use of AI among students including those with disabilities.
2. Lecturers and students with disabilities should be encouraged on the adequate use of AI.
3. Government and school administrators should address challenges to the utilization of AI such as high cost ICT facilities and AI enabled gadgets as well as difficulty in finding localized contents of AI in South East.

## References

- Alimi, A. E., Babalola, E. O., Aladesusi, G. A., Issa, A. I., & Omolafe, E. V. (2022). Availability and utilization of assistive technology for learning among students with special needs in Ilorin, Kwara State. *International Journal of Contemporary Studies in Education*, 1(2). <https://ejournal.upi.edu/index.php/IJCSNE/article/view/37916>
- Almulla, A. A., & Adam, U. A. (2025). Perceived effectiveness of artificial intelligence for special-needs students in Saudi Arabian primary schools: A model study. *International Journal of Innovative Research in Social Sciences*, 7(1). <https://ijirss.com/index.php/ijirss/article/view/5255>
- Alsudairy, N. A., & Eltantawy, M. M. (2024). Special education teachers' perceptions of using artificial intelligence in educating students with disabilities. *Journal of Intellectual Disabilities and Treatment*, 10(2). <https://www.lifescienceglobal.com/pms/index.php/jiddt/article/view/9669>
- Dabi, G. K., & Golga, D. N. (2024). Availability, awareness, and utilization of assistive technologies among students with visual impairment: The case of Haramaya University, Ethiopia. *British Journal of Visual Impairment*, 42(1), 22–35. <https://doi.org/10.1177/02646196221124420>
- Disability Data Initiative. (2021). Nigeria – Disability data overview. <https://www.disabilitydatainitiative.org/nigeria/>
- Ellen B., & William S. (2020). An Exploratory Study on the Availability of Open Educational Resources to Support the Teaching and Learning of Programming. *A paper presented in 2020 IEEE Frontiers in Education Conference (FIE)*. DOI:10.1109/FIE44824.2020.9274202
- Federal Ministry of Education. (2019). Nigerian university system statistical digest 2019. <https://education.gov.ng/nigerian-university-system-statistical-digest-2019/>
- Feng, L., Lie, H. & Jie, D. (2023). The association between perceived teacher support, students' self-efficacy, and online english academic engagement in the blended learning context. *Sustainability* 15, 8: 6839. <https://doi.org/10.3390/su15086839>.
- Gong, Y., & Wang, Y. (2022). Artificial intelligence for inclusive education: A systematic literature review. *Computers & Education: Artificial Intelligence*, 3, 100076. <https://doi.org/10.1016/j.caeai.2022.100076>
- Issa, A. I., Ibrahim, M. A., Onojah, A. O., & Onojah, A. A. (2020). Undergraduates' attitude towards the utilization of open educational resources for learning. *International Journal of Technology in Education and Science (IJTES)*, 4(3), 227-234.





- Kharbat, F. F., Alshawabkeh, A., & Woolsey, M. L. (2021). Identifying gaps in using artificial intelligence to support students with intellectual disabilities from education and health perspectives. *Aslib Journal of Information Management*, 73(2), 154–175. <https://doi.org/10.1108/AJIM-02-2020-0054>
- Khasawneh, M. A. S., & Alkhawaldeh, M. A. (2023). Harnessing the power of artificial intelligence for personalized assistive technology in learning disabilities. *Journal of Studies in Social Sciences and Humanities*, 9(3), 231–242. <https://www.jsju.org/index.php/journal/article/view/1775>
- Obi, C. J., & Olawale, A. T. (2023). Utilization of artificial intelligence tools for academic research among postgraduate students in South-West Nigeria. *African Journal of ICT in Education*, 5(2), 70–84.
- Ogunode, N. J. (2020). Administration of Public Universities in Nigeria: Problems and Solutions. *Sinestesia*, 10(2), 86-94. <https://sinestesia.pustaka.my.id/journal/article/view/55>
- Olumorin, C. O., Babalola, E. O., & Amoo, B. K. (2022). Availability and use of assistive technology for learning amongst special students in Kwara State School for Special Needs. *International Journal of Contemporary Studies in Education*, 1(2). <https://ejournal.upi.edu/index.php/IJCSNE/article/view/42776>
- Onah, F. E., & Okafor, J. N. (2023). Application of generative AI tools in enhancing English language proficiency among Nigerian university students. *Nigerian Journal of Language and Literacy Studies*, 4(1), 22–34.
- Papalexandratou, P., Stathopoulou, A., & Skanavis, C. (2024). The use of artificial intelligence in the education of students with learning disabilities. *Global Journal of Educational Technology and Applications*, 3(1), 15–27. <https://gjeta.com/content/use-artificial-intelligence-education-students-learning-disabilities>
- Perifanou, M., & Economides, A. A. (2021). Discoverability of OER: The case of language OER. *Proceedings of 6th International Conference on Smart Learning Ecosystem and Regional Development (SLERD)*, 24-25.
- Pierrès, O., Darvishy, A., & Christen, M. (2024). Exploring the role of generative AI in higher education: Semi-structured interviews with students with disabilities. *Education and Information Technologies*. <https://doi.org/10.1007/s10639-024-13134-8>
- Salako, O. A., & Ajayi, O. T. (2023). Teaching with artificial intelligence: Opportunities and challenges in Nigerian tertiary institutions. *African Journal of Educational Technology*, 13(2), 100–112.
- Uche, N. N., & Eze, P. I. (2022). Artificial intelligence and personalized learning in Nigerian universities: Potentials and practicalities. *Journal of Digital Learning and Education*, 2(3), 89–97.
- Yang, C., & Taele, P. (2025). AI for accessible education: Personalized audio-based learning for blind students. *arXiv*. <https://arxiv.org/abs/2504.17117>