TEACHERS AND STUDENTS PERCEPTION ON THE USE OF ARTIFICIAL INTELLIGENCE (AI) IN CURRICULUM IMPLEMENTATION IN SENIOR SECONDARY SCHOOLS IN AKWA IBOM STATE

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Abstract

The study examined teachers and students perception on the use of artificial intelligence (AI) in Curriculum implementation in senior secondary schools in Akwa Ibom State. Two research questions guided the study. A descriptive survey research design was used for the study. The population of the study was 5,205 teachers and 12,408 students. Simple stratified sampling technique was used in selecting 500 respondents. Questionnaire containing 14-items was the instrument for data collection. Mean ratings was used in answering the research questions. The findings of the study reveal that AI reduces job opportunity for teachers, it reduces teacher-student interaction, does not provide emotional support to students and makes students lazy. The findings of the study also reveal that AI does not help teachers analyze students, is a source of distraction in the classroom, it reduces social and emotional interaction and makes students dependent and lazy. The recommendation include: Students should not be allowed to engage only in AI directed learning, teachers should be trained on how to blend AI with teacher-student interaction and government should make legislation concerning the use of AI in schools so as to moderate its use.
Keyword: Artificial intelligence (AI), curriculum, curriculum implementation

Introduction

Curriculum implementation refers to the actual use of curriculum documents in the classroom which forms the actual engagement of learners. According to Offorma (2010), curriculum implementation is the translation of a planned curriculum into operation, while Mkpa and Izuagba (2012) defined curriculum implementation as daily activities that the school management and classroom teachers use to pursue the goals of any given curriculum. It means that the processes involved in transmitting educational plans into action bring about change in learners behaviour as they acquire the planned experiences, skills and knowledge that are aimed at empowering them to operate efficiently in the society. Curriculum implementation is a stage in the

curriculum process whereby learners, through the teachers' mediation interact with the learning materials so that learning is maximized as reflected in new behavior acquired by students (Eduok and Udosen, 2016). In other words, curriculum implementation means making learners interact with planned learning opportunities. It is the translation of principle into practice in the classroom using the combined efforts of teachers, learners and others, hence, the teacher becomes a principal actor in this process as the responsibility of disseminating the curriculum rests on him/her. In the classroom situation, the curriculum implementer is expected to use excellent and appropriate instructional methods and approaches with different teaching skills, curriculum materials and a good lesson plan to guide learners while ensuring learners active participation in the teaching-learning activities. Teachers' competence personality and utilitlization of instructional materials together with a conducive classroom environment can promote or negatively affect the implementation process of the curriculum at any level. Curriculum implementation therefore is a significant aspect of the curriculum process because no matter how well a curriculum is constructed, it is only helpful if implemented (Oviawe, 2017). If a curriculum is not implemented, it cannot be valued. Unfortunately, despite its potency, policy makers and governments who fund education often treat curriculum implementation with levity. From the above, curriculum is the virtual and practical execution of prescribed courses of study in school, syllabuses and subjects in the classrooms within a given time. Curriculum implementation can also be viewed as the process of the planned prescribed courses of study being translated into syllabuses, scheme of work and lessons by professional teachers to be delivered to students in the classroom online or physically. To Onuoha-Chidiebere, Eduok, & Aniefiok (2022), curriculum implementation is critical to the realization of school objectives. The realization of curriculum implementation goal depends on the availability of adequate human and material resources like Information Communication Technology and Artificial Intelligence. Ogunode, Idoko and Thank God (2024) noted that Artificial Intelligence deployment in the educational institution has the capacity to transform the sector. Artificial Intelligence is both a driving force of the fourth educational revolution and a major carrier of the technological progress that is changing societies and economies globally.

Artificial Intelligence (AI) according to Ogunode and Ukozor (2023) encompasses computer systems and technologies that emulate human intelligence, undertaking tasks like learning, reasoning and problem solving. These technologies include machine learning and robotics. To Alagbe (2023) Artificial Intelligence (AI) is the ability of a computer or machine to mimic the capabilities of the human mind for instance learning from examples and experience, recognizing objects, understanding and responding to language, making decisions, solving problems and combining these and other capabilities to perform frictions a human might perform, such as greeting a hotel guest or driving a car. Trusani and Houngbonon (2019) defined AI as a combined large volume of data with computing power to stimulate human intellectual ability such as reasoning, language processing, perception, vision recognition and spatial processing. Artificial Intelligence refers to the study of intelligence machine and software that can reason, learn, gather knowledge, communicate, manipulate and perceive objects (Verma 2018). Artificial Intelligence is a part of computer science that deals with intelligence in human behaviours (Ocana, Valenzuela-Fernandez and Garro-Aburto, 2019) To Copeland (2002), Artificial Intelligence is the ability of a digital computer or computer controlled robot to perform tasks commonly associated with intelligent beings. The term is frequently applied to the project of developing systems endowed with the intellectual processes characteristics of humans such as ability to reason, discover meaning, generalize or learn from past experience.

The use of Artificial Intelligence (AI) in the education system has several potential advantages. AI technologies have the ability to customize learning experiences, tailoring them to the specific needs and learning preferences of each individual learner. This flexibility facilitate the accommodation of a wide range of students' capabilities and promotes a more inclusive educational setting. It also enhances dynamic and captivating experiences by integrating simulations, virtual experiments and practical application. This not only improves students understanding of scientific topics but also ignites curiosity and excitement for the subject. Furthermore, AI has the capability to promptly offer feedback to both students and teachers, facilitating quick intervention and adaptation of teaching tactics (Ross and Kim 2018). This feedback loop enhances the efficiency and effectiveness of the teaching and learning process. In Nigeria, where access to high quality education may vary, the potential advantages of AI in education include narrowing educational disparities, enhancing educational achievements and equipping students for a future when technology is more integrated into every part of life.

Borbajo, Malbas and Dacanay (2023) discovered that AI technologies facilitate collaborative learning experiences among students. Virtual collaborative platforms, intelligent chatbot, and AI based discussion forum enable students to engage in collaborative problem solving, peer feedback, and knowledge sharing. AI tools can also assist in the formation of students groups based on complementing skills or learning needs. This integration of AI promotes collaboration, communication and critical thinking skills, enhancing the overall learning experience. The integration of AI technologies in education facilitates personalized instructions and differentiated learning. AI powered adaptive learning platforms and intelligent tutoring systems analyze student data and provide tailored learning experiences. These technologies adapt instructional content, pacing and feedback based on individual student needs and learning styles. As a result, teachers can better address the diverse needs of their students, offering customized instruction and support. In a similar research, Namboodiri (2022) submitted that the integration of AI technologies have the potential to transform traditional education system from a one-size –fits-all approach to personalized and adaptive learning environment, this shift can lead to improved learning outcomes, increased student engagement and greater equity in education. Zarrougi and Faltas (2020) study delves into the role of Artificial Intelligence (AI) in enhancing the quality of higher education. The findings underscore that academic programmes leveraging AI not only expands opportunities for self-education among students but also empower them to actively participate in the educational process, moving beyond the traditional role of passive information recipient in conventional classroom setting. Integrating Artificial Intelligence in the implementation of Secondary School Curriculum is not just about improving educational procedures, but also about strategically equipping students for a future where science, technology and innovation play a critical role in social advancement and wealth.

Statement of the Problem

Research on AI's impact on education has shown that it has the potential to improve individualized learning experiences and adaptive assessment mechanism significantly (Seaba, 2023) To Abbas (2011), AI can examine individual student performance and learning styles using machine learning algorithms and data analytics to build personalized educational strategies. That level of customization increases engagement and retention among students and enables them to learn smoothly. In addition, adaptive assessment systems driven by AI may provide real-time feedback, identify areas of student's trouble, and provide focused treatments resulting in more effective and efficient learning result (Yesilyurt, 2023). As AI technology advances, its integration

into educational systems promises to transform how education is delivered and experienced, making it more accessible and adapted to each learners needs. However, Karolinska institute (2024) reveals that there is clear scientific evidence that AI tools impair rather than enhance learning. This has led Sweden to rescind the use of AI in classes and rather opt for books, paper and pen. In addition UNESCO (2024) says that moderation should be the keyword relating to classroom AI use. The organization for Economic Co-operation and Development (2024) found that most AI technology in the class has not delivered the academic benefit once promised and that students who use AI technology very frequently in the class do worse in most learning outcomes and global test scores in mathematics, science and reading are plummeting. Also teachers in Britain have acknowledged that AI in classroom have hampered the progress of many of their pupils. This shows that children are not learning well in school. It is against this backdrop that the researcher intends to investigate teacher's perception on the use of artificial intelligence in curriculum implementation in Senior Secondary Schools in Akwa Ibom State.

Purpose of the Study

The main purpose of the study is to investigate teachers and students perception on the use of artificial intelligence in curriculum implementation in senior secondary schools in Akwa Ibom State. Specifically, the study sought

i. To examine teachers perception of the use of artificial intelligence in curriculum implementation in senior secondary schools in Akwa Ibom State.
ii. How do students perceive the use of artificial intelligence in curriculum implementation in senior secondary schools in Akwa Ibom State?

Methodology

The research design used for the study was a descriptive survey research design. The design involves a data collection strategy based on integration or questioning of respondents using such techniques as questionnaire, interviews, standardized test of intelligence, aptitude, achievement or performance (Nkemakolam, 2012). The study was conducted in Akwa Ibom State. Akwa Ibom State has ten education zones namely: Uyo, Ikot Ekpene, Ikono, Etinan, Ikot Abasi, Oron, Itu, Abak, Ukanafun and Eket. The population of the study consisted of all the 5,205 Secondary school teachers and 12,408 senior secondary school students in Akwa Ibom State (Akwa Ibom State Secondary Education Board, 2025). A simple stratified random sampling technique was adopted for selecting the teachers and students. The sample comprised of ten teachers and fourty students from each of the zones. This gives a total of five hundred respondents. The instrument used for the study was a questionnaire titled "Artificial Intelligence on Curriculum Implementation Questionnaire (AICIQ). The questionnaire was divided into two parts – parts A and B. Part A covered information about the respondents while part B contains the 14 item questions separated to cover the two research questions. The instrument was subjected to face and content validation using three lecturers from Education Foundation, University of Calabar. Reliability of the instrument was determined using test retest method. The same questionnaire constructed for the study was administered twice after two weeks interval to ten public secondary school teachers and twenty students in some secondary schools in Akwa Ibom State which are not part of the sample of the study. The first and second results obtained from the instrument were correlated and it yielded a coefficient of 0.86 which is high and reliable for the study. Mean was used to analyze the data collected from the study. Consequently, mean score of 2.50 and above was taken to mean that the respondent is in agreement with the option while a mean of 2.49 and below showed disagreement to the items of the instrument.

Result

Research Question One
How do teachers perceive the use of artificial intelligence in Curriculum implementation in Senior Secondary Schools in Akwa Ibom State?

Table One: Mean responses of teachers on their perception of the use of artificial intelligence in curriculum implementation in Senior Secondary Schools in Akwa Ibom State.

S/N	Teachers Perception	X	SD	Decision
1	AI utilization provides answers to everything beyond what the students and teachers can grasp	3.32	0.61	Agreed
2.	AI utilization can analyze the relationships between variables, thus making it easier for students to analyze complex data	2.76	0.70	Agreed
3.	AI utilization increases job opportunities for teachers	1.34	0.50	Disagreed
4.	AI utilization increases teacher-student interaction	2.40	0.46	Disagreed
5.	AI utilization provides emotional support to students	1.73	0.52	Disagreed
6.	AI utilization makes students independent and hardworking	1.36	0.51	Disagreed
7.	AI utilization increases critical thinking and innovation	1.78	0.52	Disagreed
	Grand Mean	**2.10**	**0.55**	**Disagreed**

From table one above, it can be observed that Item 1 and 2 are rated 3.32 and 2.76 with standard deviation of 0.61 and 0.70. Items 3, 4, 5, 6 and 7 are rated 1.34, 2.40, 1.73, 1.136 and 1.78 with standard deviation of 0.50, 0.46, 0.52, 0.51 and 0.52; respectively. The grand mean of the table above shows 2.10. It is therefore the option of the teachers that the use of artificial intelligence does not significantly influence curriculum implementation positively in senior secondary schools in Akwa Ibom State.

Research Question Two
How do Students perceive the use of artificial intelligence in curriculum implementation in Senior secondary Schools in Akwa Ibom State?

Table Two: Mean responses of students on their perception of the use of artificial intelligence in curriculum implementation in Senior Secondary Schools in Akwa Ibom State.

S/N	Students Perception	$\bar{X}$	SD	Decision
8.	Ai helps students deepen their knowledge and assist them in challenging lessons	3.16	0.62	Agreed
9.	AI summarizes lessons for easier understanding	2.88	0.61	Agreed
10.	Ai reduces students stress by having more fun experiences in studying	3.01	0.62	Agreed
11.	AI helps teachers analyze data on students' performance so that they can assist them better	1.61	0.57	Disagreed
12.	AI is not a source of distraction even when it is used during school class hours	1.27	0.21	Disagreed
13.	AI increases social and emotional interaction among students	1.14	0.51	Disagreed
14.	AI makes student independent and hardworking	1.38	0.31	Disagreed
	Grand Mean	**2.20**	**0.40**	**Disagreed**

From table two above, it can be observed that Item 1, 2 and 3 are rated 3.16, 2.88 and 3.01 with the standard deviation of 0.62, 0.61 ad 0.62. Items 11, 12, 13 and 14 are rated 2.61, 1.27, 1.14 and 1.38 with standard deviation of 0.57, 0.21, 0.51 and 0.31; respectively.. The grand mean of the above table shows 2.20. It is therefore the opinion of students that the use of artificial intelligence does not significantly influence curriculum implementation positively in Senior Secondary Schools in Akwa Ibom State.

Discussion of Findings

A close observation of the analysis reveals that out of the given items in cluster one, the respondents agreed with two items. The items agreed upon by the respondents include: AI utilization provides answers to everything beyond what the students and teachers can grasp, AI utilization can analyze the relationships between variables, thus making it easier for students to analyze complex data. The analysis further reveal that respondents did not agree with fix items on teachers perception, the items include: AI utilization increase job opportunities for teachers, AI utilization increases teacher-student interaction, Ai utilization provides emotional supports to students, it makes students independent and hardworking ad also increases critical thinking. These findings are in agreement with Karolinska Institute (2024) and UNESCO (2024) who found that there is a clear scientific evidence that AI tools impair rather than enhance learning.

Research question two sought to find out the perception of students on the use of artificial intelligence in curriculum implementation in Senior Secondary Schools in Akwa Ibom State. From the result obtained, it is evident that all the students are of the opinion that the use of artificial intelligence did not significantly influence curriculum implementation positively. The analysis reveals that out of the search items, the students agreed upon three items as influencing the integration of artificial intelligence in curriculum implementation in senior secondary school positively they include: It helps students deepen their knowledge and assist them in challenging lessons, it summarizes lessons for easier understanding, it reduces students stress by having more fun experiences in studying. However, the student also disregarded four items as not influencing

the integration of artificial intelligence in curriculum implementation in Senior Secondary Schools positively may include: helps teacher's analyze students, is not a source of distraction, increases social and emotional interaction and makes student independent and hardworking. This are all in line with the submission of Yesilyurt (2023), organization for Economic Co-operation and Development (2024) and Karolinska Institute 92024) who submits that there is a clear scientific evidence that AI tools impair rather than enhance learning.

Conclusion

The findings of this study actually confirms that the use perceive AI integration in curriculum implementation as not enhancing learning. The study also reveal that students also perceive AI integration in curriculum implementation as not enhancing learning in Akwa Ibom State. This therefore means that in as much as AI has its advantages, curriculum implementers should ensure to combine AI utilization with human interaction to ensure that the learners learn effectively. Teachers should not allow the students to engage entirely with AI learning activities as this will make the students lazy due to their reliance on the AI machines.

Recommendations

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

i. Students should not be allowed to engage only in AI directed learning.
ii. Teachers should be trained on how to blend AI with teacher-student interaction.
iii. Government should make legislation concerning the use of AI in schools so as to moderate its use.

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