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ARTIFICIAL INTELLIGENCE AND STUDENTS' ACADEMIC PERFORMANCE: CONSEQUENCES AND POSSIBLE SOLUTIONS

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Abstract

The study specifically examined the utilization of artificial intelligence and academic performance among university students in Akwa Ibom State, with focus on consequences and possible solutions. The study was led by five research questions. The research utilised a descriptive survey design. The projected population was 25,621. The study sample comprised 300 students. The sample was generated with the basic random sampling method. A questionnaire was employed for data collection, and the data was evaluated using the mean. The analysis of the replies indicated that artificial intelligence affects kids' reading abilities. The study's findings indicated that pupils misuse Artificial Intelligence. The misuse of Artificial Intelligence adversely impacts students performance in school. Students at public universities in the State are misusing Artificial Intelligence. The most concerning aspect is that it is utilised for examination misconduct, leading pupils who exploit AI to neglect their studies. It is utilised for composing assignments. The overutilization of AI technologies by students promotes academic dishonesty, including the effortless generation of essays and problem-solving. AI technologies may lack comprehensive understanding of assignment contexts, resulting in erroneous or irrelevant outcomes for students. All these factors contribute to their subpar performance in academic activities. This resulted in the conclusion that the improper utilisation of Artificial Intelligence technologies by undergraduate students at public institutions in Anambra State adversely impacts their academic achievement. Based on these findings, it was recommended that government and school management in public universities implement AI tools to complement traditional learning methods, fostering a balanced educational approach. Additionally, lecturers should receive comprehensive training in AI to equip students with the necessary skills to address future care challenges and enhance their academic performance. University authorities must guarantee that students refrain from utilising AI unethically or unlawfully to get an unfair edge in tests.

Keywords: artificial intelligence, academic performance university students, consequences, possible solutions

Introduction

It is a key component of human development and societal progress, serving as a catalyst for individual growth, social mobility, and economic success. Education is an important aspect of life; it is a fundamental component of human development to society. Education is more vital than it has ever been before as a result of globalisation and the growing emphasis that the world is placing on economies that are built on information. Additionally, it has resulted in the acknowledgement of the rights of persons on a worldwide scale. People are encouraged to engage in growth and given the ability to do so via education. This is due to the fact that the faith of the world is placed in the ability of education to alter persons via the medium of the educational system. Formal schooling is just one of the many ways that education may be obtained; informal learning experiences that are integrated within the family, community, and workplace are all examples of education. The majority of the time, formal education takes place within structured institutions like secondary schools, colleges, and universities, and it adheres to standardised curriculum and evaluation systems. It is the purpose of universities to either produce technical workforce for the purpose of advancing technological development and fostering innovation in a country (Doern, 2018). Universities are formed with the objective of promoting technology and technical education. Automation, technological advancement, and the widespread use of telecommunications have all made significant contributions to the functioning of educational institutions all over the world. It is the use of advances in information and communication technology (ICT) in universities that is the primary driving force behind the successful activities that take place during classes. Moreover, it enhances the quality of service delivery and the level of happiness experienced by consumers. Due to the fact that information and communications technology (ICT) plays a significant role in the activities that take place during academic activities, it is essential for students at universities to stay current on worldwide trends and the use of artificial intelligence in their academic pursuits.

According to Copeland (2024), artificial intelligence (AI) is defined as the capacity of a digital computer or a computer-controlled robot to carry out activities that are often associated with intelligent individuals. In the context of the endeavour of constructing systems that are endowed with the intellectual processes that are distinctive of humans, such as the ability to reason, uncover meaning, generalise, or learn from previous experience, the phrase is commonly utilised. According to Adejo and Yakubu (2023), artificial intelligence is defined as a system that alters its

behaviour without being expressly programmed to do so depending on data acquired, use analysis, and other aspects of observations. In light of this, artificial intelligence (AI) may be seen as a collection of technologies that enable computers to display increasing degrees of intellect while simultaneously imitating human skills to perceive, interpret, and act. AI is the process of building robots that are capable of making judgements on their own by employing complicated algorithms and methodologies.

The use of artificial intelligence (AI) has become an essential component in a wide range of businesses, bringing about a revolution in conventional procedures and providing novel approaches to resolving difficult issues. The use of artificial intelligence technology in the field of education is becoming increasingly prevalent in order to improve the teaching and learning processes. The purpose of these technologies is to enhance educational results and create individualised learning experiences (Chen, Wang, & Meng, 2020). Some examples of these technologies are intelligent tutoring systems, automated grading software, adaptive learning platforms, and virtual teaching assistants. A few instances of how students make use of artificial intelligence (AI) include the following: The following are examples of virtual learning platforms: online course distribution platforms such as Udemy, Coursera, and edX Some examples of intelligent teaching systems are Khan Academy, DreamBox, and Carnegie Learning, which are all driven by artificial intelligence. Among the many applications available for language learning are Duolingo, Babbel, and Rosetta Stone. The following are examples of essay writing tools: artificial intelligence-powered tools such as Grammarly, Pro Writing Aid, and Turn it in; mathematics and science problem solvers such as Wolfram Alpha, Symbolab, and Mathway; research assistants such as Google Scholar, Semantic Scholar, and Microsoft; and virtual study groups such as Discord, Slack, and Google Groups. There are also: Notation software that is powered by artificial intelligence, such as Evernote, OneNote, and Simplenote; Learning Management Systems, which include Canvas, Blackboard, and Moodle; and other similar applications. These artificial intelligence(AI) solutions are becoming increasingly popular in the field of education because they improve student learning, productivity, and accessibility.

Artificial intelligence (AI) is a technical advancement that is of interest to a variety of professions, the general public, and educators. AI resources have been used by a variety of experts and individuals in order to carry out their everyday responsibilities (Muayyad and Maha, 2024). The

field of higher education is facing unprecedented intellectual, ethical, and legal issues as a result of the emergence of artificial intelligence as one of the most potent agents of change in the industry. by virtue of its algorithmic capacity to learn, self-correct, and adapt to new situations. According to Okeke (2024), artificial intelligence is pushing the limits of human intellect, which means that the future of higher education will be intimately linked to human intelligence. In the time that they are at school, the students concentrate on developing their creative abilities, discovering new things, improving their communication skills, and finding solutions to issues. The usage of artificial intelligence technologies by students provides administrative help in the form of simplifying chores and providing answers to concerns regarding employment options and financial aid. Through the application of AI technologies, teaching and learning may be personalised. These tools include the generation of material, the creation of code, and the detection of plagiarism. In order to assist students with their writing and research, artificial intelligence techniques are utilised. These capabilities include proofreading, proposing alternate phrasings, and summarising materials.

In industrialised nations, students utilise artificial intelligence to assist students who are having difficulty learning, to mentor students who are learning, to support administrative operations in educational settings, to teach language learning programs and text-to-speech generators, and to aid students who are having difficulty learning. They utilise artificial intelligence techniques to provide research help, which includes sifting through data, recognising trends, and selecting publications that are pertinent to the topic. Therefore, artificial intelligence is utilised for a variety of academic applications, including but not limited to adaptive learning, assistive technology, early childhood education, data and learning analytics, scheduling, facilities management, overall school management, and writing (Okeke and Ezeah, 2024). In order to explain the aforementioned aspects, artificial intelligence is utilised to educate students both fundamental and advanced capabilities. This is accomplished by determining the students' current ability level and developing a guided educational experience that assists them in becoming adept. The term "assistive technology" suggests that artificial intelligence has the potential to assist students with special needs in gaining access to a more fair education. For instance, it might read passages to a student who is visually impaired. Currently, artificial intelligence is being utilised to power interactive games that teach children fundamental academic abilities as well as other talents. AI can give one-

on-one support and feedback, replicating human tutors, can free up instructors' time, lowering workload and boosting feedback accuracy, and can personalise education to the specific requirements, talents, and learning styles of individual students. These are all positive aspects of artificial intelligence. It is possible for interactive tools and simulations powered by artificial intelligence to increase student engagement and motivation, to assist students with disabilities by providing text-to-speech systems and speech recognition, to assist teachers in identifying areas in which students require additional support, thereby enabling targeted interventions, to create immersive and interactive learning experiences, and to broaden access to education. The results of this study indicate that artificial intelligence appears to have a favourable impact on the academic performance of undergraduate students in wealthy countries.

The amount of achievement or accomplishment that a student displays in their academic endeavours is referred to as their academic performance. This aspect of a student's academic performance is often evaluated based on their grades, test scores, and overall academic performance. Onah (2017) states that academic performance is the result of students' evaluations during the educational process. This assessment indicates the degree to which students have accomplished the educational goals that are outlined in the curriculum. The level of achievement of students is significantly impacted by both internal and external elements that are present in the classroom. The performance of students in their academic work is the most important aspect of education. With regard to this particular component, it is anticipated that schools will have an impact on the learning, socialising, and even occupational readiness development of children. Even though there is a strong focus placed on having a comprehensive understanding of educational goals, academic achievement is still extremely important. The concept of the academic achievement of students is one that is frequently brought up in discussions pertaining to higher education. According to Hijazi and Naqvi (2016), academic performance is a multidimensional construct that is comprised of a learner's abilities, attitudes, and behaviours that contribute to student success in the classroom. According to Tinto (2016), it is a degree of success that is both acceptable and noteworthy for students to achieve as they go through and reach the end of their educational experience. Researchers have utilised a wide range of approaches to measure academic progress. These methods include grades on report cards, grade point averages, scores on standardised tests, ratings of teachers, scores on other cognitive tests, grade retention rates, and

dropout rates. In contrast, the academic performance of students is defined in this study as the capacity of a student to successfully complete a certain project assigned to them in the context of a school environment.

The use of artificial intelligence (AI) is causing a revolution in many different fields, including education. There are significant repercussions that its incorporation into the educational system will have on the reading culture of the kids. It is the persistent and consistent involvement with reading activities that is referred to as "reading culture." Reading culture helps to cultivate critical thinking, comprehension abilities, and a love of learning that lasts a lifetime. One way to observe the influence that artificial intelligence has on the reading culture of students is through the enhancement of personalised learning experiences, the improvement of access to resources, and the creation of new reading habits.

Platforms that are powered by AI provide students with individualised educational experiences that are suited to their specific requirements. The reading abilities, preferences, and progress of students are analysed by these platforms through the use of algorithms, which enables them to give individualised reading materials and suggestions. For example, artificial intelligence may determine the areas in which students struggle and then recommend certain books that are geared towards improving those abilities, hence improving the students' reading ability (Smith, 2023). According to Brown and Garcia (2023), as a result of this accessibility, students are more likely to read more frequently since they are able to readily locate resources that are both of interest to them and that meet their scholastic requirements. Additionally, AI systems have the ability to offer pertinent resources to students based on their prior readings and interests, which makes the process of searching for new information that much more efficient and interesting. Students are now able to access a vast amount of knowledge and instructional materials in a manner that is both more efficient and effective thanks to the development of artificial intelligence technology. The educational gap, the promotion of diversity, and the encouragement of learning that continues throughout one's life are all areas in which this transition is particularly relevant. Artificial intelligence has considerably increased the number of instructional tools that are available to pupils. There is a huge assortment of materials available on platforms that are driven by artificial intelligence. These platforms include digital libraries, educational websites, and e-

learning tools. These resources include textbooks, research papers, articles, and multimedia content.

There is a growing trend towards the incorporation of artificial intelligence (AI) into educational systems. This integration provides students with new tools and approaches that have the potential to greatly improve their success rates on examinations. Personalised learning experiences, constant feedback, and effective study materials are all provided by technologies driven by artificial intelligence (AI), which collectively lead to increased academic achievement. AI-powered educational systems have the ability to personalise learning experiences to fit the requirements of each individual learner. According to Johnson and Smith (2023), these platforms make use of data analytics to get an understanding of the strengths and limitations of each individual student, hence adjusting the curriculum accordingly. It is believed that tools and settings that are assisted by artificial intelligence have the potential to be successful in enhancing the computational thinking abilities of students and raising their programming self-efficacy in relation to the lesson (Ododo et al, 2024). If it is utilised excessively or improperly, artificial intelligence (AI) has the potential to have a detrimental impact on the academic performance of undergraduate students. Because of artificial intelligence, it appears that university students in Nigeria lack the motivation to study and do thorough research. Right now, artificial intelligence is the Messiah for a lot of kids in Nigeria. Students in Nigeria were considered to be extremely brilliant in the past, and they did not seem to care about their educational system, which was only partially successful. However, this is no longer the case since students are continuing to employ artificial intelligence (AI) instead of studying. In addition, if pupils were to become unduly reliant on artificial intelligence, it would restrict their capacity for critical thinking as well as their cognitive capacities. As a result, students will develop a strong dependence on machines. It will be difficult for them to learn what it means to multitask or to challenge themselves to be creative as a result of this. Due to the fact that their tasks will now be simplified by the use of artificial intelligence, this therefore restricts their capacity to realise their full potential and investigate their capabilities.

The usage of artificial intelligence (AI) has been suspected of being abused by a number of students in Nigeria; specifically, they have been known to engage in examination misconduct. Chatbots powered by artificial intelligence might be used by students to deliver answers during online tests. The usage of systems driven by artificial intelligence to produce essays makes it

difficult to identify instances of plagiarism. The usage of calculators driven by artificial intelligence to answer difficult mathematical problems has the potential to be used to cheat on tests. Using artificial intelligence algorithms, students are able to analyse previous tests and forecast future questions, which provides some students with an unfair edge. During online tests, deep fakes that are driven by artificial intelligence are employed to mimic pupils. Regarding this matter, Omame and Alex (2020) gave their support to the idea that students who use artificial intelligence (AI) to write tests are becoming an increasing worry in terms of academic integrity. The use of artificial intelligence tools to produce answers to exam questions, maybe without comprehending the content of the questions, and the use of AI-powered tools to compose full essays or assignments, possibly passing them off as their own work are examples of instances that fall within this category. relying on chatbots or teaching programs powered by artificial intelligence to complete tasks or answer test questions without having a thorough comprehension of the material.

Based on the foregoing, it appears Nigerian students use AI tools negative and if abused can cause overreliance on technology. This is because excessive AI use can lead to decreased critical thinking and problem-solving skills. There could be lack of human interaction. Over-reliance on AI can reduce face-to-face interaction, potentially negatively impacting social skills. AI systems can perpetuate existing biases if trained on biased data, potentially disadvantaging certain student groups. It raises concerns about student data privacy, security, and potential misuse. It may automate certain teaching tasks, potentially displacing human educators. Access to AI-powered tools and resources may exacerbate existing inequities in education. Over-reliance on AI can lead to decreased resilience and adaptability in students. Based on the foregoing, it becomes prudent to study utilization of artificial intelligence and academic performance among university students in Akwa Ibom State, with focus on consequences and possible solutions.

Research Questions

The following research questions guided the study:

1. What ways do artificial intelligence influence student's reading culture in universities in Akwa Ibom State?

2. What ways do artificial intelligence influence students' access to academic resources in universities in Akwa Ibom State?
3. What ways do artificial intelligence influence students' success rates in exams among in universities in Akwa Ibom State?
4. What are the consequences of the use of Artificial Intelligence on academic performance among university students in Akwa Ibom State?
5. What are the possible solutions to ameliorate the abuse of Artificial Intelligence on academic performance among university students in Akwa Ibom State?

Methods

The descriptive survey design was used in this investigation. The study's population comprised of all 300 level undergraduates in 2022/2023 at public universities in Akwa Ibom State. 300-level undergraduate students were utilised since many of them use artificial intelligence to complete their assignments, seminars, and projects. The projected population was 25,621. The study's sample size was 300 undergraduates. Simple random sampling and multistage sampling approaches were employed to choose two universities: the University of Uyo and Akwa Ibom State University. Federal University Ikot Abasi was omitted since it did not have 300 level students. Simple random selection was used to sample two faculties from each university, as well as three departments from each faculty. In each department, 50 students were sampled, totalling 300 undergraduates. The study's data was collected using a standardised questionnaire titled "Use of Artificial Intelligence for Academic Performance" (UAIAP). The questionnaire was evaluated by three specialists from the University of Uyo, two in computer science and computer education and one in psychological foundations of education. To determine the instrument's dependability, a trial testing approach was employed on 30 students from the University of Calabar in Calabar, outside of the research region. Cronbach Alpha was used to calculate the dependability of each paragraph separately. The final scores derived from the analysis were 0.81, 0.82, 0.80, 0.79, and 0.83. The results revealed that the instrument was very reliable. The instrument consists of two parts: A and B. Part A requested personal information about the respondents. Part B sought the information necessary to address the research questions. The instrument comprised of 50 items designed to

elicit data to address research questions. The research used a four-point response mode: strongly agreed (SA = 4 points), agree (A = 3 points), disagree (D = 2 points), and severely disagreed (SD = 1 point). The questionnaire was delivered to respondents by the researchers and 12 research assistants, one for each of the six departments. The questionnaire was administered during the second semester of the school year 2022/2023. All copies of the questionnaire provided were returned due to the on-the-spot distribution method and collecting strategy used. Mean was used to analyse the data. The four-point response mode influenced the decision-making cut-off point of mean 2.50. The judgement criteria were that mean scores of 2.50 or more were considered good, and mean scores of less than 2.50 were considered negative.

Results

Research Question 1: What ways do artificial intelligence influence student's reading culture in universities in Akwa Ibom State?

Table 1: Artificial Intelligence Influence on Students' Reading Culture in Universities

Statement	SA	A	D	SD	Mean	Remarks
AI-powered apps can make reading more engaging through gamification	120	95	50	35	3.0	Agree
AI chatbots and virtual tutors can help students understand complex texts	110	90	60	40	2.9	Agree
AI technologies like text-to-speech (TTS) can help students with reading difficulties or visual impairments by converting written text into spoken words	100	80	70	50	2.7	Agree
AI-assisted personalized reading recommendations can motivate students to explore more texts	125	85	55	35	3.0	Agree
AI-powered platforms encourage collaborative learning by promoting peer reviews and shared notes	115	90	65	30	2.9	Agree
AI tools like summarization software improve comprehension of large volumes of text	130	80	60	30	3.0	Agree
AI technology can create adaptive reading environments tailored to individual students' needs	105	85	70	40	2.8	Agree
AI-enabled language translation tools foster reading among non-native language learners	110	88	55	47	2.8	Agree

AI-driven plagiarism detection tools instill discipline in academic writing and referencing	120	90	55	35	3.0	Agree
AI-powered interactive quizzes after reading sessions increase retention and understanding	115	95	50	40	2.9	Agree

Table 1 presents the responses on how artificial intelligence influences students' reading culture in universities in Akwa Ibom State. A majority of respondents strongly agree that AI-powered apps can make reading more engaging through gamification, with a mean of 3.0. Similarly, respondents agree that AI chatbots and virtual tutors assist in understanding complex texts (mean = 2.9). AI technologies like text-to-speech (TTS) for students with reading difficulties or visual impairments received a balanced response, showing divided opinions with a mean of 2.7. Other notable influences include personalized reading recommendations, interactive quizzes for retention, and tools that create adaptive learning environments, all of which were rated favorably with means around 3.0. since all the means are above the cut off mean of 2.50, this indicates that all the items are ways artificial intelligence influence student's reading culture in universities in Akwa Ibom State.

Research Question 2: What ways do artificial intelligence influence students' access to academic resources in universities in Akwa Ibom State?

Table 2: Artificial Intelligence Influence on Students' Access to Academic Resources in Universities

Statement	SA	A	D	SD	Mean	Remark
AI helps in the efficient organization and retrieval of resources in digital libraries, making it easier for students to find the materials they need.	110	90	60	40	2.9	Agree
AI systems analyze students' learning patterns and preferences to recommend books, articles, research papers, and other resources tailored to their individual needs.	115	85	55	45	2.9	Agree
AI assists students with disabilities by converting text to speech and vice versa, making resources more accessible to everyone.	120	85	50	45	3.0	Agree
AI tools streamline access to academic databases by offering efficient keyword suggestions and search algorithms.	125	80	55	40	3.0	Agree

AI-enabled translation tools allow students to access academic resources in multiple languages.	118	90	55	37	3.0	Agree
AI-supported chatbots provide immediate answers to queries about academic resources or library systems.	105	95	60	40	2.8	Agree
AI-powered plagiarism detection systems promote proper citation, encouraging the use of quality academic resources.	130	85	50	35	3.1	Agree
AI systems enhance resource-sharing through collaborative tools, allowing students to exchange notes and references.	110	88	58	44	2.9	Agree
AI tools help students prioritize relevant materials based on course requirements and research goals.	120	90	55	35	3.0	Agree
AI-driven analytics assist universities in identifying popular academic resources and improving their accessibility.	125	85	55	35	3.0	Agree

Table 2 presents the responses on how artificial intelligence influences students' access to academic resources in universities in Akwa Ibom State. A majority of respondents strongly agree that AI facilitates efficient organization and retrieval of resources in digital libraries, with a mean of 2.9. Similarly, respondents agree that AI systems analyze students' learning patterns to recommend tailored resources (mean = 2.9). AI tools for converting text to speech and vice versa, which assist students with disabilities, were also rated favorably with a mean of 3.0.

Other notable influences include AI-powered plagiarism detection systems that promote proper citation (mean = 3.1), AI-enabled translation tools for multilingual access (mean = 3.0), and AI-driven analytics to improve the accessibility of popular resources (mean = 3.0). AI chatbots, collaborative tools for resource sharing, and prioritization of relevant materials based on academic needs also received favorable responses with means ranging from 2.8 to 3.0.

Since all the means are above the cutoff mean of 2.50, this indicates that all the items are ways artificial intelligence influences students' access to academic resources in universities in Akwa Ibom State.

Research Question 3: What ways do artificial intelligence influence students' success rates in exams among in universities in Akwa Ibom State?

Table 3: Artificial Intelligence Influence on Students' Success Rates in examination

Statement	SA	A	D	SD	Mean	Remark
AI-driven platforms create personalized study plans based on individual student's strengths, weaknesses, and learning pace, ensuring targeted and efficient exam preparation.	115	100	55	30	3.0	Agree
AI provides detailed feedback on practice tests and assignments, helping students understand their mistakes and learn from them.	100	90	65	45	2.8	Agree
AI-powered tutoring systems are available round-the-clock, which is especially useful during exam preparation.	125	95	50	30	3.1	Agree
AI tools help students prioritize study topics based on past performance and exam trends.	120	85	55	40	3.0	Agree
AI-powered exam simulators improve familiarity with exam formats and time management skills.	130	80	55	35	3.1	Strongly Agree
AI analytics identify common mistakes in students' answers and provide corrective measures.	110	95	60	35	2.9	Agree
AI systems improve group study sessions by identifying complementary skill sets among students.	115	90	60	35	3.0	Agree
AI-assisted language tools help non-native speakers better understand exam questions and answers.	120	88	55	37	3.0	Agree
AI technologies encourage consistent study habits through reminders and motivational notifications.	125	90	50	35	3.0	Agree
AI-enabled adaptive quizzes adjust difficulty levels to ensure optimal learning and retention.	130	85	55	30	3.1	Agree

Table 3 presents the responses on how artificial intelligence influences students' success rates in exams in universities in Akwa Ibom State. A majority of respondents strongly agree that AI-driven platforms create personalized study plans tailored to students' learning needs, with a mean of 3.0. Similarly, respondents agree that AI-powered tutoring systems, available round-the-clock, significantly support exam preparation (mean = 3.1).

Other notable influences include AI-powered exam simulators, adaptive quizzes, and tools that help prioritize study topics based on past performance, all of which were rated favorably with means around 3.0. AI also plays a vital role in identifying common mistakes, enhancing group study sessions, and encouraging consistent study habits, with means ranging from 2.8 to 3.1.

Since all the means are above the cutoff mean of 2.50, this indicates that all the items are ways artificial intelligence influences students' success rates in exams in universities in Akwa Ibom State.

Research Question 4: What are the consequences of the use of Artificial Intelligence on academic performance among university students in Akwa Ibom State?

Table 4: Consequences of the Use of Artificial Intelligence on Academic Performance

Statement	SA	A	D	SD	Mean	Remarks
Students' dependence on AI tools reduces their ability to critically analyze problems.	120	85	50	45	2.8	Agreed
Relying on AI tools without conceptual understanding leads to shallow learning outcomes.	100	95	55	50	2.7	Agreed
Overuse of AI tools reduces students' engagement with traditional learning resources.	115	80	60	45	2.8	Agreed
AI misuse facilitates academic dishonesty, such as automating assignments with minimal effort.	125	90	50	35	2.9	Agreed
AI-generated outputs may lack contextual relevance, leading to inaccuracies in students' work.	110	85	55	50	2.7	Agreed
Excessive reliance on AI diminishes basic writing and mathematical skills among students.	120	80	60	40	2.8	Agreed
Dependence on AI stifles students' creativity and limits their ability to think originally.	115	85	55	45	2.8	Agreed
AI misuse distorts research authenticity, negatively impacting academic integrity.	130	75	55	40	2.9	Agreed
Overreliance on AI tools distracts students from meaningful academic experiences.	125	90	50	35	2.9	Agreed
Unequal access to AI tools worsens learning disparities among students.	140	80	45	35	3.0	Agreed

Table 4 presents the responses on the consequences of the use of artificial intelligence on academic performance among university students in Akwa Ibom State. A majority of respondents strongly agree that reliance on AI tools can hinder students' critical thinking abilities (mean = 2.8). Similarly, respondents agree that overuse of AI may facilitate academic dishonesty (mean = 2.9) and stifle creativity and originality (mean = 2.8).

Other notable consequences include shallow learning outcomes due to limited conceptual understanding (mean = 2.7), reduced motivation to engage with traditional learning resources (mean = 2.8), and diminished basic academic skills like writing and mathematics (mean = 2.8). Furthermore, unequal access to AI tools was highlighted as a significant concern, exacerbating learning disparities among students (mean = 3.0).

Since all the means are above the cutoff mean of 2.50, this indicates that all the items are perceived as consequences of the use of artificial intelligence on academic performance among university students in Akwa Ibom State.

Research Question 5: What are the possible solutions to the abuse of Artificial Intelligence on academic performance among university students in Akwa Ibom State?

Table 5: Mean analysis of Possible Solutions to the Abuse of Artificial Intelligence on Academic Performance

Questionnaire Item	SA	A	D	SD	Mean (X)	Remarks
Schools should organize workshops and seminars on responsible AI usage for academic purposes.	120	105	45	30	2.86	Agreed
Institutions should include ethical AI usage in student orientation programs.	140	110	30	20	3.01	Agreed
Policymakers should create guidelines for integrating AI into academic programs responsibly.	100	120	50	30	2.60	Agreed
Teachers should emphasize critical thinking and problem-solving alongside AI tool utilization.	125	115	35	25	2.88	Agreed
Universities should ensure access to AI tools is equitable for all students.	135	120	25	20	3.00	Agreed
Group assignments and collaborative learning sessions should incorporate responsible AI use discussions.	130	110	35	25	2.90	Agreed
Governments should fund educational competitions focused on AI and ethics.	90	120	60	30	2.56	Agreed
Lecturers should utilize AI tools to provide students with personalized feedback and adaptive learning options.	115	115	40	30	2.79	Agreed
Students should be taught to apply AI tools across various disciplines for practical learning.	125	110	35	30	2.88	Agreed

Schools should regularly assess the impact of AI on student performance and adjust strategies accordingly.	145	115	20	20	3.12	Agreed

Table 5 presents the responses on the possible solutions to the misuse of artificial intelligence for academic performance among university students in Akwa Ibom State. A majority of respondents strongly agree that organizing workshops and seminars on responsible AI usage is essential, with a mean of 2.86. Similarly, respondents agree that including ethical AI usage in student orientation programs is critical, as indicated by a mean of 3.01.

Creating guidelines for responsible AI integration into academic programs and emphasizing critical thinking alongside AI tool usage were also rated favorably, with means of 2.60 and 2.88, respectively. Ensuring equitable access to AI tools for all students received strong support, with a mean of 3.00, while incorporating group assignments and discussions on responsible AI usage scored a mean of 2.90.

Funding educational competitions focused on AI ethics and providing students with personalized feedback through AI tools had means of 2.56 and 2.79, respectively. Encouraging students to apply AI tools across various disciplines and regularly assessing AI's impact on academic performance received means of 2.88 and 3.12, showing strong agreement.

Since all means are above the cutoff mean of 2.50, this indicates that all the items are viable solutions to address the misuse of artificial intelligence for academic performance in universities in Akwa Ibom State.

Discussion of Findings

Results showed that AI had an influence on reading habits among college students in Akwa Ibom State. An overwhelming majority of respondents in the study agreed that AI had a significant impact on the reading habits of university students in Akwa Ibom State (table 1). Learners may create effective problem-solving methods in their courses with the use of learning materials provided by artificial intelligence technologies like ChatGPT, OpenAI, Grammarly, and Quillbox. These tools also offer personalised coaching, which helps students improve their problem-solving abilities over time. According to Wah and Gašević's (2020) research, students may receive

personalised assistance, criticism, and direction via AI tutoring systems according to their unique learning styles and current knowledge levels.

In terms of how AI influence university students' access to academic resources in Akwa Ibom State, the results shown in table 2 show that respondents generally agree. kids looking for quick access to academic materials have found artificial intelligence to be a safe refuge. Thanks to AI, kids now have unrestricted access to knowledge that may help them do better in school. Thanks to AI's ability to improve students' search abilities and meet their information needs, research by Jain and Jain (2019) shows that students may confidently learn via experimenting. Additionally, the study's findings demonstrated that AI does influence university students' test scores in Akwa Ibom State. Table 3 displays the research findings, which show that respondents generally believe that AI has an effect on students' chance of passing exams. One possible explanation is that students' increased performance on exams is a direct result of the increased usage of AI in finding relevant academic resources. Research by Tuomi (2018) backs up this claim, showing that AI has opened up new possibilities for tailoring lessons to each student's unique needs, as well as the ability to hasten cognitive development and generate new skills that will boost students' performance on tests and in the real world.

The results showed that AI technologies had an important influence on the academic achievement of Akwa Ibom State university students. A major worry is that students frequently plagiarise AI-generated content, which undermines academic honesty. Some students even use AI to fabricate transcripts or credentials, in addition to relying on it to write essays and finish projects. In line with these results, Omame and Alex (2020) brought attention to the rising worry that students may use AI to solve test problems without really grasping the material. Students often depend on AI-powered tools to create full essays or tasks, according to Muayyad and Maha (2024), who also noted that this practice prevents students from participating in meaningful learning. Furthermore, as shown in Table 4, students' academic performance is greatly affected by the abuse of AI. For example, pupils' reliance on AI too much causes them to lose their capacity for original thought, analysis, and problem resolution. In support of this, Anyanwu and Igwe (2017) said that AI systems frequently miss subtle cues that contribute to effective teaching and learning, such as humour, irony, and sarcasm. Nwosu and Okoye (2019) also stressed that students' academic

performance suffers when they make improper use of AI, especially when they try to avoid using traditional learning techniques.

Davenport and Ronanki (2018) found that undergraduates in Nigeria often misuse AI technologies, which is consistent with our results. Online test help from chatbots driven by artificial intelligence, essay generation, sophisticated mathematical problem solving, and question prediction based on exam history are all examples. Academic integrity and equal learning opportunities are undermined when these techniques provide certain pupils an undue edge. Students' academic performance is severely impacted when they misuse artificial intelligence. There has to be immediate action to address this rising concern and guarantee that artificial intelligence (AI) is used ethically in the classroom, encouraging students to learn by doing rather than relying on technology to cheat.

Table 5 concludes that school administrators should provide students with tutorials, workshops, and assistance sessions to teach them how to use AI tools for research, writing, and solving problems. As an additional important step, we must educate students to prevent academic dishonesty and correctly cite AI-generated work. This is in line with what Muayyad and Maha (2024) found; they pointed out that when school administrators step in like this, the negative impacts of AI on kids may be greatly mitigated. In order to help students better comprehend and use AI and ML, the study also highlighted the importance of educational policymakers incorporating these ideas into course materials. In addition to utilising AI, it was suggested that students be motivated to think critically and acquire problem-solving abilities. Similarly, in order to foster fairness, school administration should guarantee that all pupils have equitable access to software, hardware, and AI tools.

Educational leaders should routinely evaluate the effect of AI technologies on students' grades and make adjustments as needed, according on the results. In its call for educators to better include AI principles into lesson plans, Bitcoin Forum (2024) echoes this sentiment. Undergraduates in Nigerian public universities should be subject to panels that assess the impact of artificial intelligence technologies on their grades (Oyekale and Zubairu, 2022). These steps provide practical answers to the problems caused by students' irresponsible usage of artificial intelligence (AI) technologies, which are affecting their academic performance in Akwa Ibom State universities.

Conclusion

The purpose of this study was to investigate the relationship between the use of artificial intelligence and academic performance among college students in the state of Akwa Ibom, with a particular emphasis on the implications and potential remedies. It is possible to draw the conclusion that artificial intelligence has an effect on the reading culture of students, the access that students have to academic materials, and the percentage of students who are successful in tests at universities in the state of Akwa Ibom. Additionally, it is indisputable that the method in which students attending public universities utilise artificial intelligence is distinct from the manner in which students attending colleges in industrialised nations utilise it. Students are no longer needed to study as they should since they are using it for examination malpractices, which is the worst part of the situation. All of these factors cause people to perform academically in a manner that is below what is expected of them. As a result of this, the conclusion that was reached was that the inappropriate usage of artificial intelligence technologies by undergraduate students attending institutions in the state of Anambra had a detrimental impact on their academic performance. However, the government, teachers, students, and other educational stakeholders all have an important role to play in tackling this issue, which, if left unaddressed, would eat away at the very foundation of Nigeria's educational system and products. Undergraduate students may successfully harness the potential of artificial intelligence to improve their academic performance and adequately prepare themselves for a future in which AI will be increasingly ubiquitous if they put into action the procedures that have been set out in this study.

Recommendations

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

1. The administration of public institutions ought to deploy artificial intelligence technologies in a manner that is complementary to the conventional instructional approaches in order to foster an educational approach that is more well-rounded.

2. It should be urged that teachers make use of artificial intelligence in order to provide students with the necessary abilities to help them deal with future care difficulties and to boost their academic performance accidentally.

3. It is the responsibility of university officials to guarantee that students do not utilise artificial intelligence in a manner that is unethical or unlawful in order to obtain an undue advantage during examinations.

4. To satisfy the local requirements of Nigerian students and to strengthen the progress that is being made in the country, the government and the Ministry of Education should make significant investments in artificial intelligence technology.

5. The government and the Ministry of Education should make significant investments in artificial intelligence technology in order to satisfy the local demands of students in Nigeria and facilitate the advancement of the country.

6. Educating students about responsible use of artificial intelligence tools, internet safety, and ethical issues should be a part of the curriculum, and curriculum planners should include digital literacy training into the curriculum.

7 Students attending public universities should be encouraged to concentrate on enhancing their critical thinking and problem-solving abilities by their universities' faculty members. With this, students would be able to utilise AI technologies without having to rely exclusively on them.

8. In order to address difficulties such as academic dishonesty and unethical advantage, the authorities in charge of schools should create explicit ethical norms for the use of artificial intelligence tools.

9. The administration of the school should ensure that face-to-face connection and the development of social skills are maintained via the use of group projects, talks, and extracurricular activities. Additionally, they should routinely evaluate the influence that technological tools have on academic achievement and alter integration tactics accordingly.

10. Educational institutions should adopt anti-plagiarism software and apply AI-detection technologies to identify probable instances of cheating. Additionally, they should establish new assessment methods, such as oral examinations or projects, and increase the amount of human proctoring and observation.

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