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IMPACT OF ARTIFICIAL INTELLIGENCE ON CURRICULUM, TEACHING AND LEARNING OF BUSINESS EDUCATION IN TERTIARY INSTITUTIONS IN AKWA LBOM STATE

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ABSTRACT

This research aimed at exploring the impact of AI on curriculum design, teaching methods and learning outcomes in business education in tertiary institutions in Akwa Ibom State. In carrying out this study Expost-Facto research design was adopter for the study, inclusive of quantitative and qualitative research approaches. The study was carried out in Akwa Ibom State. The target populations comprised lecturers and students of business education in tertiary institutions in Akwa Ibom State. A simple random sampling technique was employed to select 165 lecturers and students from tertiary institutions in Akwa Ibom State, which formed the sample size for the study. A structured questionnaire was administered to the sampled lectures and students to gather data on the impact of AI on curriculum design, teaching methods and learning outcomes in business education. Regression analysis was used to test the hypothesis. The consent of participants in this study was first of all obtained before data could collected from them. The data were treated with confidentiality. The findings revealed that AI integration had a significant impact on curriculum design ($R = 0.96$, $R^2 = 0.93$, $F = 2106.564$, $p < 0.05$), indicating that 93% of the variation in curriculum design was explained by AI integration. AI also significantly influenced teaching methods ($R = 0.92$, $R^2 = 0.85$, $F = 949.273$, $p < 0.05$), students' learning outcomes ($R = 0.91$, $R^2 = 0.83$, $F = 785.546$, $p < 0.05$), business education generally ($R = 0.84$, $R^2 = 0.69$, $F = 367.526$, $p < 0.05$), and business education curriculum development ($R = 0.81$, $R^2 = 0.66$, $F = 367.526$, $p < 0.05$). The study concluded that integration of AI into Business Education has enhanced curriculum delivery by introducing innovative digital tools, improving access to learning resources, and promoting interactive and student-centered learning experiences. One of the recommendations made was that Government and educational stakeholders should formulate policies and provide funding to encourage the adoption and sustainable integration of AI technologies in tertiary institutions.

KEYWORDS: Artificial Intelligence, Curriculum Design, Teaching Methods, Learning Outcomes, Business Education, Tertiary Institutions.

INTRODUCTION

In today's rapidly evolving educational landscape, educators face the increasing challenge of staying ahead of the technological curve to provide the best possible learning experiences for their students. In education, it is estimated that 47 percent of learning management tools will be enabled with AI capabilities by 2024. AI offers a promising solution for refining teaching methods and streamlining administrative tasks. Thus, learning AI becomes crucial for educators to cater to those diverse learners and build an educational environment that is more effective and inherently inclusive. While computer science and engineering schools have long been offering AI courses, students from other disciplines, like medicine and business, also hope to remain relevant in the age of AI. Equipping themselves with highly sought-after AI knowledge and skills as a part of their degree programme could help them enhance their chance of employment now and in the future. As AI technologies become more ubiquitous in the workplace, business and other professionals must become familiar with the principles on which these technologies are built in order to assess the potential they hold along with the risks they carry. To train an AI-ready workforce and prepare students for the era of AI,

educators have advocated to incorporate AI training in higher education curricula and learning environments.

However, a survey of business school deans shows that many business and management schools are struggling to incorporate AI training into business education (Al Braiki et al., 2020). One of the challenges that business schools could face, when considering offering AI related courses, is the task of curriculum design due to the lack of pedagogical resources such as model curricula and textbooks. A review of AI-related textbooks shows that most of them are written for technical audiences and those few that target business audiences typically present only a high-level view of AI technologies (Cope et al., 2021). The lack of an adequate explanation of how the methods actually work precludes students from understanding their inner workings and becoming competent users capable of appreciating the technology's full potential and limitations. In other words, the key challenge is to find materials to present a high-level perspective supported with just enough technical detail for non-technical audiences.

The difficulty of finding teaching materials in the absence of an appropriate-level textbook is exacerbated by the fact that AI is a broad, complex discipline, which encompasses a wide range of theories, models and techniques. For example, the most popular AI textbook (Russell & Norvig, 1995) consists of twenty eight chapters, each of which covers dozens of concepts, multiple algorithms and methods; and it is not straightforward to determine what content will serve business students most effectively. Moreover, the field is fast evolving with new algorithms and techniques being rapidly developed, making it a worthy, yet daunting task to keep up with the latest innovations and state-of-the-art technologies. On the other hand, leaving out some of the most foundational concepts in favour of the latest developments will deprive students of a holistic view of intelligence in machines, which may shortchange them in the future. An examination of the top business schools shows that many business programs, while meeting the market demand for business analytics in the past decade, have offered data mining and analytics courses. However, these courses often focus only on introducing statistics and machine learning techniques related to data analysis, and do not adequately prepare students for future work environments where a broad array of diverse AI technologies are used.

Another open question in curriculum development is the selection of effective teaching methods. In particular, it remains unclear if programming assignments should be required for AI courses targeting business education. In traditional AI training in computing and engineering disciplines, which stress the development of new methods and applications, programming is used as one of the primary teaching methods. Hands-on practice with AI algorithms and methods is essential to the development of a deeper understanding of the logic and mechanisms of AI techniques as well as their possible biases, limitations and ethical implications. Without such understanding, future business people and managers may have to treat AI as a black box and leave critical decisions to machines, which is problematic. Although typical teaching methods in business education courses, such as case study, can be used to present AI concepts and techniques at the conceptual level, it is impossible for students to gain the necessary understanding of the techniques by merely reading stories about how companies and organizations employ AI to help with decision-making and problem solving (Lee et al., 2022). On the other hand, since business education graduates will unlikely need to handle all the intricacies of AI algorithms and representations, AI training in business education may not necessarily need to have programming assignments with comparable requirements as in computing and engineering disciplines.

Equally important is the assessment of student learning outcomes, which can be used as an important input for curriculum design and improvement (Chiu & Chai, 2020). With AI tools like Google Bard and Microsoft Bing, educators can seamlessly tailor content to engage tech-savvy students. There are many ways where AI can be leveraged to create effective academic content.

Beyond content creation, AI serves as a valuable research ally. Tools like Researchrabit streamline information retrieval and facilitate effortless organization, sharing, and study of academic papers in business education. The time saved in this process adds another layer of efficiency, making AI a dependable teaching assistant in business education. However, despite the acknowledged benefits of AI, many institutions lack a clear strategy for its effective implementation. Educators can proactively address this gap by familiarizing themselves with AI systems, paving the way for a more seamless integration of these transformative technologies into educational practices. It is based on this background that this study seeks to explore the impact of AI on curriculum design, teaching methods and learning outcomes in business education in tertiary institutions in Akwa Ibom State.

Problem Statement

The rapid advancement in Artificial Intelligence (AI) are transforming various sectors, including education. In tertiary institutions particularly in business education, the potential for AI to reshape curriculum design, teaching methods and learning outcomes is significant. However, there is limited empirical evidence on how AI integration is currently influencing or could influence business education in Akwa Ibom State's tertiary institutions. This study seeks to address the gap by investigating the extent to which AI is affecting business education and its impact on students' academic outcomes, skill acquisition, and adaptability to modern business practices.

Objectives of the Study

This study will explore the impact of AI on curriculum design, teaching methods and learning outcomes in business education in tertiary institutions in Akwa Ibom State. The study will make significant contributions by conducting an empirical investigation that explores the AI determining factors and tools in the context of business education. Additionally, the study will address the need for continuous improvements in the implementation of AI in business education. The study holds both theoretical and practical significance. By identifying existing gaps in curriculum experts, educators and students' knowledge and their level of preparedness for adopting AI in business education, it provides a foundation for the further development of educational strategies. The study's findings can serve as a guide for educators, researchers, and the educational community in improving practices related to the use of AI in the learning process. By highlighting the need for active engagement in AI-assisted education innovation, the study will contribute to shaping future research directions and actions to maximize the benefits derived from integrating AI into business education. The specific objectives of the study will be to:

1. To examine the extent of AI integration into curriculum design of business education in tertiary institutions in Akwa Ibom State.
2. To assess how AI influences teaching methods in business education programmes.
3. To ascertain the impact of AI on learning outcomes in business education.
4. To examine the Impact of AI on business education
5. To explore the Impact of AI on business education curriculum development.

Research Questions

1. To what extent is AI integration into curriculum design of business education in tertiary institutions in Akwa Ibom State?
2. How does AI influence teaching methods in business education programmes?
3. What is the impact of AI on learning outcomes in business education?
4. What is the Impact of AI on business education?
5. What is the Impact of AI on business education curriculum development?

Research Hypotheses

1. There is no significant impact of AI integration on curriculum design of business education in tertiary institutions in Akwa Ibom State.
2. AI has no significant influence on teaching methods used in business education programmes.
3. AI has no significant effect on students' learning outcomes in business education.
4. There is no significant Impact of AI on business education
5. There is no significant Impact of AI on business education curriculum development

LITERATURE REVIEW

Artificial Intelligence

Artificial Intelligence (AI) can be characterized as a compilation of computer programs and technologies aiming to replicate the functioning and intellectual capabilities of the human brain. These AI systems can be classified into two categories, mechanically-intelligent and thinking-intelligent. The mechanically-intelligent systems excel at efficiently carrying out repetitive tasks, while the thinking-intelligent systems possess the ability to learn from data and adapt their performance accordingly. To achieve this level of intelligence, AI systems depend on a vast repository of big data, which encompasses various types of information such as text, audio, and video (Chiu & Chai, 2020). It is through this extensive dataset that AI systems can learn and enhance their functioning by utilizing computational methods like machine learning and deep learning. Essentially, an artificially intelligent system is one that can learn from this abundant source of data and adjust its predictions and actions accordingly.

AI technology in education is expected to grow significantly in the coming decades, presenting new opportunities and challenges. Researchers, policymakers and practitioners are integrating AI in education to enhance teaching, personalized learning, assessments and administrative services. AI represents progress in education, offering benefits on multiple levels, and stimulates the evolution of teaching and learning through technologies like chatbots, robots, automated assessment, digitized artefacts, and intelligent tutoring systems, despite occasional organizational challenges (Chiu et al., 2023). The demand for adaptive digital learning has surged in the past decade, driven by the AI innovation. Online and blended learning are now prevalent in modern communities and emerging economies as they strive to integrate these methods into the educational system. AI in education could provide feasible solutions to complex societal problems, enabling students to engage closely with global challenges and develop real-life problem-solving skills.

The Impact of AI on Business Education

The conversation around AI in business education often centers on its potential to disrupt traditional learning models. However, the real story is not just about disruption but about enhancement and empowerment. AI technologies can provide students with real-time feedback, simulate complex business scenarios, and offer a level of interactivity that traditional educational methods struggle to match (al-Zyoud, 2020). The integration of AI into business education is not without its challenges. It requires a fundamental rethinking of curriculum design, teaching methods, and the role of educators. Educators must become facilitators of learning experiences where AI tools serve as both the medium and the message. The task ahead is clear. Business schools must not only teach AI as a subject but also use AI to teach. This dual approach will ensure that students not only understand AI's mechanics but can also critically assess its applications and implications in the business world (Das et al., 2015). Furthermore, as generative AI continues to evolve, so must the

ethical frameworks that guide its use. Business education must therefore include a strong emphasis on the ethical considerations of AI, preparing students to make decisions that balance innovation with integrity.

AI-based education enhances entrepreneurial competencies and fosters creativity, benefiting businesses (Nuseir et al., 2020). While AI offers real support in business scenarios for students, further conceptualization of AI's use in business and education is needed, covering critical aspects like processes, activities and actors. AI tools have proven firmly and vastly helpful in various fields, in education or business education. Amongst them, there are computer vision, prediction systems, data mining, intelligent learning or teaching systems, learning analytics, facial recognition systems, voice or speech recognition systems, virtual laboratories, augmented reality, virtual reality, hearing and sensing technologies, edge computing, virtual personalized assistants, real-time analysis, AI chatbot, image recognition, personalized learning approach, academic analytics, and adaptive learning method (Han et al., 2022).

Impact of AI on Business Education Curriculum Development

AI has the potential to revolutionize the methods and processes of curriculum design in business education. It is important to find ways to automate and enhance efficiency, with AI helping to collate and interpret trends in cohorts and in wider society. This includes utilizing AI for tasks like generating educational content, streamlining administrative processes, and offering data-driven insights to inform business education curriculum improvements (Ley et al., 2023). Even in the short term, it is worth exploring ways in which AI can support time-consuming and troublesome but fundamental aspects of business education curriculum design processes such as articulating programme and module level outcomes, summarizing module content or generating rubrics for grading.

With the advent of AI, there may be changes in the ways in which business education curriculum is design. It is important that experts in business education consider urgently what changes may be needed in the contents of the programme. Business education curriculum may need to include AI as a topic of study, given its growing importance in business. This involves educating students about AI technologies, their applications, and the underlying principles that drive them. Understanding the broader implications of AI in business education is becoming a crucial element of the business education curriculum. Also fundamentally is the ways in which AI is influencing the jobs and other roles that the curriculum is preparing students for (Antara, 2023). In essence, AI is both a tool for enhancing the efficiency of curriculum development and a subject that is becoming integral to the curriculum itself, reflecting its pervasive role in society and the necessity for AI literacy in higher education and wider society.

Impact of AI on Teaching Methods in Business Education

In recent years, the assimilation of AI in education has developed immense momentum. AI is revolutionizing traditional teaching methods, providing new opportunities for educators and students alike. As one witnesses the rise of AI in education, it is important to realize that this technological advancement is about empowering educators with tools that enhance the learning experience for their students in a meaningful manner. In doing so, AI does not act as a fading novelty; it facilitates a more engaging and personalized educational journey (Chiu & Chai, 2020). AI is likely to transform many aspects of teaching, learning, and assessment methodologies. It can support personalized learning paths, be used to support academic skills, be utilized as tutor (or tutorial support), and aid in the fair and efficient evaluation of student work. All of this comes with implications to the ways in which we develop our programmes and design assessments.

AI-powered learning platforms analyze students' learning patterns and tailor the curriculum content accordingly to develop a personalized learning experience. This tailoring of education caters to individual strengths and weaknesses, fostering a more effective learning environment. As stated by Chen et al. (2021), personalization extends beyond using AI in curriculum development, it comprises personalized assessments, assignments, and methods of teaching to build a learning environment where all students can feel supported. Artificial Intelligence brings with it a wave of increased efficiency, allowing business educators to focus on meaningful interactions with students. Automation of routine and error-prone tasks lets educators focus on more meaningful and educational interactions with students. AI in business education can help streamline administrative processes to save time and resources that can instead be directed toward improving education standards (Goksel & Bozkurt, 2019). In this manner, educators can dedicate more time to developing their unique teaching methods and helping students sharpen their critical thinking skills. AI-powered learning platforms deploy mechanisms for constructive feedback, which is a crucial element of the give-and-take involved in the learning process. Students can receive consistent assessments and constructive comments, which help them understand errors and reflect on their mistakes. Timely and constructive feedback aids in academic improvement and develops a mindset geared towards critical thinking.

Impact of AI on Business Education Learning Outcomes

AI-powered personalized learning platforms can create individual learning profiles for students, track individual student progress and pinpoint unique learning needs to adjust within the instructional content dynamically. Integrating AI into the teaching framework helps students grasp AI's role in various learning stages, encouraging creativity and avoiding mere task completion. AI's potential for innovation in education is prominent in the realm of learning analytics and student support. The advent of AI has brought a shift towards utilizing student data and analytics to enhance the educational experience and improve learning outcomes. AI technologies enable real time analysis of vast amounts of data not limited to students' learning but about their emotions as well, offering advantages in identifying at-risk students, recommending personalized interventions, and facilitating timely feedback and assessment (Lee et al., 2022). Learning analytics and AI-driven student support systems can provide actionable insights to educators and enhance student success.

Al Braiki (2020) identified contextual factors differentiating high-achieving and low-achieving students in reading literacy using machine learning techniques. Li et al. (2022) optimized AI-based genetic algorithm grouping method for collaborative groups in higher education outperformed traditional grouping methods. Ouyang et al. (2023) utilized AI algorithms and learning analytics to analyze groups' collaboration patterns in online interaction settings. AI systems in education significantly enhance learners' involvement and performance. Chiu et al. (2023) identified essential AI roles for learners: competency-based task assignments, learner-machine discussions, feedback, and adaptive digital environments. AI benefits include fostering technical skills, creativity, critical thinking, and problem-solving abilities for students.

AI personalizes learning experiences and communication to cater to individual needs and abilities, enhancing efficiency. Customized learning materials are tailored based on students' evaluations, addressing their strengths and weaknesses. Li and Wang (2023) proposed using advanced technology to create a comfortable communication environment, fostering learner networks with increased information accessibility for future generations. Adapting learning experiences sustains student progress and engagement in virtual environments, promoting skill development. Interactivity and participation substantially increase among students and teachers. Khosravi et al. (2022) emphasized the significance of AI in various learning interfaces. For remote learners, AI offers a crucial advantage through simulation cases on complex life topics challenging

to address in traditional settings (example, welfare system, losses, and violence). Ouyang and Jiao (2021) identified three AI in education paradigms, "AI-direct, learner-as-recipient", where AI leads learning with a defined pathway for the learner, "AI-supported, learner-as-collaborator", where AI optimizes interaction among learners, information, and technology, and "AI-empowered, learner-as-leader", where AI enhances learners' intelligence through a complex system.

METHODOLOGY

In carrying out this study Expost-Facto research design was adopter for the study, inclusive of quantitative and qualitative research approaches. The study was carried out in Akwa Ibom State. The target populations comprised lecturers and students of business education in tertiary institutions in Akwa Ibom State. A simple random sampling technique was employed to select 165 lecturers and students from tertiary institutions in Akwa Ibom State, which formed the sample size for the study. A structured questionnaire was administered to the sampled lectures and students to gather data on the impact of AI on curriculum design, teaching methods and learning outcomes in business education. Regression analysis was used to test the hypothesis. The consent of participants in this study was first of all obtained before data could collected from them. The data were treated with confidentiality.

RESULTS AND DISCUSSIONS

Hypothesis One:

The null hypothesis states that thereis no significant impact of AI integration on curriculum design of business education in tertiary institutions in Akwalbom State. In order to answer the hypothesis, simple regression analysis was performed on the data (see table 1)

TABLE 1: Simple Regression Analysis of the Impact of AI Integration on curriculum design of business education in tertiary institutions in Akwalbom State

Model	R	R-Square	Adjusted R Square	Std. error of the Estimate	R Square Change
1	0.96a	0.93	0.93	0.63,	0.93

*Significant at 0.05 level; df= 163; N= 165; critical R-value = 0.197

The above Table 1 shows that the calculated R-value (0.96) is greater than the critical R-value of 0.197at 0.05 level of significance with 163 degrees of freedom. The R-square value of 0.93 indicates that 93% of the variation in curriculum design is explained by AI integration. This implies that there is a significant impact of AI integration on curriculum design of business education in tertiary institutions in Akwa Ibom State. To further determine the significance and differences among the variables, an Analysis of Variance (ANOVA) will be presented and interpreted.

TABLE 2

Analysis of variance of the impact of AI integration on curriculum design of business education in tertiary institutions in Akwaibom State.

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	827.745	1	827.745	2106.564	.000b
Residual	64.049	163	.393		
Total	891.794	164			

The table shows that the calculated F-value (2106.564) is significant at $p < 0.05$, since the significance value is 0.000. This indicates that there is a significant impact of AI integration on curriculum design of business education in tertiary institutions in Akwa Ibom State. Therefore, the null hypothesis is rejected. The finding of the study revealed that AI integration significantly influences curriculum design in business education in tertiary institutions in Akwa Ibom State. The result is in support of the opinion Chiu et al., (2023) who asserted of AI represents progress in education, offering benefits on multiple levels, and stimulates the evolution of teaching and learning through technologies like chatbots, robots, automated assessment, digitized artefacts, and intelligent tutoring systems, despite occasional organizational challenges. This finding is also in agreement withLey et al., (2023) who asserted that AI has the potential to revolutionize the methods and processes of curriculum design in business education. It is important to find ways to automate and enhance efficiency, with AI helping to collate and interpret trends in cohorts and in wider society. This includes utilizing AI for tasks like generating educational content, streamlining administrative processes, and offering data-driven insights to inform business education curriculum improvements.

Hypothesis two:

The null hypothesis states that AI has no significant influence on teaching methods used in business education programs. In order to answer the hypothesis, simple regression analysis was performed on the data (see table 3).

TABLE 3: Simple Regression Analysis of the influence of AI on teaching methods used in business education programmes

Model	R	R-Square	Adjusted R Square	Std. error of the Estimate	R Square Change
1	0.92a	0.85	0.85	0.70	0.85

***Significant at 0.05 level; df= 163; N= 165; critical R-value = 0.197**

The above Table 3 shows that the calculated R-value of (0.92) is greater than the critical R-value of 0.197 at 0.05 level of significance with 163 degrees of freedom. The R-square value of 0.85 indicates that 85% of the variation in teaching methods is explained by AI. This implies that there is a significant influence of AI on teaching methods used in business education programmes. To further

determine the significance and differences among the variables, an Analysis of Variance (ANOVA) will be presented and interpreted.

TABLE 4

Analysis of variance of the impact AI on teaching methods used in business education programme.

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	465.189	1	465.189	949.273	.000[b]
Residual	79.878	163	.490		
Total	545.067	164			

The table shows that the calculated F-value (949.273) is significant at 0.05, since the significance value is 0.000. This indicates that there is a significant impact of AI on teaching methods used in business education programmes. The finding of the study revealed that AI significantly influences teaching methods used in business education programmes. The result is in support of the opinion of Chiu & Chai, (2020) who mentioned that AI in education has developed immense momentum. AI is revolutionizing traditional teaching methods, providing new opportunities for educators and students alike. As one witnesses the rise of AI in education, it is important to realize that this technological advancement is about empowering educators with tools that enhance the learning experience for their students in a meaningful manner. In doing so, AI does not act as a fading novelty; it facilitates a more engaging and personalized educational journey. This finding is also in agreement with Goksel & Bozkurt, (2019) who noted that AI in business education can help streamline administrative processes to save time and resources that can instead be directed toward improving education standards.

Hypothesis three:

The null hypothesis states that AI has no significant effect on students' learning outcomes in business education. In order to answer the hypothesis, simple regression analysis was performed.

TABLE 5: Simple Regression Analysis of the effect AI has on students' learning outcomes in business education

Model	R	R-Square	Adjusted R Square	Std. error of the Estimate	R Square Change
1	0.91	0.83	0.83	0.85	0.83

***Significant at 0.05 level; df= 163; N= 165; critical R-value = 0.197**

The above Table 5 shows that the calculated R-value of (0.91) is greater than the critical R-value of 0.197 at 0.05 level of significance with 163 degrees of freedom. The R-square value of 0.83 indicates that 83% of the variation in students' learning outcomes is explained by AI. Therefore, the null hypothesis is rejected. This implies that there is a significant influence ofAI on students' learning

outcomes in business education. To further determine the significance and differences among the variables, an Analysis of Variance (ANOVA) will be presented and interpreted.

TABLE 6

Analysis of variance of the Impact AI on students' learning outcomes in business education

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	566.731	1	566.731	785.546	.000b
Residual	117.596	163	.721		
Total	684.327	164			

The table shows that the calculated F-value (785.546) is significant at 0.05, since the significance value is 0.000. This indicates that there is a significant impact of AI on students' learning outcomes in business education. The finding of the study revealed that AI significantly influences students' learning outcomes in business education. The result is in support of the findings of Li et al. (2022) who stated that optimized AI-based genetic algorithm grouping method for collaborative groups in higher education outperformed traditional grouping methods. Ouyang et al. (2023) stated that utilized AI algorithms and learning analytics to analyze groups' collaboration patterns in online interaction settings. AI systems in education significantly enhance learners' involvement and performance.

Hypothesis four:

The null hypothesis states there is no significant Impact of AI on business education. In order toanswer the hypothesis. In order to answer the hypothesis, simple regression analysis was performed on the data (see table 7)

Table 7:

Simple regression analysis was Impact of AI on business education.

Model	R	R-Square	Adjusted R Square	Std. error of the Estimate	R Square Change
1	0.84a	0.69	0.69	0.73	0.69

***Significant at 0.05 level; df= 163; N= 165; critical R-value = 0.197**

The above Table 7 shows that the calculated R-value of (0.84) is greater than the critical R-value of 0.197 at 0.05 level of significance with 163 degrees of freedom. The R-square value of 0.69 indicates that 69% of the variation in business education is explained by AI. This implies that there is a significant influence of AI on business education. To further determine the significance and differences among the variables, an Analysis of Variance (ANOVA) will be presented and interpreted.

TABLE 8

Analysis of variance of the Impact of AI on business education

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	193.074	1	193.074	367.526	.000[b]
Residual	85.629	163	.525		
Total	278.703	164			

The table shows that the calculated F-value (367.526) is significant at 0.05, since the significance value is 0.000. This indicates that there is a significant impact of AI on business education. The finding of the study revealed that AI significantly influences business education. The result is in support of the findings of Al-Zyoud, (2020) who mentioned that the conversation around AI in business education often centers on its potential to disrupt traditional learning models. However, the real story is not just about disruption but about enhancement and empowerment. AI technologies can provide students with real-time feedback, simulate complex business scenarios, and offer a level of interactivity that traditional educational methods struggle to match. The findings is also in agreement with the opinion of Das et al., (2015), who stated that bbusiness schools must not only teach AI as a subject but also use AI to teach. This dual approach will ensure that students not only understand AI's mechanics but can also critically assess its applications and implications in the business world.

Hypothesis five:

The null hypothesis states that there is no significant Impact of AI on business education curriculum development. In order to answer the hypothesis, simple regression analysis was performed on the data (see table 9).

TABLE 9: Simple Regression Analysis of the Impact of AI on business education curriculum development

Model	R	R-Square	Adjusted R Square	Std. error of the Estimate	R Square Change
1	0.81a	0.66	0.66	0.88	0.65

*Significant at 0.05 level; df= 163; N= 165; critical R-value = 0.197

The above Table 9 shows that the calculated R-value of (0.81) is greater than the critical R-value of 0.197 at 0.05 level of significance with 163 degrees of freedom. The R-square value of 0.66 indicates that 66% of the variation in business education curriculum development is explained by AI. Therefore, the null hypothesis is rejected. This implies that there is a significant influence of AI on business education curriculum development. To further determine the significance and differences among the variables, an Analysis of Variance (ANOVA) will be presented and interpreted.

TABLE 10

Analysis of variance of the Impact of AI on business education curriculum development

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	193.074	1	193.074	367.526	.000[b]
Residual	85.629	163	.525		
Total	278.703	164			

The table shows that the calculated F-value (367.526) is significant at the 0.05 level since the significance value is 0.000. This indicates that there is a significant impact of AI on business education curriculum development. Therefore, the null hypothesis is rejected. The finding of the study revealed that AI has a significant impact on business education curriculum development. This finding is in support of Ley et al. (2023), who stated that AI has the potential to revolutionize the methods and processes of curriculum design in business education. AI can automate and enhance efficiency by helping educators collate and interpret trends within student cohorts and society, generate educational content, streamline administrative processes, and provide data-driven insights for curriculum improvement.

CONCLUSION

In conclusion, the impact of Artificial Intelligence (AI) on the curriculum, teaching, and learning of Business Education in tertiary institutions in Akwa Ibom State has brought significant improvements to educational practices and outcomes. The integration of AI into Business Education has enhanced curriculum delivery by introducing innovative digital tools, improving access to learning resources, and promoting interactive and student-centered learning experiences. AI has also supported lecturers in carrying out instructional and assessment activities more efficiently while enabling students to develop critical thinking, problem-solving, digital literacy, and other skills required in today's technology-driven business environment. Furthermore, the adoption of AI has increased opportunities for personalized learning, allowing students to learn at their own pace and according to their individual needs. Despite these benefits, challenges such as inadequate technological infrastructure, insufficient funding, limited technical expertise, and concerns about ethical use remain barriers to effective implementation. Therefore, for tertiary institutions in Akwa Ibom State to fully harness the potential of AI in Business Education, there is a need for continuous investment in technological facilities, capacity building for educators, curriculum enhancement, and supportive policies that encourage the responsible and effective use of AI in teaching and learning. Through these efforts, AI can serve as a valuable tool for improving the quality, relevance, and effectiveness of Business Education in the state.

RECOMMENDATION

1. Tertiary institutions in Akwa Ibom State should provide adequate AI-related infrastructure, including reliable internet access, computers, and digital learning tools, to support effective teaching and learning.
2. Business Education lecturers should be regularly trained through workshops, seminars, and professional development programs on the use of AI technologies in instructional delivery.

3. **Government and educational stakeholders should formulate policies and provide funding to encourage the adoption and sustainable integration of AI technologies in tertiary institutions.**

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