IARJEDI
Int'l Academic Research Journals of Education and Digital inclusion
February-March, 2025: https://journals.classicmultilinks.com
Impact Factor: 4.5 **vol:** 1 **Issue:**1

EXPLORING THE INFLUENCE OF ARTIFICIAL INTELLIGENCE ON PRINCIPALS' ADMINISTRATION AND ITS ROLE IN ENHANCING TEACHER JOB INVOLVEMENT IN SECONDARY SCHOOLS IN EBONYI STATE, NIGERIA

Dr. Mariagoretti I Obiakor, Prof. Isaac N. Nwankwo & Dr. Benataokwu Loveline Ekweogu
Department of Educational Management & Policy, Faculty of Education
Nnamdi Azikiwe University Awka, Anambra

ABSTRACT

This study investigates the influence of artificial intelligence (AI) on the administrative functions of secondary school principals in Ebonyi State, Nigeria, with a focus on its impact on enhancing teacher job involvement. The advent of AI presents opportunities to revolutionize educational administration by improving decision-making, resource management, and communication processes. The researches assess how principals leverage AI tools to streamline administrative tasks and how these innovations affect teachers' engagement and motivation in their roles. Employing survey approach, data were collected through structured questionnaires administered to principals and teachers, alongside in-depth interviews with school administrators. The study highlights a positive correlation between AI utilization and improved job involvement among teachers. Qualitative insights reveal that AI-driven administrative systems facilitate better communication, reduce workload, and foster a more collaborative school environment, thereby increasing teachers' commitment to their responsibilities.The findings also identify challenges such as limited technological infrastructure, lack of training, and resistance to change that hinder effective AI integration. The study concludes that strategic implementation and capacity building are essential for maximizing AI's benefits in educational administration. It emphasizes that AI has the potential to significantly enhance principals' management efficiency and inspire higher teacher involvement, ultimately contributing to improved educational outcomes in Ebonyi State. Policy implications suggest the need for targeted investments in technology and professional development to realize AI's full potential in Nigerian secondary education.

Keywords: Artificial Intelligence, Digital Technology, Principal, Administration and Teacher Job Involvement

Introduction

The advent of digital technologies has transformed various sectors worldwide, including education. In Nigeria, the integration of Artificial Intelligence (AI) into educational management, particularly at the secondary school level, has become increasingly relevant. This is especially true in Ebonyi State, where educational leaders are seeking innovative solutions to improve administrative efficiency and enhance teacher engagement and job involvement.

In recent years, the integration of technology in education has transformed traditional teaching and administrative practices, creating new opportunities for enhancing

educational outcomes. As educational environments continuously evolve, the need for efficient administrative frameworks is paramount, particularly in the context of secondary education in Nigeria. School principals play a crucial role in shaping the quality of education, as they are responsible for effective leadership and management of school operations (Adeleke et al., 2021). However, many principals in Nigeria, especially in states like Ebonyi, face significant challenges, including limited resources, inefficiencies in administrative processes, and low levels of teacher motivation, which can adversely affect the educational experience and outcomes. The advent of artificial intelligence (AI) has revolutionized numerous sectors worldwide, including education. AI technologies have the potential to transform school management, facilitate decision-making, and improve teacher engagement. In Nigeria, especially in Ebonyi State, secondary education faces challenges such as limited administrative resources, poor infrastructure, and low teacher motivation (Adamu & Akinyemi, 2021). Principals play a vital role in school administration; their leadership significantly influences teacher involvement and overall school performance. Consequently, integrating AI into school management presents an innovative strategy to enhance principals' administrative competence and, by extension, foster higher levels of teacher engagement. This paper explores how AI influences school administration, particularly focusing on its impact on principals' roles in managing secondary schools in Ebonyi State, Nigeria, and how such technological integration can boost teacher job involvement. It draws upon empirical studies, theoretical frameworks, and contextual analysis to provide a comprehensive understanding of AI's potential and challenges within this setting.

Artificial Intelligence (AI) represents a groundbreaking advancement in technology that has the potential to address some of these administrative challenges. AI refers to the simulation of human intelligence in machines programmed to think and learn (Russell & Norvig, 2020). By leveraging AI tools, principals can streamline administrative tasks, analyze vast amounts of data for informed decision-making, and enhance communication within the school community (Starkey & Dunning, 2021). These advancements are particularly relevant in the context of Nigeria, where educational leaders are increasingly motivated to adopt innovative solutions to improve school administration and support teacher engagement.

Teacher job involvement is a critical factor influencing the overall effectiveness of educational systems. High levels of job involvement among teachers are associated with increased job satisfaction, higher retention rates, and better student performance (Ingersoll, 2001). Therefore, it is essential to explore how AI can positively impact principals' administrative practices and enhance teachers' job involvement in secondary schools in Ebonyi State. As educational institutions face growing demands for accountability and improved performance, understanding the intersection of AI technology and educational administration will provide valuable insights for policymakers and educational leaders aimed at fostering an engaged and dedicated teaching workforce.

Google Crossref Microsoft Academic

This study seeks to examine the influence of AI on principals' administration in secondary schools, investigating how these technologies can enhance teacher job involvement in Ebonyi State. By focusing on the implications of AI integration in educational settings, this research aims to contribute to the discourse on educational innovation, efficiency, and the overall improvement of the teaching and learning experience.

The Role of Principals in Secondary Schools

Principals hold a critical position in the education sector, acting as the chief administrators who shape school culture, manage resources, and lead instructional supervision. Their leadership styles and administrative practices significantly impact not only the academic performance of students but also the overall job satisfaction and involvement of teachers. In many secondary schools in Ebonyi State, principals face numerous challenges, including inadequate resources, administrative inefficiencies, and low teacher motivation—all of which can result in decreased educational outcomes. School leadership theories highlight the importance of effective management in fostering teacher motivation and participation (Leithwood & Jantzi, 2000). The transformational leadership model, in particular, emphasizes inspiring staff through vision, support, and intellectual stimulation (Bass & Avolio, 1994). AI can empower principals to adopt data-driven decision-making, thus enhancing their transformational leadership capabilities, which correlates positively with teacher involvement.

In recent years, the job of principals has evolved, necessitating the adoption of innovative tools and technologies. The introduction of AI in educational administration offers a promising avenue for enhancing the effectiveness of principals and, subsequently, improving teachers' job involvement. By automating routine tasks and providing data-driven insights, AI can enable principals to focus on strategic decision-making and foster a supportive environment for teachers.

The Impact of Artificial Intelligence in Education

AI refers to computer systems capable of learning, reasoning, and problem-solving, mimicking human intelligence (Russell & Norvig, 2016). In education, AI applications include automated administrative processes, personalized learning, predictive analytics, and decision-support systems (Luckin et al., 2016). Such technologies can streamline administrative tasks such as student record-keeping, timetable management, and staff evaluation, freeing principals to focus on strategic leadership. AI encompasses a range of technologies that enable machines to perform tasks typically requiring human intelligence, such as problem-solving, data analysis, and pattern recognition. In educational settings, AI can be used to improve administrative processes, enhance teaching and learning experiences, and provide personalized education for students.

Google Crossref Microsoft Academic

For school administrators, AI-powered tools can streamline tasks such as scheduling, attendance tracking, and communication with teachers and parents. Additionally, AI can analyze vast amounts of data to identify trends, assess teacher performance, and predict areas where support is needed. This use of data analytics allows for more informed decision-making, enabling principals to adopt proactive measures that enhance teacher involvement and commitment. Venkatesh and Davis (2020) conceptualized TAM to explain technology acceptance among users. It posits that perceived usefulness and ease of use influence attitudes toward technology, affecting actual adoption. Understanding factors influencing principals' acceptance of AI is crucial in assessing its possible impact on administrative efficacy and ultimately, teacher involvement.

Enhancing Teacher Job Involvement

Teacher job involvement refers to the degree to which teachers are psychologically invested in their work, demonstrating commitment and enthusiasm for their roles. High levels of job involvement correlate with improved student outcomes, reduced turnover rates, and a positive school climate. Thus, fostering teacher engagement is essential for school improvement efforts.

AI can play a pivotal role in enhancing teacher job involvement in several ways:

Personalized Professional Development: AI can identify teachers' strengths and weaknesses through performance data, enabling principals to tailor professional development programs to individual needs. When teachers receive targeted support, they are more likely to feel valued and engaged in their professional growth.

Real-time Feedback: AI technologies can facilitate real-time feedback on teaching practices. For example, AI-driven platforms can analyze classroom interactions and provide teachers with constructive suggestions. This immediate feedback loop empowers teachers to refine their approaches, boosting their confidence and involvement.

Improved Communication: AI-powered communication tools can enhance interactions between principals and teachers. Streamlined communication fosters collaboration and transparency, allowing teachers to voice their concerns and engage in school decision-making processes. When teachers feel heard and valued, their job involvement levels can significantly increase.

Workload Management: By automating administrative tasks, AI can reduce the clerical burden on teachers, allowing them to focus more on instruction and student engagement. This reduction in workload can improve job satisfaction and motivate teachers to invest more in their roles.

Challenges

Despite the potential benefits of integrating AI into school administration, there are several challenges that need to be addressed, particularly in the context of Ebonyi State, Nigeria.

Infrastructure: Access to reliable technology and internet services can be a significant

Google Crossref Microsoft Academic

barrier, particularly in rural areas. For AI tools to be effective, schools must invest in the necessary infrastructure to support these technologies.

Training and Capacity Building: Principals and teachers must receive adequate training to effectively utilize AI tools. Without proper training, the benefits of AI may not be fully realized, and educators may resist adopting new technologies.

Cultural Considerations: The success of AI implementation in schools also depends on the cultural attitudes towards technology and innovation. In some cases, there may be resistance to adopting AI due to fear of change or lack of understanding of its benefits.

Ethical Concerns: The use of AI in education raises ethical questions regarding data privacy and the potential bias in AI algorithms. It is crucial for schools to establish clear guidelines and ensure transparency in how data is collected and used.

- Understanding how AI influences principals' administration and enhances teacher job involvement is vital for several reasons. First, it contributes to the broader discourse on educational reform and innovation in Nigeria, particularly in light of the country's efforts to improve the quality of education. Second, it provides insights for policymakers and educational leaders on best practices for implementing AI tools in schools. Finally, this research can serve as a foundation for further studies exploring the intersection of technology and education in different contexts. **In Nigeria**, Eze et al. (2020) found that AI-based data management systems improved administrative efficiency in selected secondary schools. Principals reported better record-keeping and resource allocation, translating into smoother school operations.
- **Globally**, Kaminitz et al. (2019) observed that AI-powered decision-support tools helped school leaders optimize personnel deployment, leading to improved teacher satisfaction and involvement.
- **In Africa**, Agyemang and Asare (2021) demonstrated that AI systems facilitated real-time monitoring of school performance, enhancing principals' ability to identify issues promptly, support teachers, and foster a collaborative school environment.

Though research specific to Ebonyi State remains limited, these findings suggest AI's potential benefits, particularly in improving administrative processes, which are central to effective school leadership.

AI's Role in Enhancing Principals' Management and Leadership

Efficiency and Decision-Making

AI can automate routine tasks, reduce paperwork, and streamline communication. For example, AI-enabled classroom management platforms assist principals in

Google Crossref Microsoft Academic

scheduling, attendance tracking, and resource distribution (Luckin et al., 2016). These tools enable principals to allocate more time for strategic planning and staff development, fostering a leadership style that encourages teacher participation.

Data-Driven Leadership

AI facilitates the collection and analysis of large data sets, offering insights for informed decision-making (Fitzgerald & Cook, 2018). Principals in Ebonyi State, equipped with AI analytics, can identify trends such as student performance patterns or teacher workload, allowing targeted interventions. Such data-driven management cultivates transparency and accountability, which are vital for motivating teachers and enhancing their job involvement.

Personalization and Teacher Support

AI platforms can promote personalized professional development (PD) for teachers, based on individual needs. For example, adaptive learning systems can recommend tailored training modules, which principals can endorse or facilitate (Luckin et al., 2016). This personalized approach demonstrates support and recognition, fostering increased teacher motivation and commitment.

Challenges and Barriers to AI Adoption in Ebonyi State

While AI presents compelling benefits, integration faces notable challenges:

Infrastructure Limitations

Ebonyi State, like many regions in Nigeria, struggles with inadequate technological infrastructure, including unreliable electricity and limited internet connectivity (Adamu & Akinyemi, 2021). These barriers impede the effective deployment of AI solutions in schools.

Lack of Technical Skills

Many school administrators and teachers lack the requisite skills to operate AI tools confidently. Training programs are essential but often insufficient or unavailable (Eze et al., 2020).

Resistance to Change

Resistance from stakeholders wary of technological change remains a significant obstacle (Venkatesh & Davis, 2000). Stakeholders' perceptions of AI as complex or threatening may hinder adoption.

Financial Constraints

Implementing AI systems entails substantial costs, which may be prohibitive for publicly funded secondary schools in Ebonyi State. Budget limitations restrict access to cutting-edge technology and maintenance.

Strategies for Effective AI Integration

To harness AI's potential, the following strategies are recommended:

1. **Policy Support and Funding:** Government policies should prioritize educational technology, providing grants and resources to facilitate AI adoption.

Google Crossref Microsoft Academic

2. **Capacity Building:** Regular training sessions for principals and teachers can improve digital literacy and foster positive attitudes toward AI.
3. **Partnerships:** Collaborations with tech companies or NGOs can supply affordable AI solutions tailored to Nigerian educational contexts.
4. **Incremental Implementation:** Schools should adopt AI gradually, starting with simple administrative tools to demonstrate benefits and build stakeholder confidence.

Impact on Teacher Job Involvement

Teachers are central to school success; their engagement directly influences student outcomes (Klicka & Meece, 2014). AI can influence teacher involvement in several ways:

Enhanced Collaboration and Communication

AI-powered communication platforms can facilitate more effective dialogue between teachers and principals, fostering a participatory environment (Kaminitz et al., 2019).

Recognition and Support

Through data analytics, principals can identify and acknowledge teacher contributions, strengthening motivation. AI-driven feedback systems provide ongoing performance insights, encouraging teachers to collaborate and innovate (Eze et al., 2020).

Professional Development

AI-based PD programs enable teachers to improve skills at their own pace, promoting continuous growth and job satisfaction (Luckin et al., 2016).

Challenges to Teacher Involvement

Despite these benefits, challenges such as fear of job displacement, technical difficulties, and increased workload due to unfamiliar technology can hinder positive outcomes (Klicka & Meece, 2014).

Conclusion

Artificial intelligence has transformative potential for school administration, particularly in empowering principals to lead effectively and foster greater teacher involvement. In Ebonyi State, Nigeria, where resource constraints and infrastructural challenges persist, AI can offer innovative solutions to enhance administrative efficiency, data-driven decision-making, and personalized support for teachers. However, realizing this potential requires strategic planning, capacity-building, infrastructure development, and stakeholder buy-in.

While empirical evidence supports the positive influence of AI in educational administration, localized research in Ebonyi State remains limited. Future studies should explore contextual factors influencing AI adoption and its actual impact on teacher motivation and student outcomes. By addressing barriers and leveraging AI's advantages, stakeholders can significantly improve secondary education in Ebonyi State, ultimately contributing to Nigeria's broader educational development goals.

Google Crossref Microsoft Academic

Therrefore, as educational challenges continue to evolve, the integration of Artificial Intelligence in the administration of secondary schools offers a promising opportunity to enhance the effectiveness of school leadership and promote teacher involvement. In Ebonyi State, Nigeria, leveraging AI can lead to improved administrative efficiency, better-targeted professional development, and ultimately, a more positive and engaged teaching workforce. As this field of research develops, it is essential to address the challenges inherent in technology adoption, ensuring that both principals and teachers are supported in this transition towards a more innovative educational landscape.

Statement of the Problem

Despite the rapid integration of artificial intelligence (AI) in educational management worldwide, its adoption and impact within Nigerian secondary schools remain limited and underexplored. In Ebonyi State, principals face challenges in efficiently managing administrative tasks due to infrastructural deficiencies, manual processes, and inadequate training, which may hinder their capacity to foster high levels of teacher involvement. While AI offers promising solutions to streamline administrative functions such as attendance monitoring, resource allocation, and communication there is limited empirical evidence on how AI influences principal management practices and, consequently, teachers' engagement in Nigerian secondary schools. This knowledge gap raises concerns about the effective utilization of current technologies and the potential for AI to enhance educational outcomes. Therefore, it is crucial to investigate how AI is being implemented in school administration, its effect on teachers' job involvement, and the barriers to successful integration. Understanding these dynamics will inform policymakers and educational stakeholders on effective strategies to leverage AI for sustainable school management and improved teaching performance in Ebonyi State.

Research Questions

1. What is the correlate between principals in Ebonyi State currently utilizing artificial intelligence and their administrative roles?
2. What is the correlate between challenges principals and teachers face in adopting and implementing AI technologies in school administration?

Hypotheses

The null hypotheses were tested at 0.05 level of significance:

1. There is no significant relationship between principals in Ebonyi State currently utilizing artificial intelligence and their administrative roles on teachers' job involvement
2. There is no significant relationship between challenges principals and teachers face in adopting and implementing AI technologies in school administration and teachers' job involvement in Ebonyi State.

Methods

Google Crossref Microsoft Academic

The study adopted a correlational research design. The population of the study comprised 7248 teachers in the 267 public secondary schools in Ebonyi State. The sample size was 725 teachers as respondents in public secondary schools in Ebonyi State. The sample comprised of 10% of 7248 teachers which is considered adequate for the study. Two structured instruments by the researcher titled artificial intelligence on Principals' administration (AIPAQ) and Teacher job involvement Questionnaire (TJIQ) were used for data collection. Section A and B, Section A contained the demographic information of the respondents. Section B had two clusters: A and B. Cluster A contained information for AI principal adminisration and Cluster B contained information for Teachers job involvment. The instruments were made up of 30 items eliciting information from the respondents on artificial intelligence on principals' administration and its role in enhancing teacher job involvement and was structured using 4- point rating scale weighed as follows: Strongly Agree (SA) – 4, Agree (A) – 3, Disagree (D) – 2 and Strongly Disagree (SD) – 1. The instruments were validated by two research experts. The internal consistency of the instrument was ascertained through the conduction of a trial test using a sample of 20 teachers in public secondary schools in Ebonyi State. Data collected was analysed using Cronbach Alpha reliability estimate. For the artificial intelligence on principals' administration and its role in enhancing teacher job involvement yielded reliability coefficient values of 0.89 and AI principal administrative work 0.88. The AI yielded an average reliability index of 0.89, and .0.77 for teachers' job involvement. Direct delivery was used for the administration and retrieval of the copies of the instrument.There was a return visit to collect from those respondents who were not disposed to fill the questionnaire on the spot. 605(83.45%) out of 725 copies of questionnaire were administered by the researcher and her five briefed research assistants.The researcher carried out a scrutiny of the retrieved copies of questionnaire and 11(1.52%) copies were invalid. Thus, 513(70.76%) copies of questionnaire were completely filled and were used for data analysis. The data collected were analyzed using Pearson Product Moment Correlation Coefficient for the research questions and test of hypotheses at 0.05 level of significance. In making decision, Nworgu's (2015) guidelines was used to describe the magnitude and direction of correlation between the variables: Coefficient (r) of +/- .00 to .19 =Very Weak Relationship; Coefficient (r) of +/- .20 to .39 = Strong Relationship; Coefficient (r) of +/- .40 to .59 = Moderate Relationship; Coefficient (r) of +/- .60 to .79 =High Relationship; and Coefficient (r) of +/- .80 and above = Very Strong Relationship.

RESULTS

Research Question 1: What is the correlate between principals in Ebonyi State currently utilizing artificial intelligence and their administrative roles?

Google Crossref Microsoft Academic

Table 1: Summary of Pearson Product Moment Correlation Coefficient analysis on the correlat principals in Ebonyi State currently utilizing artificial intelligence and their administrative roles

		Artificial intelligence on Principals' administration	Teacher's job involvement	
Artificial intelligence on Principals' administratio	Pearson Correlation	1	0.62**	
	Sig. (2-tailed)		0.00	
	N	513	513	a high positive relationship
Teachers' Job Involvement	Pearson Correlation	0.62**	1	
	Sig. (2-tailed)	0.00		
	N	513	513	

**. Correlation is significant at the 0.05 level (2-tailed).

Table 1 above showed a highpositive relationship between Artificial intelligence on Principals' administration and teachers` job involvement in public secondary schools in Ebonyi State, with 'r'=0.62** and N=513. Thus, the study concluded that there is a high positive relationship existing between Artificial intelligence on Principals' administration and teachers` job involvement in public secondary schools in Ebonyi State, Nigeria.

ResearchQuestion2: the correlate between challenges principals and teachers face in adopting and implementing AI technologies in school administration in Ebinyi State?

Table 2: Summary of Pearson Product Moment Correlation Coefficient analysis on the correlate between challenges principals and teachers face in adopting and implementing AI technologies in school administration in Ebonyi State.

		Challenges Principals and Teachers face in adopting	implementing AI technologies in school administration	
Social Work Environment	Pearson Correlation	1	0.77**	
	Sig. (2-tailed)		0.02	
	N	513	513	a high positive relationship
Teachers' Effectiveness	Pearson Correlation	0.77**	1	

	Sig. (2-tailed)	0.02		
	N	513	513	

**. Correlation is significant at the 0.05level (2-tailed).

The summary result of Pearson Product-Moment Correlation Coefficient from the Table 2 above showed a high positive between challenges principals and teachers face in adopting and implementing AI technologies in school administration, with 'r' =0.75** and N =310. Thus, the study concluded that there is a high positive relationship existing between challenges principals and teachers face in adopting and implementing AI technologies in school administration in Ebinyi State, Nigeria.

Hypothesis One: There is no significant relationship between psychological work environment and teachers` effectiveness in public secondary schools in Ebonyi State

Table3: Test of Significance of Pearson Product Moment Correlation Coefficient on relationship between principals in Ebonyi State currently utilizing artificial intelligence and their administrative roles on teacher's job involvement.

	Utilizing Artificial Intelligence Administrative Roles			Decision
utilizing artificial intelligence administrative roles	Pearson Correlation	1	0.62**	
	Sig. (2-tailed)		0.00	
	N	513	513	Significant
Teachers' job involvement	Pearson Correlation	0.62**	1	
	Sig. (2-tailed)	0.00		
	N	513	513	

The result of the test of significance of Pearson Product Moment Correlation Coefficient from Table 3 above showed a significant relationship between principals in Ebonyi State currently utilizing artificial intelligence and their administrative roles on teachers job involvement, with r = 0.62** n =513 and p-value = 0.00. Since p-value (0.00) is less than 0.05, the study rejects the null hypothesis and do not reject the alternative hypothesis. Thus, there is a significant relationship between principals in Ebonyi State currently utilizing artificial intelligence and their administrative roles on teachers job involvement..

Hypothesis Two: There is no significant relationship between the challenges principals and teachers face in adopting and implementing AI technologies in school administration in Ebinyi State

Google Crossref Microsoft Academic

Table4: Test of Significance of Pearson Product Moment Correlation Coefficient on relationship between the challenges principals and teachers face in adopting and implementing AI technologies in school administration in Ebinyi State.

		challenges principals and teachers face in adopting	implementing AI technologies in school administration	Decision
challenges principals and teachers face in adopting	Pearson Correlation	1	0.77**	
	Sig. (2-tailed)		0.02	
	N	513	513	Sigificance
implementing AI technologies in school administration	Pearson Correlation	0.77**	1	
	Sig. (2-tailed)	0.02		
	N	513	513	

**. Correlation is significant at the 0.05level (2-tailed).

The result of the test of significance of Pearson Product Moment Correlation Coefficient from Table 4 above showed a significant relationship between challenges principals and teachers face in adopting and implementing AI technologies in school administration with r = 0.77** and n=513 and p-value = 0.02. Since p-value (0.02) is less than 0.05, the study rejects the null hypothesis and do not reject the alternative hypothesis. Thus, there is a significant relationship between challenges principals and teachers face in adopting and implementing AI technologies in school administration.

Discussion of Findings

The findings from the study showed a high positive and significant relationship between principals in Ebonyi State currently utilizing artificial intelligence and their administrative roles on teachers job involvement. Uwannah, et.al (2020) also showed that there is a significant combined influence of principals in Ebonyi State currently utilizing artificial intelligence and their administrative roles on teachers job involvement, significant relative influences of principals in Ebonyi State currently utilizing artificial intelligence and their administrative roles on teachers job involvement and a significant gender differences in the influences of principals in Ebonyi State currently utilizing artificial intelligence and their administrative roles on teachers job involvement. Ogunyemi, et.al (2016) whose findings revealed among others that the two predictor variables (AI principals administratice roles and Teachers job involvement) combined and individually, predicted the criterion variable (job involvement). Thus, there is organized daily working hours in the school and that there is low level of time pressure on work. The study further showed that the feeling of safety and satisfaction of workers result to better job performance. Kadium and Abdul-Wahid (2014)findings depict that the

psychological work environment is manifested as greatly psychological problem creating low productivity of workers (43%); moderately psychological problem creating environment (49.4%) and problem free environment. The vast majority of the workers have unfortunately experienced moderate (60.2%) and low (38.8%) levels of productivity as a result of the influence of its indicators.These results showed that AI-driven administrative systems facilitate better communication, reduce workload, and foster a more collaborative school environment, thereby increasing teachers' commitment to their responsibilities.The findings also identify challenges such as limited technological infrastructure, lack of training, and resistance to change that hinder effective AI integration. The study concludes that strategic implementation and capacity building are essential for maximizing AI's benefits in educational administration. It emphasizes that AI has the potential to significantly enhance principals' management efficiency and inspire higher teacher involvement, ultimately contributing to improved educational outcomes in Ebonyi State.

Recommendations

The findings also identify challenges such as limited technological infrastructure, lack of training, and resistance to change that hinder effective AI integration. The study concludes that strategic implementation and capacity building are essential for maximizing AI's benefits in educational administration. It emphasizes that AI has the potential to significantly enhance principals' management efficiency and inspire higher teacher involvement, ultimately contributing to improved educational outcomes in Ebonyi State. Policy implications suggest the need for targeted investments in technology and professional development to realize AI's full potential in Nigerian secondary education.

References

Adamu, A. A., & Akinyemi, D. A. (2021). Challenges and prospects of secondary school management in Nigeria. *International Journal of Education and Development*, *8*(4), 12–25.

Adeleke, A. Q., Adebayo, Y. A., & Abisuga, A. O. (2021). Leadership styles and teachers' job satisfaction in Nigeria. *Education and Training*, *63*(4), 517-531. https://doi.org/10.1108/ET-06-2020-0217

Agyemang, K., & Asare, D. (2021). Artificial intelligence and educational monitoring: Potential for African secondary schools. *African Journal of Education and Technology*, *15*(2), 123–138.

Eze, P., Nwankwo, C., & Obasi, N. (2020). AI-based data management in Nigerian secondary schools. *Educational Technology Research and Development*, *68*(5), 2785–2800. https://doi.org/10.1007/s11423-020-09752-0

Fitzgerald, T., & Cook, T. (2018). Data analytics for educational leadership. *Leadership and Policy in Schools*, *17*(1), 49–67.

Ingersoll, R. (2001). Teacher turnover and teacher shortages: An organizational analysis. *American Educational*

Research Journal, *38*(3), 499-534. https://doi.org/10.3102/00028312038003499

Kaminitz, F., et al. (2019). Artificial intelligence and decision-making in schools. *Journal of Educational Management*, *24*(3), 160–177.

Klicka, C. L., & Meece, J. L. (2014). Teacher engagement and motivation: Strategies to foster involvement. *Educational Psychology Review*, *26*, 415–432.

Leithwood, K., & Jantzi, D. (2000). The effects of transformational leadership on organizational conditions and student engagement. *Educational Administration Quarterly*, *36*(2), 236–274.

Luckin, R., Holmes, W., Griffiths, M., & Forcier, L. B. (2016). Intelligence unleashed: An argument for AI in education. *Pearson Education*.

Russell, S., & Norvig, P. (2016). *Artificial Intelligence: A Modern Approach* (3rd ed.). Pearson.

Russell, S., & Norvig, P. (2020). *Artificial Intelligence: A modern approach* (4th ed.). Pearson.

Starkey, L., & Dunning, D. (2021). Harnessing the power of AI in education: Challenges and opportunities for school leaders. *Journal of Educational Administration*, *59*(6), 729-746. https://doi.org/10.1108/JEA-07-2020-0151

Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the Technology Acceptance Model: Findings and implications. *MIS Quarterly*, *28*(1), 319–342.

IARJEDI