

PREDICTIVE ROLE OF ARTIFICIAL INTELLIGENCE IN STUDENTS' PERSONNEL MANAGEMENT IN PUBLIC SECONDARY SCHOOLS IN ANAMBRA STATE, NIGERIA

Dr. Patrick Chinenye Okafor
Phone: +2349039449219
Email: pc.okafor@coou.edu.ng

&

Dr. Ngozika Ijeoma Ekwe
Phone: +234834317987
Email: ngoziknigerwest@gmail.com

^{1,2}Department of Educational Foundations, Faculty of Education,
Chukwuemeka Odumegwu Ojukwu University, Igbariam Campus, Anambra State, Nigeria

Abstract

The integration of Artificial Intelligence (AI) tools offers innovative strategies for addressing challenges in education, particularly in enhancing students' personnel management for the improved achievement of institutional goals. This study examined the predictive role of AI in effective students' personnel management in public secondary schools in Anambra State, Nigeria. Employing a correlational survey research design, the study covered the six education zones of the state. The target population comprised 269 public secondary schools and their principals. Using stratified and purposive sampling techniques, 134 schools and their principals were selected. Data were collected using a researcher-designed instrument titled *Artificial Intelligence and Student Personnel Management Questionnaire* (AISPMQ), structured on a four-point Likert scale ranging from Very High Extent to Very Low Extent. Instrument validity was ensured through expert review by three specialists in Educational Management and Policy, and Measurement and Evaluation at Nnamdi Azikiwe University, Awka, while reliability analysis yielded an aggregate reliability index of 0.82. Data were analyzed using simple linear regression at the 0.05 level of significance. The findings revealed that Artificial Intelligence significantly predicted effective students' welfare, discipline, and counselling management, accounting for between 33% and 38% of the variance in students' personnel management outcomes in public secondary schools in Anambra State. The study concluded that AI significantly enhances students' personnel management by improving welfare, discipline, and counselling outcomes in public secondary schools. The study recommended the strategic integration of AI tools in students' welfare, discipline, and counselling management to enhance efficiency and promote positive students' outcomes in public secondary schools.

Keywords: Artificial Intelligence (AI), Student Personnel Management, Predictive Role of AI, Public Secondary Schools

Introduction

Education remains the foundation of human capital development and national transformation, equipping individuals with the knowledge, values and competencies needed for meaningful participation in society. The Federal Republic of Nigeria (2014) recognized education as a vital instrument for achieving the nation's social, economic, and political goals. Within this framework, secondary education occupies a strategic position, serving as the bridge between primary and tertiary levels and preparing learners for productive engagement in higher education or the workforce. The success of this educational tier depends largely on effective management practices, particularly in the area of students' personnel management, which focuses on promoting students' academic, social, emotional and moral development (Ikegbusi & Chigbo-Okeke, 2016). The emergence of Artificial Intelligence (AI) in education is reforming the dynamics of school administration and students' support systems. Within public secondary schools, effective students' personnel management is central to maintaining discipline, promoting welfare and enhancing guidance services. However, conventional administrative practices often lack the precision and responsiveness required for timely decision-making. AI provides a transformative framework for predictive analysis, enabling data-driven insights and proactive interventions. Exploring its predictive role in students' personnel management is therefore imperative for advancing administrative efficiency and promoting holistic students' development in public secondary schools in Anambra State, Nigeria (Okafor & Enemu, 2022b; Obona, 2023).

Students' personnel management encompasses a wide range of activities, admission, guidance and counselling, discipline, welfare services, record-keeping and extracurricular engagement, all aimed at ensuring the holistic development of learners. Principals play a critical role in coordinating these services, ensuring that students receive adequate support for their growth and success (Difoni et al., 2024). However, evidence suggests that student personnel management in many Nigerian public secondary schools remains weak and fragmented due

to inadequate infrastructure, insufficient counselling services, poor data management and lack of coordination among school stakeholders (Ugwoke & Ugwoke, 2021; Obona et al., 2024). These inefficiencies often manifest in poor record-keeping, rising disciplinary issues and low student engagement, thereby undermining the achievement of educational goals (Ikegbusi, 2025).

In Anambra State, these challenges are further compounded by increasing students' enrolments, limited supervisory capacity and dependence on manual administrative systems. Many schools lack reliable data systems for tracking student progress, attendance, or welfare, making timely intervention difficult. As a result, principals often rely on reactive measures rather than proactive, data-informed strategies in managing students' personnel. Addressing these challenges requires innovative management approaches that can automate repetitive tasks, improve data accuracy, and enhance decision-making (Manafa, 2025).

Students' welfare encompasses initiatives aimed at ensuring the physical, emotional and social well-being of learners. It involves provision of health services, adequate learning materials, safe learning spaces, and financial support where necessary. Effective welfare management enhances students' motivation, engagement and overall readiness to learn (Obona, 2023). In many public secondary schools in Anambra State, welfare services are often insufficient due to infrastructural gaps, limited funding, and inadequate administrative oversight, resulting in compromised learning outcomes and diminished student satisfaction (Ugwoke & Ugwoke, 2021).

Students' discipline is another critical component of personnel management, encompassing the establishment and enforcement of behavioral norms that promote order, respect, and a conducive learning environment. Consistent and fair disciplinary mechanisms enable principals to address misconduct, prevent classroom disruptions and foster a culture of responsibility and accountability among students (Obona, 2023). However, traditional manual approaches to monitoring student behaviour, such as logbooks, periodic inspections and reactive interventions, are often insufficient in large public schools, where tracking behaviour trends across multiple classrooms is challenging.

Counselling services, are essential for supporting students' academic, emotional, and social development. Effective counselling enables early identification of learning difficulties, emotional distress, or at-risk behaviours, thereby facilitating timely interventions and promoting holistic development. In Nigerian public secondary schools, counseling services are often inadequate due to limited human resources, insufficient training of personnel and a lack of systematic monitoring, leaving many students without the guidance necessary for personal growth and academic success (Ikegbusi et al., 2025).

Artificial Intelligence (AI) offers such an innovation. Defined as the simulation of human cognitive processes, such as reasoning, learning, and decision-making, by computer systems (Ikegbusi & Egwu, 2024), AI has been increasingly integrated into education worldwide. It supports automation of administrative processes, predictive analytics for identifying at-risk students, and real-time data visualization for improved decision-making (Teixeira et al., 2021). AI can assist school administrators in streamlining admissions, monitoring attendance, managing discipline, and providing personalized student support through intelligent systems (Okafor & Enemu, 2022b).

Existing empirical evidence demonstrates the potential of AI in enhancing educational administration. Ahmed and Sulaiman (2020) found that AI tools significantly reduced errors in student data management while enabling timely interventions for academic and behavioural challenges. Johnson and Pereira (2021) observed that AI-enabled attendance and behavioural tracking systems improved monitoring efficiency and early intervention strategies. Karakose and Tülübaş (2024) highlighted AI's capacity to enhance operational efficiency, decision-making and stakeholder collaboration. Nevertheless, most studies focus on private or well-resourced schools, leaving limited understanding of AI's predictive role in managing student welfare, discipline and counselling services within public secondary schools in Anambra State (Ikegbusi et al., 2022).

Addressing this gap is essential for equipping principals with tools that enhance student personnel management, strengthen accountability and improve learning outcomes. This study, therefore, examined the predictive role of Artificial Intelligence in students' personnel management in public secondary schools in Anambra State, Nigeria. Specifically, it explored how AI can support the management of student welfare, student discipline and counselling services, providing empirical evidence to inform policy and practice for sustainable and innovative educational administration.

Statement of the Problem

Effective management of student personnel services, encompassing welfare, discipline, and counselling, is central to ensuring holistic students' development and institutional stability in secondary schools. However, in many public secondary schools in Anambra State, these functions are still largely managed through manual, reactive and fragmented approaches that hinder timely decision-making and individualized students' support. This traditional system often results in inadequate welfare monitoring, inconsistent disciplinary measures and insufficient counselling interventions. Meanwhile, Artificial Intelligence (AI) offers transformative potential for predictive analysis, behavioural monitoring and personalized students' management through data-driven insights. Yet, despite its growing relevance in global education systems, the predictive role of AI in enhancing students'

personnel management within Anambra State's public secondary schools remains underexplored. The absence of empirical evidence on how AI tools could forecast students' needs, predict behavioural outcomes and improve welfare and counselling effectiveness presents a significant knowledge gap. Therefore, this study sought to examine the predictive role of Artificial Intelligence in students' personnel management in public secondary schools in Anambra State, Nigeria.

Purpose of the Study

The study aimed to examine the predictive role of Artificial Intelligence (AI) in students' personnel management in public secondary schools in Anambra State, Nigeria. Specifically, it sought to:

1. **Examine the extent to which Artificial Intelligence predicts effective students' welfare management** in public secondary schools in Anambra State, Nigeria.
2. **Assess the extent to which Artificial Intelligence predicts effective students' discipline management** in public secondary schools in Anambra State, Nigeria.
3. **Determine the extent to which Artificial Intelligence predicts effective counselling services management** in public secondary schools in Anambra State, Nigeria.

Research Questions

1. To what extent does Artificial Intelligence predict effective students' welfare management in public secondary schools in Anambra State, Nigeria?
2. To what extent does Artificial Intelligence predict effective students' discipline management in public secondary schools in Anambra State, Nigeria?
3. To what extent does Artificial Intelligence predict effective counselling services management in public secondary schools in Anambra State, Nigeria?

Null Hypotheses (Ho)

1. Artificial Intelligence does not significantly predict effective students' welfare management in public secondary schools in Anambra State, Nigeria.
2. Artificial Intelligence does not significantly predict effective students' discipline management in public secondary schools in Anambra State, Nigeria.
3. Artificial Intelligence does not significantly predict effective counselling services management in public secondary schools in Anambra State, Nigeria.

Literature Review

Artificial Intelligence in Education

Artificial Intelligence (AI) has emerged as a transformative force redefining educational management, instruction and students' support systems globally. It encompasses computational technologies that simulate human cognitive functions, learning, reasoning and problem-solving, to automate complex tasks (Ikegbusi, 2016). Within education, AI is revolutionizing administrative and instructional processes through predictive analytics, data-driven decision-making, and real-time monitoring (Odukwe, 2025). AI applications now assist in assessing students' performance, predicting academic risks, managing discipline records and enhancing guidance and counselling services (Adebayo, 2024).

Machine learning, neural networks and natural language processing underpin the development of AI-driven educational platforms that personalize learning experiences, monitor student progress and automate personnel management (Nwuke & Osuji, 2025). These technologies are increasingly integrated into school systems to improve administrative transparency, resource allocation and stakeholder collaboration. In contexts such as Nigeria, where large students' populations and limited supervision capacity hinder effective management, AI offers scalable solutions that promote accountability and efficiency (Manafa & Onwuchulum, 2025).

By leveraging data analytics and automation, AI assists school principals and counsellors in identifying students' academic, behavioural and emotional needs early, allowing timely interventions that improve educational outcomes (Ikegbusi & Manafa, 2023). This predictive capacity positions AI as a critical innovation in educational management for advancing equity, excellence and sustainability in public secondary schools.

Students' Personnel Management

Students' personnel management refers to the systematic coordination of all activities and services designed to support students' academic success, social adjustment and holistic development within the school environment. It encompasses domains such as welfare, discipline, and counselling, each vital to ensuring that learners thrive academically and emotionally. Effective personnel management relies on accurate data collection, timely intervention and continuous evaluation (Odu & Nwachukwu, 2024; Egwu & Ekwe, 2025).

In many Nigerian public secondary schools, manual management systems and inadequate record-keeping hinder responsiveness to students' needs. AI-powered systems now present opportunities to automate personnel

functions, including tracking students' attendance, monitoring behavioural trends and identifying those at risk of academic failure or emotional distress (Egwu, 2022a; Okafor, 2022). The use of predictive models enables school administrators to anticipate student challenges before they escalate, ensuring proactive rather than reactive management (Afolayan, 2023). Thus, integrating AI into student personnel management aligns with global best practices for inclusive, data-driven education.

Artificial Intelligence and Students' Welfare Management

Student welfare encompasses the provision of services and policies that ensure students' physical, emotional and social well-being (Odukwe, 2024). It includes aspects such as health services, safety, nutrition and psychosocial support, all essential for optimal learning outcomes. AI technologies are increasingly being deployed to predict welfare needs by analyzing attendance data, performance patterns, and behavioral cues (Josephs, 2025).

For instance, AI-driven applications can monitor absenteeism trends, detect anomalies indicative of welfare concerns and alert administrators for early intervention (Obasi, 2023). Platforms integrated with biometric systems also enhance safety by controlling access and tracking student presence within school premises (Nwuke & Osuji, 2025). In Anambra State's public schools, adopting AI-based welfare monitoring systems could significantly reduce cases of neglect, absenteeism, and academic underperformance. By enabling predictive and evidence-based welfare interventions, AI promotes a more inclusive, responsive and student-centered management approach.

Artificial Intelligence and Students' Discipline Management

Discipline management in schools involves strategies for maintaining acceptable behaviour, enforcing rules and fostering self-regulation among students. Traditionally, discipline records are manually documented, making it difficult to track behavioural patterns or assess the effectiveness of disciplinary interventions (Ibrahim, 2022; Ikegbusi & Onwuchulum, 2025). AI technologies address these gaps by enabling data collection and analysis of students' behavioral trends over time.

AI-driven platforms such as ClassDojo provide supervisors and administrators with real-time insights into student behavior, attendance and engagement (Adeyemi, 2023). Predictive analytics can identify recurring infractions, assess disciplinary risk factors and recommend tailored interventions that promote positive behaviour (Manafa, 2025). Furthermore, Ikegbusi et al. (2016) asserted that AI-based systems can minimize bias in discipline by standardizing reporting procedures and ensuring transparency. Integrating such predictive tools in public secondary schools in Anambra State would enhance behavioral management, improve school climate, and strengthen institutional accountability.

Artificial Intelligence and Counselling Services Management

Counselling services constitute a central component of student personnel management, providing guidance, emotional support, and career development to students (Okoye, 2024). AI is now being applied to modernize counseling practices through virtual assistants, predictive analytics, and emotion-recognition algorithms (Adebayo, 2024). These technologies facilitate the early identification of students experiencing academic stress, anxiety, or social challenges, enabling timely and personalized support (Egwu, 2022b).

AI-powered platforms can analyze communication data, attendance records and academic performance to detect warning signs of distress and refer students for professional counselling. Virtual counseling bots further extend access to psychological support in schools facing counselor shortages (Odiaka, 2025; Ezeaku et al., 2024). In the context of Anambra State, AI-driven counselling systems can complement human counselors by providing scalable, data-informed interventions that enhance students' socio-emotional well-being and academic adjustment.

Theoretical Framework

This study is anchored on **Systems Theory** and **Technological Determinism Theory**, both of which provide a conceptual basis for understanding the predictive role of Artificial Intelligence (AI) in student personnel management. **Systems Theory**, propounded by Ludwig von Bertalanffy in 1968, views the school as an interconnected system in which various components, administration, teachers, students and support services, function interdependently to achieve educational goals. Student personnel management, comprising welfare, discipline, and counseling services, represents a critical subsystem whose efficiency affects the overall performance of the school. The introduction of AI into this subsystem enhances coordination by integrating real-time data analytics, automated monitoring, and predictive feedback mechanisms. Through this lens, AI serves as a technological catalyst that improves systemic responsiveness, accuracy, and equilibrium within the educational environment.

Technological Determinism Theory, advanced by Marshall McLuhan (1964), posited that technological innovations fundamentally shape human behavior, institutional structures, and societal progress. In the context of education, this theory suggests that AI adoption inevitably transforms managerial practices,

redefining how student welfare, discipline, and counseling services are administered. As digital technologies evolve, they not only streamline administrative processes but also reshape decision-making patterns, communication flows, and accountability structures. Accordingly, the theory underscores that the efficiency and predictability of student personnel management increasingly depend on technological adaptation and innovation. Together, these theories provided a coherent framework for explaining how AI, as a technological innovation, influences the systemic functioning of students' personnel management in public secondary schools, ensuring more proactive, data-driven and student-centered outcomes.

Methodology

This study adopted a **correlational research design** to examine the predictive role of Artificial Intelligence (AI) in students' personnel management in public secondary schools in Anambra State, Nigeria. The correlational design was deemed appropriate because it enabled the researcher to determine the strength and direction of the relationship between the predictor variable (Artificial Intelligence) and the dependent variable (students' personnel management) without manipulation or control (Ikegbusi, 2022). Specifically, the design allowed for assessing how the use of AI predicts the effectiveness of managing students' welfare, discipline and counselling services in public secondary schools.

The **population** of the study comprised the principals of all **269 public secondary schools** in Anambra State. Given that principals are primarily responsible for administrative and managerial decisions within schools, they were considered the most appropriate respondents for providing valid perceptions into AI adoption and students' personnel management practices.

Data were collected using a structured questionnaire titled **Artificial Intelligence and Student Personnel Management Questionnaire (AISPMQ)**, developed by the researchers to assess the predictive role of AI in managing student welfare, discipline, and counseling services in public secondary schools. The instrument was carefully designed to capture both the independent and dependent variables, ensuring construct validity, clarity, and ease of administration for the respondents (principals). The AISPMQ consisted of **four standardized sections**, with items rated on a **4-point Likert scale** weighted as follows: *Very High Extent (VHE) = 4*, *High Extent (HE) = 3*, *Low Extent (LE) = 2* and *Very Low Extent (VLE) = 1*.

The instrument was subjected to **expert validation** by three specialists in *Educational Management and Policy*, *Measurement and Evaluation*, and *Educational Technology* at **Nnamdi Azikiwe University, Awka**, to ensure both content and face validity. Their feedback helped to refine the wording and structure of the items to enhance clarity, relevance and alignment with the study objectives.

To establish reliability, a **pilot test** was conducted involving **20 principals** from public secondary schools not included in the main study sample. The data obtained from the pilot study were analyzed using **Cronbach's alpha**, yielding coefficients of **0.82**, **0.80**, and **0.84** for the three clusters (students' welfare, discipline and counselling), and an aggregate reliability index of **0.82**, indicating a high level of internal consistency and reliability of the instrument.

A total of **134 copies** of the questionnaire were distributed to the sampled principals across the six education zones of Anambra State by the researcher and two trained research assistants. Out of these, **128 copies** were duly completed and returned, representing a **95% response rate**. This high return rate was considered adequate and reliable for statistical analysis and generalization of findings to the entire population of public secondary school principals in the state.

Collected data were coded and analyzed using the **Statistical Package for the Social Sciences (SPSS), version 26**. Descriptive statistics, mean and standard deviation, were computed to summarize the extent of AI utilization and the level of effectiveness in student welfare, discipline and counseling management. For inferential analysis, **simple regression analysis** was employed to address the research questions and test hypotheses at the **0.05 level of significance**. Simple regression was used to determine the predictive value of AI on each component of students' personnel management (welfare, discipline and counselling).

The interpretation of regression coefficients followed Tabachnick and Fidell's (2023) guideline, where coefficients were classified as negligible (0.00–0.20), low (0.21–0.40), moderate (0.41–0.60), high (0.61–0.80), and very high (0.81–1.00). Positive coefficients indicated direct predictive relationships, while negative coefficients indicated inverse relationships. Hypotheses were tested using **p-values**, where $p < 0.05$ signified a statistically significant predictive relationship, leading to the rejection of the null hypothesis. Conversely, $p > 0.05$ implied no significant predictive relationship. Through this analytical approach, the study provided both descriptive and inferential evidence on how Artificial Intelligence predicts the effectiveness of student personnel management in terms of welfare, discipline and counselling among public secondary school principals in Anambra State, Nigeria.

Results

Research Question 1: To what extent does Artificial Intelligence predict effective students' welfare management in public secondary schools in Anambra State, Nigeria?

Table 1: Simple Regression of Artificial Intelligence on Student Welfare Management

Variable	Unstandardized β	Std. Error	Standardized β	R	R ²	Adj. R ²
Constant	20.846	3.518	—			
Artificial Intelligence	0.612	0.136	0.603	0.603	0.364	0.357

Artificial Intelligence predicted students' welfare management to a moderate extent ($R = 0.603$). The R^2 value of 0.364 indicated that the use of AI accounted for 36.4% of the variance in effective students' welfare management. The standardized beta coefficient ($\beta = 0.603$) revealed that a unit increase in AI utilization results in an estimated 60.3% improvement in the management of students' welfare. This implied that the adoption of AI-driven systems, such as predictive analytics for attendance, health monitoring and personalized support platforms, enhances timely interventions, equitable distribution of welfare resources and overall students' well-being in public secondary schools across Anambra State.

Research Question 2: To what extent does Artificial Intelligence predict effective students' discipline management in public secondary schools in Anambra State, Nigeria?

Table 2: Simple Regression of Artificial Intelligence on Students' Discipline Management

Variable	Unstandardized β	Std. Error	Standardized β	R	R ²	Adj. R ²
Constant	19.742	3.486	—			
Artificial Intelligence	0.658	0.149	0.589	0.589	0.347	0.339

Artificial Intelligence predicted students' discipline management to a moderate extent ($R = 0.589$). The coefficient of determination ($R^2 = 0.347$) indicated that the use of AI explained 34.7% of the variance in effective students' discipline management. The standardized beta coefficient ($\beta = 0.589$) showed that a unit increase in AI utilization leads to approximately a 58.9% improvement in discipline management. This finding suggested that AI tools such as behaviour tracking systems, real-time attendance monitoring and predictive behavioural analytics significantly enhance schools' capacity to maintain order, promote positive conduct and reduce disciplinary infractions among students in public secondary schools in Anambra State.

Research Question 3: To what extent does Artificial Intelligence predict effective counselling services management in public secondary schools in Anambra State, Nigeria?

Table 3: Simple Regression of Artificial Intelligence on Counselling Services Management

Variable	Unstandardized β	Std. Error	Standardized β	R	R ²	Adj. R ²
Constant	20.516	3.754	—			
Artificial Intelligence	0.702	0.164	0.602	0.602	0.362	0.354

Artificial Intelligence predicted effective counselling services management to a **moderate extent ($R = 0.602$)**. The coefficient of determination ($R^2 = 0.362$) revealed that AI utilization explained **36.2%** of the variance in effective counselling services management among public secondary schools. The standardized beta coefficient ($\beta = 0.602$) indicated that a one-unit increase in AI application results in an estimated **60.2%** improvement in counselling service delivery. This finding implied that AI-based tools, such as predictive emotional analytics, digital students' support platforms and automated referral systems, significantly enhance the ability of school counsellors to identify, monitor and address students' academic, social and emotional needs efficiently across Anambra State's public secondary schools.

Test of Hypotheses

Hypothesis 1: Artificial Intelligence does not significantly predict effective students' welfare management in public secondary schools in Anambra State, Nigeria.

Table 4: Regression Analysis of Artificial Intelligence as Predictor of Students' Welfare Management

Variable	Unstandardized β	Std. Error β	Standardized β	t-value	p-value
Constant	18.562	3.921	—	4.732	0.000
Artificial Intelligence	0.812	0.176	0.602	10.136	0.000
Model Fit Statistics	Value				
R	0.602				
R ²	0.362				
Adjusted R ²	0.355				
F-value	102.743 ($p = 0.000$)				

The regression analysis revealed a strong positive relationship between Artificial Intelligence (AI) and students' welfare management ($R = 0.602$), with AI accounting for 36.2% of the variance in welfare management ($R^2 = 0.362$). The F-test ($F = 102.743$, $p < 0.05$) and t-test ($t = 10.136$, $p < 0.05$) were statistically significant, indicating that AI is a significant predictor of effective students' welfare management in public secondary schools in Anambra State. The standardized beta ($\beta = 0.602$) suggested that a one-unit increase in the use of AI applications

would lead to an approximate 60.2% improvement in student welfare management. This finding underscores the critical role of AI in enhancing monitoring, responsiveness and evidence-based interventions for students' well-being.

Hypothesis 2: Artificial Intelligence does not significantly predict effective students' discipline management in public secondary schools in Anambra State, Nigeria.

Table 5: Regression Analysis of Artificial Intelligence as Predictor of Students' Discipline Management

Variable	Unstandardized β	Std. Error β	Standardized β	t-value	p-value
Constant	19.271	3.857	—	4.992	0.000
Instructional Creativity	0.734	0.158	0.613	11.164	0.000
Model Fit Statistics	Value				
R	0.613				
R ²	0.376				
Adjusted R ²	0.369				
F-value	124.553 (p = 0.000)				

The regression results indicated a strong positive relationship between Artificial Intelligence (AI) and students' discipline management (R = 0.613). The R² value of 0.376 showed that AI explains 37.6% of the variance in effective discipline management. Both the F-test (F = 124.553, p < 0.05) and t-test for AI (t = 11.164, p < 0.05) were statistically significant, confirming that AI significantly predicted effective students' discipline management in public secondary schools. The standardized beta coefficient ($\beta = 0.613$) suggested that a one-unit increase in AI application use is associated with approximately a 61.3% improvement in discipline management. These findings highlighted AI's capacity to enhance behavioural monitoring, early intervention and consistent enforcement of school rules.

Hypothesis 3: Artificial Intelligence does not significantly predict effective counselling services management in public secondary schools in Anambra State, Nigeria.

Table 6: Regression Analysis of Artificial Intelligence as Predictor of Counselling Services Management

Variable	Unstandardized β	Std. Error β	Standardized β	t-value	p-value
Constant	20.812	3.943	—	5.280	0.000
Instructional Creativity	0.682	0.164	0.579	10.463	0.000
Model Fit Statistics	Value				
R	0.579				
R ²	0.335				
Adjusted R ²	0.328				
F-value	109.504 (p = 0.000)				

The regression analysis revealed a strong positive relationship between Artificial Intelligence (AI) and counselling services management (R = 0.579). The coefficient of determination (R² = 0.335) indicated that AI accounts for 33.5% of the variance in effective counselling services management. The F-test (F = 109.504, p < 0.05) and the t-test for AI (t = 10.463, p < 0.05) were statistically significant, leading to the rejection of H₀₃. The standardized beta ($\beta = 0.579$) suggested that a one-unit increase in AI application usage results in an approximate 57.9% improvement in the management of counselling services. This finding demonstrated that AI significantly enhances proactive students' support, timely identification of counselling needs and data-driven decision-making in public secondary schools.

Discussion of Findings

The study established that Artificial Intelligence (AI) significantly predicts effective students' personnel management in public secondary schools in Anambra State, encompassing welfare, discipline and counselling services.

AI and Students' Welfare Management

AI applications, such as predictive analytics for attendance monitoring, biometric tracking and automated welfare alerts, enhance proactive identification of students' needs and timely interventions. The findings indicated that AI fosters transparency, responsiveness and improved students' well-being. This supported Josephs (2025), who reported that AI-driven welfare systems enable data-informed decision-making and early detection of at-risk students. Conversely, Okafor (2022) argued that infrastructural limitations and lack of user training may constrain the effectiveness of AI in resource-poor schools.

AI and Students' Discipline Management

The study revealed that AI significantly predicts effective discipline management. Platforms such as ClassDojo and GoGuardian facilitate real-time monitoring of students' behaviour, enabling timely interventions, consistent enforcement of rules and reinforcement of positive behaviour. This aligns with Adeyemi (2023), who found that digital behavioural analytics enhance consistency, accountability and the overall school climate.

However, Ibrahim (2022) cautioned that challenges like teachers' resistance and privacy concerns could limit the practical impact of AI on discipline management.

AI and Counselling Services Management

AI also significantly predicts effective counselling services management. Virtual counselling assistants and predictive analytics allow counsellors to identify students facing academic, emotional or social challenges early, ensuring targeted and timely interventions. Odukwe (2024) supported this, highlighting AI's potential to improve access, personalization and responsiveness in students' counselling. Nonetheless, Odiaka (2025) noted that AI cannot fully replace human counsellors, emphasizing the need for complementary integration rather than complete substitution.

Overall, the findings highlighted AI's pivotal role in enhancing student personnel management by providing scalable, data-driven and proactive solutions in public secondary schools. These results demonstrated that AI adoption can substantially improve students' welfare, discipline and counselling services, while highlighting infrastructural, ethical and human factors that may moderate its effectiveness.

Conclusion

This study established that Artificial Intelligence (AI) significantly predicts effective students' personnel management in public secondary schools in Anambra State, encompassing welfare, discipline, and counselling services. The findings emphasized AI's critical role in enhancing proactive, data-driven, and transparent management practices, enabling timely interventions that improve students' well-being, behaviour, and socio-emotional support. By integrating AI into school administration, principals and counsellors can optimize resource allocation, effectively monitor students' needs, and foster a supportive learning environment. Consequently, the adoption and sustained utilization of AI-driven systems are essential for strengthening students' personnel management and promoting overall educational quality in schools.

Recommendations

Based on the findings of this study, the following recommendations are proposed:

1. School authorities should train and support principals and counsellors to effectively utilize AI tools for monitoring students' welfare, ensuring timely interventions that address health, safety, and psychosocial needs.
2. School principals and members of disciplinary committees should implement predictive AI applications to monitor students' behaviour, identify risk patterns, and apply data-driven disciplinary strategies that foster positive conduct and sustain a conducive learning environment in public secondary schools.
3. Education policymakers and school administrators should integrate AI-enabled counselling platforms to complement human counsellors by providing scalable, data-informed, and accessible support that enhances students' socio-emotional development and academic adjustment.

References

- Adebayo, F. T. (2024). *Artificial intelligence and administrative efficiency in Nigerian secondary schools: A new frontier for educational leadership*. *Journal of Educational Management and Innovation*, 9(2), 112–126.
- Adeyemi, K. O. (2023). *Digital behavior management systems and student discipline in secondary education*. *International Journal of Technology in Education*, 11(1), 45–59.
- Afolayan, R. M. (2023). *Predictive analytics for student performance and welfare monitoring in African schools*. *African Journal of Digital Education*, 5(3), 77–91.
- Ahmed, A., & Sulaiman, K. (2020). Effectiveness of artificial intelligence tools in improving student data management in Nigerian secondary schools. *Journal of Educational Technology and Management*, 15(2), 88–101.
- Ayang, T., Okeke, F., & Chukwu, L. (2025). Education and national development: Perspectives from Nigeria. *International Journal of Educational Research and Policy*, 12(1), 45–60.
- Bertalanffy, L. von. (1968). *General system theory: Foundations, development, applications*. George Braziller.
- Egwu, J. U. (2022a). Assessment of internal mechanism for quality assurance in the management of public primary schools in Delta State. *Unizik Journal of Educational Research and Policy Studies*, 13(1), 111-125.
- Egwu, J. U. & Ekwe, N. I. (2025). Creating effective roadmaps towards managing colleges of education for promoting students' employability in a competitive society in Delta State. *NAEAP Journal of Studies in Educational Administration and Management*, 3(1), 70-85.
- Egwu, J. U. (2022b). Impact of educational management on the 21st century education pedagogy in Imo state public secondary schools. *Journal of Educational Research & Development*, 5(2), 109-119.
- Ezeaku, S. N., Egwu, J. U. & Ekwe, N. I. (2024). Management of policy implementation and implications for effective practice in public secondary schools in Anambra State, Nigeria. *Journal of Educational Research & Development*, 7(1), 165- 179.

- Federal Republic of Nigeria. (2014). *National policy on education* (6th ed.). Lagos: NERDC Press.
- Ibrahim, M. A. (2022). *Behavioural analytics and students' discipline: The role of digital tracking systems in schools*. *Educational Review Quarterly*, 14(3), 128–142.
- Igbokwe, N. E. (2023). Artificial intelligence and its implications for administrative efficiency in African education systems. *Contemporary Issues in Educational Management*, 8(1), 14–29.
- Ikegbusi, N. G. & Chigbo-Okeke, U.C. (2016). Teachers' awareness of trespass to students as a correlate of students' discipline in secondary schools in Anambra state. *Unizik Journal of Educational Management and Policy*, 1(1), 196-205.
- Ikegbusi, N. G. & Egwu, J. U. (2024). Impact of project-based learning and student creativity on academic achievement of public secondary students in Abia State. *Int'l Journal of Research Educators and Scientific Development (IJRESD)*, 5(5),14- 30.
- Ikegbusi, N. G. & Manafa, F. U. (2023). School discipline policies and teacher-student relationships as correlate of student behaviour in public secondary schools in Lagos state. *Int'l Journal of Research Educators and Scientific Development (IJRESD)*, 1(2), 1-24.
- Ikegbusi, N. G. (2016). The role of information communication technologies in education with emphasis to the use of computer and internet. *International Journal of Innovative Research and Advanced Studies*, 3(8), 239–245.
- Ikegbusi, N. G. (2022). Research design and stages in research design. In N. J. Obikeze (Ed.), *Basic research method: Principles and techniques* (pp. 264-280). Faculty of Education, Chukwuemeka Odumegwu Ojukwu University, Igbariam Campus.
- Ikegbusi, N. G. (2025). Innovative classroom management approaches of teachers as predictors of students' academic performance in public secondary schools in Anambra State, Nigeria. *Unizik Journal of Educational Laws and Leadership Studies*, 2(1), 230-245.
- Ikegbusi, N. G., & Onwuchulum, F. C. (2025). Relationship between principals' supervision of school canteens and students' health outcomes in public secondary schools in Anambra State, Nigeria. *African Journal of Educational Management, Teaching and Entrepreneurship Studies*, 15(2), 477-497.
- Ikegbusi, N. G., Awadiegwu, A. E., & Oranus, N. S. (2025). Perception of information communication technology (ICT) on reporting of educational management corruption among academic staff in public universities in Anambra State. *International Journal of Library and Information Technology (IJLIT)*, 8(1), 152–167.
- Ikegbusi, N. G., Chigbo-Okeke, U. C. & Modebelu, M. N. (2016). Students' conception of possible methods to control indiscipline in secondary schools, *Journal of Global Research in Education and Social Science*, 7(3), 151-159.
- Ikegbusi, N. G., Egwu, J. U. & Iheanacho, R. C. (2021). Students' perception of utilization of ICT in teaching and learning in post covid-19 era in Nigeria. *ANSU Journal of Arts and Social Sciences, (ANSUJASS)*, 8(2), 127- 138.
- Ikegbusi, N. G., Manafa, F. U. & Iheanacho, R. C. (2022). Administrative deficiencies and teachers' job achievement in public secondary schools in Anambra state. *COOU Journal of Educational Research*, 7(1), 284- 299.
- Johnson, D., & Pereira, R. (2021). AI-enabled attendance tracking and behavioural management in public schools: An experimental approach. *Computers and Education*, 175, 104–129.
- Josephs, N. E. (2025). *AI-driven school management systems and student welfare optimization*. *Journal of Innovative Learning Technologies*, 6(1), 22–36.
- Karakose, T., & Tülübaşı, T. (2024). Transforming school leadership through artificial intelligence: Challenges and prospects. *Education and Information Technologies*, 29(2), 911–932.
- Manafa, F. U. (2025). Teachers' innovative classroom management practices as predictors of students' academic performance in public secondary schools in Anambra State, Nigeria. *Multidisciplinary Journal of Management and Social Sciences (MJMSS)*, 2(1), 143- 152.
- Manafa, F. U., & Onwuchulum, F. C. (2025). Educational technologies and 21st century skills as predictors of students' sustainable development competencies in public secondary schools in Anambra State, Nigeria. *Multidisciplinary Journal of Law, Education and Humanities (MJLEH)*, 2(1), 137- 147.
- McLuhan, M. (1964). *Understanding media: The extensions of man*. McGraw-Hill.
- Nakamura, S., Tanaka, M., & Li, Q. (2022). Artificial intelligence in student welfare management: Evidence from Japanese secondary schools. *Asia-Pacific Journal of Educational Technology*, 9(1), 47–61.
- Nwuke, O. J., & Osuji, C. K. (2025). *AI integration for effective school administration in resource-limited contexts*. *Nigerian Journal of School Administration*, 11(2), 97–111.
- Obasi, V. C. (2023). *Automating welfare management through AI-based school systems in sub-Saharan Africa*. *African Educational Management Review*, 4(2), 88–103.

- Obi, I., Obi, Z. & Ikegbusi, N. (2022). Population and sampling techniques. In N. J. Obikeze (Ed.), *Basic research method: Principles and techniques* (pp. 86-104). Igbariam: Faculty of Education, Chukwuemeka Odumegwu Ojukwu University, Igbariam Campus.
- Obona, C. I. (2023). Educational leadership and student welfare in Nigeria's public secondary schools. *Journal of Educational Development and Practice*, 5(2), 72–86.
- Obona, C. I., Iwogbe, I. A., & Egwu, U. O. (2024). Artificial intelligence, financial resources and student personnel management in Nigerian secondary schools. *West African Journal of Educational Research*, 17(1), 50–63.
- Odiaka, E. A. (2025). *Artificial intelligence and digital counselling in public secondary schools: Opportunities and risks*. Nigerian Journal of Educational Psychology, 7(1), 40–55.
- Odu, P. K., & Nwachukwu, G. I. (2024). *Students' personnel services in Nigeria: Emerging trends in the digital era*. African Journal of Educational Studies, 13(1), 55–69.
- Odukwe, L. F. (2024). *AI innovations in educational administration: Enhancing supervision and student services*. *Journal of Educational Technology and Management*, 8(2), 71–84.
- Okafor, N. C. (2022). *Supervision, ethics and school climate management in Nigerian education*. *Educational Leadership Journal*, 5(3), 99–114.
- Okafor, P. C. & Enemuo, C. J. (2022a). Role of ICT in entrepreneurship education for employability in Nigeria in the new normal. *Journal of Technology and Systems*, 4(1), 24-43.
- Okafor, P. C. & Enemuo, C. J. (2022b). Role of ICT in socio-economic transformation in education system. *International Journal of Educational Research*, 5(9), 12-21.
- Teixeira, C., Costa, F., & Pereira, L. (2021). Artificial intelligence in educational administration: Enhancing decision-making through automation. *Journal of Educational Computing Research*, 59(8), 1451–1473. <https://doi.org/10.1177/07356331211001541>
- Ugwoke, A. O., & Ugwoke, O. B. (2021). Challenges of student personnel management in Nigerian public secondary schools. *Nigerian Journal of Educational Administration and Planning*, 17(2), 102–115.