



INTERNATIONAL JOURNAL OF PREMIUM MULTIDISCIPLINARY INNOVATIVE RESEARCH (IJPMIR)

Journal Home Page: <http://ijpmir.org> Print ISSN: 3141-4400; Online ISSN: 3141-4419



PRINCIPALS' DIGITAL LEADERSHIP PRACTICES AS PREDICTORS OF TEACHERS' JOB PERFORMANCE IN PUBLIC SECONDARY SCHOOLS IN ANAMBRA STATE, NIGERIA

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Recommended Citation for APA 7th Edition: Oshia, E.C., Obuegbe, A.S., & Ezeokenwa, C.A. (2026). Principals' digital leadership practices as predictors of teachers' job performance in public secondary schools in Anambra State, Nigeria. *International Journal of Premium Multidisciplinary Innovative Research*, 1(1), 29-38. DOI: <https://doi.org/10.5281/zenodo.20233718>

ABSTRACT

The study investigated principals' digital leadership practices as predictors of teachers' job performance in public secondary schools in Anambra State, Nigeria. Two research questions guided the study and two null hypotheses were tested at the 0.05 level of significance. A correlational research design was adopted for the study. The population of the study comprised 8,187 teachers from 273 public secondary schools in Anambra State. The sample for this study consisted of 578 teachers drawn using a multistage sampling procedure. Two sets of instruments titled "Principals' Digital Leadership Practices Questionnaire (PDLQPQ) and "Teachers' Job Performance Questionnaire (TJPQ)" were used for data collection. The instruments were face-validated by three experts: two from the Department of Educational Management and Policy and one from the Department of Educational Foundations in the Measurement and Evaluation Unit of the Faculty of Education, Nnamdi Azikiwe University. The test of internal consistency of the instruments was conducted using the Cronbach alpha method, which yielded overall coefficients of 0.82 and 0.80 for the two PDLQPQ clusters, respectively, and 0.84 for TJPQ. The researchers, together with three research assistants, collected data for the study using the direct approach, and a 98% return rate was recorded. Simple regression was used to answer the research questions and test hypotheses. The study's findings revealed, among others, that principals' integration of emerging technology practices is a strong and significant predictor of teachers' job performance in public secondary schools in Anambra State. It was also found that principals' data-driven decision-making practices are a strong and significant predictor of teachers' job performance in public secondary schools in Anambra State. Based on the findings, it was recommended, among others, that principals establish a data management committee responsible for maintaining and making available updated information to support decision-making that can improve teachers' job performance.

Keywords: Principals, Digital Leadership, Practices, Teachers, Job Performance, Data-Driven, Decision-Making, Emerging Technologies

1.1 Introduction

Education empowers individuals with the skills and knowledge to actively participate in productive activities and public affairs, driving society's progress and economic development. It provides a platform for educating individuals about their rights, responsibilities, and the values needed to behave responsibly in society. Agbaizu, Nwodo and Nnebedum (2026) opined that education equips individuals with the requisite skills and knowledge to actively participate in a nation's economic, social, and political activities. Furthermore, Agbaizu et al. asserted that formal



education takes place through teaching and learning activities in classroom settings. One of the crucial stages of formal education is secondary school.

Secondary education is the post-basic education programme that offers specialized skills and knowledge in diverse subjects to prepare students for higher studies and productive ventures in society. It also offers education programmes tailored to students' vocational interests to supply semi-skilled manpower to society. Okafor and Ekwesianya (2026) asserted that secondary education is a post-basic learning programmes that equip students with knowledge to discover their future career paths and improve their chances of furthering their education in higher institutions of learning. The authors added that secondary education provides specialized career and vocational training, contributing to the supply of semi-skilled manpower to society. Secondary education offers programmes that enable students to become civic-minded and active participants in society's development. The leaders of secondary schools are the principals.

Principals are the chief executive officers who oversee and ensure that administrative, academic and co-curricular activities run smoothly in secondary schools. The principals are responsible for discharging a wide range of administrative duties, such as planning, decision-making, financial management, record keeping, task delegation, time management, resource allocation, and information dissemination, among others. Enwezor (2025) stated that the principal is the chief executive officer who oversees daily operations to facilitate the implementation of educational policies in a secondary school. Continuing, Enwezor asserted that the principal is the custodian and manager of the available resources, facilitating the attainment of predetermined goals in secondary schools. The principals are responsible for planning and overseeing academic and co-curricular activities by developing timetables for teachers, supervising teaching, organizing inter-house sports, and organizing debates and regular sporting programs in secondary schools. Principals can automate some of their duties to improve the smooth operation of secondary schools through digital leadership practices.

Digital leadership practices involve leveraging innovative devices and platforms to execute managerial tasks such as planning, decision-making, recordkeeping, resource management, monitoring work activities, and evaluating staff performance within an organization. Digital leadership practices are defined by Han, Ambotang, Sulaiman, Salam and Pantulusang (2025) as the actions leaders take to leverage innovative technologies to manage and transform educational institutions. Digital leadership practices are managers' efforts to integrate electronic devices and software into the administration and teaching of students in secondary schools. According to Akhmad (2025), digital leadership is a set of strategic activities and processes in which leaders leverage information and communication technology (ICT) to direct organizational vision, facilitate innovation, and manage change that affects work activities. Digital leadership practices focus on managing available resources and leading staff through modern facilities, platforms, and approaches to enhance work efficiency and goal attainment within an organization.

Emerging technologies such as Google Meet, Zoom and GoToMeeting could be used for staff meetings, teaching, and communicating with teachers in secondary schools. Torres, Raz and Romo (2025) noted that emerging technologies, such as digital content and database systems, information and communication technologies, robotics, the internet, virtual and augmented reality, 3D printing, artificial intelligence, and big data, can enhance work activities and improve an organization's efficiency. Edeh, Sharma, Nwafor, Fyneface, Sen and Edeh (2020) asserted that emerging technologies such as tablet computing, mobile applications, cloud computing, virtual

technology, Artificial Intelligence, and many more make teaching and learning more interesting and productive. Emerging technologies such as CCTV cameras and biometric face and voice recognition could be applied by principals to enhance security in secondary schools. The integration of emerging technologies into the management of secondary schools has the potential to facilitate the fulfillment of official responsibilities with ease within a short timeframe. Joshi (2026) asserted that emerging technologies, such as AI systems, allow employees to focus on high-level thinking skills, such as creative problem-solving, rather than performing repetitive tasks that have no value to the organization. Continuing, Joshi averred that emerging technologies enable employees to work remotely from home through Cloud Computing.

Data-driven decision-making practices leverage available digital tools to source accurate, up-to-date information to solve problems in secondary schools. Hanandeh, Alkhazali, Alhyasat, Mistarihi, and Alkilani (2025) defined data-driven decision-making as a systematic, organized approach that relies on collecting, analyzing, and interpreting data to inform strategic decision-making and achieve organizational goals. Data-driven decision-making practices enable principals to integrate information from multiple sources, including staff activities, available funds, student population, and school programs, to make informed decisions. Data-driven decision-making practices lead to evidence-based decisions that align with the challenges and needs of secondary schools. Data-driven decision-making practices enhance transparency, accountability and efficiency of an organization.

Teachers' job performance is the act of carrying out official responsibilities by members of the teaching staff at a stipulated time in educational institutions. Agbaizu, Nwodo and Nnebedum (2026) noted that teachers' job performance is the engagement in work activities that carry out their official functions in secondary schools. The authors added that teachers' job performance results from the work activities carried out by members of the teaching staff at a given time. According to Okafor, Aronu and Ndupuechi (2026), teacher job performance encompasses the professional responsibilities of teaching staff to facilitate learning and achieve educational objectives. Furthermore, Okafor et al maintained that these professional responsibilities include mastery of subject content, pedagogical competence, classroom management, and effective student engagement.

Some scholars have identified criteria for assessing teachers' job performance in secondary schools. Akinwumi, Onyeneke and Omwirhiren (2026) noted that teachers' performance can be assessed based on punctuality in work, eagerness to be at work, prompt response to duties, total commitment to work, effective teaching, and regular evaluation of students' performance. In the same vein, Tyosaa and Okwori (2026) maintained that teachers' performance can be assessed through their participation in the school curricular activities, regularity and punctuality in the school, maintenance of good interpersonal relationships with subordinates and superiors, discipline, motivation and counseling of students and compliance with teachers' professional code of conduct. However, teacher job performance is below expectations in public secondary schools in Anambra State. Oshia, Chukwuogo, and Okoye (2026) asserted that some teachers frequently arrive late to work, display unauthorized absences, skip class without permission, struggle to cover their scheme of work, and fail to give, mark, and correct students' work in public secondary schools in Anambra State. Teachers are experiencing problems with job performance, likely because principals have yet to provide them with digital leadership to automate some of their work in public secondary schools. Some principals still rely on outdated, manual methods of managing school

affairs in secondary schools in Anambra State. Some principals have yet to provide and support the use of digital tools and platforms for performing administrative and instructional tasks in secondary schools in Anambra State, Nigeria, which prompted this study.

1.2 Purpose of the Study

The main purpose of the study was to investigate principals' digital leadership practices as predictors of teachers' job performance in public secondary schools in Anambra State, Nigeria. Specifically, the study sought to investigate:

1. Principals' integration of emerging technologies practices as predictors of teachers' job performance in public secondary schools in Anambra State, Nigeria.
2. Principals' data-driven decision-making practices as predictors of teachers' job performance in public secondary schools in Anambra State, Nigeria.

1.3 Research Questions

The following research questions will guide the study:

1. What is the predictive value of principals' integration of emerging technologies practices on teachers' job performance in public secondary schools in Anambra State, Nigeria?
2. What is the predictive value of principals' data-driven decision-making practices on teachers' job performance in public secondary schools in Anambra State, Nigeria?

1.4 Hypotheses

The following hypotheses were formulated and tested at 0.05 level of significance:

1. Principals' integration of emerging technologies practices does not significantly predict teachers' job performance in public secondary schools in Anambra State, Nigeria.
2. Principals' data-driven decision-making practices does not significantly predict teachers' job performance in public secondary schools in Anambra State, Nigeria.

2. Methods

A correlational research design was adopted for this study. The population of the study comprised 8,187 teachers from 273 public secondary schools in Anambra State. The sample for this study consisted of 578 teachers drawn using a multistage sampling procedure. Two sets of instruments titled "Principals' Digital Leadership Practices Questionnaire (PDLQP)" and "Teachers' Job Performance Questionnaire (TJPQ)" were used for data collection. The instruments were structured by the researchers based on an intensive literature review. PDLQP 18 items divided into clusters A and B. Cluster A has 10 items on the integration of emerging technologies practices and Cluster B contains eight items on data-driven decision-making practices. TJPQ, which focuses on teachers' job performance, contains 20 items. The items of the two instruments were structured on a four-point rating scale of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD), weighted 4, 3, 2, and 1, respectively. The instruments were face-validated by three experts: two from the Department of Educational Management and Policy and one from the Department of Educational Foundations in the Measurement and Evaluation Unit, Faculty of Education, Nnamdi Azikiwe University. The test of internal consistency of the instruments was conducted using the Cronbach alpha method, which yielded overall coefficients of 0.82 and 0.80 for the two PDLQP clusters, respectively, and 0.84 for TJPQ. Thus, the researcher considered the instrument to be reliable for the study.

The researchers used a direct data-collection method, assisted by three research assistants. A total of 578 copies of instruments were distributed to teachers, and 564 copies of questionnaires were properly completed and successfully retrieved, indicating a 98 percent return rate. Simple regression was used to answer the research questions and test the hypotheses. For the decision on the research questions, the coefficient r and the size of the relationship were interpreted using the correlation coefficient by Alsagr (2021), as follows:

Predictive Value	Interpretation
.00- .19	Very Weak Prediction
.20- .39	Weak Prediction
.40- .59	Moderate Prediction
.60- .79	Strong Prediction
.80- .99	Very Strong Prediction
1	Perfect

In taking decisions on the null hypotheses, if the p -value is equal to or less ($\leq$) than the significance value of .05, the null hypothesis was rejected, but if the p -value is greater than ($>$), the significance value of .05, the null hypothesis was not rejected.

3. Results

Research Question 1: What is the predictive value of principals' integration of emerging technologies practices on teachers' job performance in public secondary schools in Anambra State, Nigeria?

Table 1: The Summary of Simple Regression Analysis on the Predictive Value of Principals' Integration of Emerging Technologies Practices on Teachers' Job Performance

Model	N	R	R Square	Adjusted R Square	Std. Error of the Estimate	Remarks
Integration of Emerging Technology Practices	564	0.751	0.565	0.564	0.45328	Strong

Result in Table 1 revealed that the predictive value of principals' integration of emerging technologies practices on teachers' job performance is 0.751 with a coefficient of determination of 0.565. This shows that principals' integration of emerging technologies practices can account for 56.5% changes in teachers' job performance. The regression coefficient r of 0.751 indicated that principals' integration of emerging technologies practices is a strong predictor of teachers' job performance in public secondary schools in Anambra State.

Research Question 2: What is the predictive value of principals' data-driven decision-making practices on teachers' job performance in public secondary schools in Anambra State, Nigeria?

Table 2: The Summary of Simple Regression Analysis on the Predictive Value of Principals' Data-Driven Decision-Making Practices on Teachers' Job Performance

Model	N	R	R Square	Adjusted R Square	Std. Error of the Estimate	Remarks
Data-Driven Decision-Making	564	0.709	0.531	0.531	0.27896	Strong

Result in Table 2 reveal that the predictive value of principals' data driven decision-making practices on teachers' job performance is 0.709 with a coefficient of determination of 0.531. This shows that 53.1% variation in teachers' job performance could be explained by principals' data driven decision-making practices. The regression coefficient r of 0.709 indicated that principals' data driven decision-making practices is a strong predictor of teachers' job performance in public secondary schools in Anambra State.

Hypothesis One: Principals' integration of emerging technologies practices does not significantly predict teachers' job performance in public secondary schools in Anambra State, Nigeria.

Table 3: Simple Regression on Principals' Integration of Emerging Technology Practices as Significant Predictor of Teachers' Job Performance

Predictor	N	R	R ²	F	P-value	Remark
Integration of Emerging Technologies Practices	564	0.751	0.565	332.997	.000	*S

*Significant

Table 3 indicates that the simple regression coefficient (R) is 0.751, while the R² is 0.565 showing that principals' integration of emerging technologies practices can lead to 56.5% variance in teachers' job performance. The $F(1/564) = 332.997$ and the p -value of 0.000 is less than 0.05. Therefore, since the p -value is less than the stipulated 0.05 level of significance, the null hypothesis was rejected. Therefore, principals' integration of emerging technologies practices significantly predicts teachers' job performance in public secondary schools in Anambra State, Nigeria.

Hypothesis Two: Principals' data-driven decision-making practices does not significantly predict teachers' job performance in public secondary schools in Anambra State, Nigeria.

Table 4: Simple Regression on Principals' Data-Driven Decision-Making Practices as Significant Predictor of Teachers' Job Performance

Predictor	N	R	R ²	F	P-value	Remark
Data-Driven Decision-Making Practices	564	0.709	0.531	561.704	.000	*S

*Significant

Result in Table 4 indicates that the simple regression coefficient (R) is 0.709, while the R² is 0.531 showing that principals' data-driven decision-making practices can make 53.1% contributions to teachers' job performance. The $F(1/564) = 561.704$ and the p -value of 0.000 is less than 0.05. Therefore, since the p -value is less than the stipulated 0.05 level of significance, the null hypothesis was rejected. Therefore, principals' data-driven decision-making practices significantly predicts teachers' job performance in public secondary schools in Anambra State, Nigeria

4. Discussion

The study's findings indicate that principals' integration of emerging technology practices is a strong predictor of teachers' job performance in public secondary schools in Anambra State. Principals' integration of emerging technologies practices enables teachers to access modern

facilities that assist them in discharging their duties and thereby contribute to a strong prediction of their job performance in public secondary schools in Anambra State. This is in line with Joshi's (2026) finding that emerging technologies have a strong relationship with employee performance at the workplace. The agreement between the findings could be attributed to the similarity in time span, as the studies were conducted in the same year. This refuted the finding of Lentoimaga, Mulongo and Omboto (2017), which showed that integration of emerging technological systems had a moderate relationship with employee performance in the banking sector. The disagreement between the findings could be attributed to the similarity in time span, as the studies were conducted in different years. Principals' integration of emerging technologies practices enables teachers to automate their duties, reduce errors associated with the manual method of carrying out work activities, and thereby contribute to strong predictors of their job performance in public secondary schools in Anambra State. It was also found that principals' integration of emerging technologies practices significantly predicts teachers' job performance in public secondary schools in Anambra State, Nigeria. Joshi (2026) found that emerging technologies were significantly related to employee performance at the workplace.

The study's results reveal that principals' data-driven decision-making practices are a strong predictor of teachers' job performance in public secondary schools in Anambra State. The possible explanation for this finding is that data-driven decision-making practices that enable principals to incorporate teachers' needs in decision-making could be a source of motivation for teachers to improve their job performance in public secondary schools in Anambra State. This concurred with the findings of Hanandeh, Alkhazali, Alhyasat, Mistarihi and Alkilani (2025), which indicated that data-driven decision-making had a strong positive relationship with employees' performance. This also supported the findings of Radhakrishna and Abhishek (2025), who showed that data-driven decision-making in human resources was strongly associated with workforce performance. The similar time span of the studies could contribute to the agreement between the findings. Data-driven decision-making practices enable principals to effectively schedule teachers' duties and allocate resources to enhance their job performance in public secondary schools in Anambra State. Further results indicate that principals' data-driven decision-making practices significantly predict teachers' job performance in public secondary schools in Anambra State, Nigeria. This aligned with the findings of Hanandeh, Alkhazali, Alhyasat, Mistarihi and Alkilani (2025), which indicated that data-driven decision-making had a significant relationship with employees' performance. This also supported the finding of Radhakrishna and Abhishek (2025), which showed that data-driven decision-making in human resources was significantly related to workforce performance.

5. Conclusion

Based on the study's findings, it was concluded that principals' digital leadership practices are positive and significant predictors of teachers' job performance in public secondary schools in Anambra State, Nigeria. Principals who integrate emerging technologies and use available data to inform decision-making can improve teachers' job performance in public secondary schools in Anambra State, Nigeria. Principals' digital leadership practices support teachers in automating some of their duties to improve their performance in public secondary schools in Anambra State, Nigeria.

6. Recommendations

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

1. The State Ministry of Education should organize annual workshops for principals to keep them up to date on the skills and knowledge needed to apply emerging technologies to enhance teachers' job performance.
2. Principals should constitute a data management committee responsible for maintaining and making available updated information to support decision-making that can improve teachers' job performance.

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