



Digital Transformation in Secondary School Administration: ICT Utilization for Personnel, Instructional, and Financial Management in Enugu Education Zone, Nigeria.

Onyido Chika Elizabeth, John-Mba Roselyn Ijeoma, Nwabuaku Nkiru Onyeka

Department of Educational Foundations, Faculty of Education, National Open University of Nigeria

ABSTRACT

This study examined the extent of ICT utilization for personnel administration, instructional programme management, and financial management in secondary schools in Enugu Education Zone, Enugu State, Nigeria. A descriptive survey design was adopted, involving 211 respondents comprising 32 principals and 179 teachers. Data were collected through a structured questionnaire titled ICT Utilization in School Administration Questionnaire (ICTUSAQ) with reliability coefficient of 0.89 and analysed using mean, standard deviation, and independent-samples t-test at the .05 level of significance. Results showed ICT utilization was at a little extent in personnel administration ($M = 2.27$), instructional programme management ($M = 2.05$), and financial management ($M = 2.00$), with no significant difference between principals' and teachers' ratings in any area. The findings indicate that ICT has not been fully integrated into routine administrative processes, with inadequate infrastructure, limited professional development, unreliable electricity, funding constraints, maintenance difficulties, and resistance to change identified as key barriers. The study argues that digital transformation in school administration should be understood as an organisational development process rather than a purely technological intervention, and recommends an integrated strategy involving infrastructure, staff development, technical support, policy implementation, reliable power supply, digital record-management procedures, and monitoring of ICT utilization.

ARTICLE'S INFO

Article No.: 090726156

Type: Research

Full Text: [PDF](#), [PHP](#), [HTML](#), [EPUB](#), [MP3](#)

DOI: [10.15580/gjer.2026.1.090726156](https://doi.org/10.15580/gjer.2026.1.090726156)

Accepted: 31/09/2026

Published: 16/09/2026

Keywords: Digital Transformation, ICT Utilization, Personnel Management, Instructional Management, Financial Management

***Corresponding Author**

Onyido Chika Elizabeth

E-mail: conyido8@gmail.com

Article's QR code



INTRODUCTION

Secondary school administration involves the coordination of human and material resources towards the achievement of educational goals. Principals are expected to manage personnel, students, instructional programmes, finances, facilities, records and external relations (Abiodun-Oyebanji & Omotayo, 2012). The effectiveness of these responsibilities depends largely on the availability, accuracy and timeliness of information for decision-making. In contemporary times, Information and Communication Technology (ICT) has become a critical tool for generating, processing, storing, retrieving and disseminating information in organizations, including educational institutions (Ajayi & Ekundayo, 2009). The integration of ICT into administrative processes has the potential to enhance efficiency, transparency and accountability in secondary school management (Eze et al., 2023).

Digital transformation is a broader concept than mere computerization. It refers to the integration of digital technologies into all areas of an organization, fundamentally changing how operations are conducted and value is delivered (Okafor & Nwankwo, 2024). In school administration, digital transformation involves not only the replacement of paper-based systems with electronic systems but also changes in organizational processes, staff competencies, leadership practices and communication patterns. A school may possess computers and internet connectivity yet still operate major administrative functions manually, indicating the presence of technology without transformation (Adedoyin & Okereke, 2023). This distinction is crucial for understanding the depth of ICT integration in Nigerian secondary schools where procurement often outpaces utilization.

ICT utilization in personnel administration involves the use of electronic systems for staff recruitment records, attendance monitoring, leave management, appraisal, payroll information and professional development records. According to Eze et al. (2023), use of Human Resource Management Information System improves accuracy and retrieval of personnel data. Similarly, ICT utilization for instructional programme management involves use of digital tools for curriculum planning, lesson monitoring, timetable management, student assessment records and instructional supervision. Ukaigwe and Obiekwe (2022) noted that e-instructional management enhances monitoring of curriculum implementation and supports instructional leadership.

ICT utilization for financial management entails use of accounting software, electronic budgeting, fee management, expenditure tracking and financial reporting. Nwosu and Obi (2024) observed that digital financial management improves transparency and accountability in school administration. However,

effective utilization depends on organisational readiness including infrastructure, staff competence, leadership support, policy framework, reliable electricity and maintenance culture (Igwe et al., 2023). Without these, provision of hardware alone does not translate to transformation. This study therefore examines ICT utilization across three core administrative domains in secondary schools in Enugu Education Zone.

Statement of the Problem

School administration has become increasingly complex due to expansion of enrolment, increased demand for accountability, and the need for timely reporting to education authorities. Personnel records, instructional monitoring reports and financial statements must be maintained accurately and retrieved quickly. Abiodun-Oyebanji and Omotayo (2012) reported a significant relationship between ICT adoption and effective administration in Ekiti State, yet noted low ICT awareness and inadequate facilities among administrators. Similarly, Ajayi and Ekundayo (2009) identified inadequate infrastructure, limited user capacity, funding constraints and irregular electricity supply as challenges affecting ICT utilization in Nigerian secondary schools. Recent studies by Nwosu and Obi (2024) and Igwe et al. (2023) confirmed that despite Federal Government policy on ICT in education, many public secondary schools still operate predominantly manual administrative systems, leading to delays, data loss, duplication of efforts and poor information management.

Where ICT facilities are available, utilization is often limited to typing examination questions or browsing, rather than systematic application to personnel, instructional and financial management processes. The implications are far-reaching: difficulty in tracking staff records, inefficient monitoring of curriculum implementation and poor financial accountability. The problem is not merely whether schools possess computers, but whether administrators use them systematically to improve administrative processes. The extent of utilization in Enugu Education Zone has not been adequately documented with recent empirical data, creating a gap in planning for digital transformation. Hence, there is need to examine the extent of ICT utilization for personnel, instructional and financial management in secondary schools in Enugu Education Zone, Nigeria, to provide empirical evidence for educational planning and policy intervention.

Theoretical Framework

Systems Theory propounded by Ludwig von Bertalanffy (1968) provides a framework for this study. The theory views an organization as a system composed of interrelated and interdependent subsystems that interact with the environment. A school is an open system

comprising subsystems such as personnel, instructional, financial, student and facility subsystems. Change in one subsystem affects others. This theory is relevant because ICT utilization in one administrative area can influence other areas. For instance, a digital student information system supports both instructional planning and financial planning for resources (Abiodun-Oyebanji & Omotayo, 2012).

Technology Acceptance Model (TAM) by Davis (1989) also underpins the study. TAM posits that perceived usefulness and perceived ease of use determine acceptance and actual use of technology. Principals and teachers are more likely to utilize ICT for administration if they perceive it as useful for improving efficiency and easy to use. Ajayi and Ekundayo (2009) found that inadequate user capacity negatively affected utilization, which aligns with TAM's emphasis on ease of use. Training and technical support therefore increase perceived ease of use and subsequently actual utilization.

Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh et al. (2003) further explains factors influencing ICT utilization including performance expectancy, effort expectancy, social influence and facilitating conditions. In secondary school context, facilitating conditions such as electricity, infrastructure, funding and technical support are critical determinants. Recent studies by Okafor and Nwankwo (2024) and Igwe et al. (2023) confirmed that facilitating conditions significantly predict ICT utilization in Nigerian schools. These theories collectively frame digital transformation as a systemic and behavioural phenomenon, not merely a technical one.

Purpose of the Study

The main purpose of the study is to examine the extent of ICT utilization for personnel, instructional and financial management in secondary schools in Enugu Education Zone, Nigeria. Specifically, the study seeks to:

1. Determine the extent of ICT utilization for personnel administration in secondary schools in Enugu Education Zone.
2. Ascertain the extent of ICT utilization for instructional programme management in secondary schools in Enugu Education Zone.
3. Examine the extent of ICT utilization for financial management in secondary schools in Enugu Education Zone.

Research Questions

1. What is the extent of ICT utilization for personnel administration in secondary schools in Enugu Education Zone?
2. What is the extent of ICT utilization for instructional programme management in secondary schools in Enugu Education Zone?

3. What is the extent of ICT utilization for financial management in secondary schools in Enugu Education Zone?

Null Hypotheses

- H0₁: There is no significant difference between the mean ratings of principals and teachers on the extent of ICT utilization for personnel administration in secondary schools in Enugu Education Zone.
- H0₂: There is no significant difference between the mean ratings of principals and teachers on the extent of ICT utilization for instructional programme management in secondary schools in Enugu Education Zone.
- H0₃: There is no significant difference between the mean ratings of principals and teachers on the extent of ICT utilization for financial management in secondary schools in Enugu Education Zone.

METHODOLOGY

The study adopted a descriptive survey research design. The design was considered appropriate because it allows for collection of data from a large population to describe existing conditions without manipulation of variables. The study was carried out in Enugu Education Zone, Enugu State, Nigeria. The zone comprises three Local Government Areas: Enugu North, Enugu East and Enugu South, with 32 public secondary schools. The population of the study comprised 211 respondents consisting of 32 principals and 179 teachers in public secondary schools in the zone. No sampling was done as the entire population was used due to manageable size. The instrument for data collection was a structured questionnaire titled ICT Utilization in School Administration Questionnaire (ICTUSAQ) divided into three clusters: Cluster A (items 1-10) on personnel administration, Cluster B (items 11-20) on instructional programme management and Cluster C (items 21-30) on financial management, structured on a 4-point scale of Very High Extent (4), High Extent (3), Little Extent (2) and Very Little Extent (1). The instrument was validated by three experts from Educational Administration and Measurement and Evaluation, University of Nigeria Nsukka. Cronbach Alpha was used to determine reliability which yielded coefficients of 0.84, 0.86 and 0.88 for the three clusters respectively, with overall coefficient of 0.89. The questionnaire was administered by the researchers with the help of two research assistants, with 100% return rate. Mean and standard deviation were used to answer research questions with real limits: 3.50-4.00 Very High Extent, 2.50-3.49 High Extent, 1.50-2.49 Little Extent, 1.00-1.49 Very Little Extent. Independent samples t-test was used to test null hypotheses at 0.05 level of significance.

RESULTS

Research Question 1:

What is the extent of ICT utilization for personnel administration in secondary schools in Enugu Education Zone?

Table 1: Mean and Standard Deviation Scores on Extent of ICT Utilization for Personnel Administration

S/N	Item Statement	Mean	SD	Decision
1	Use of computer for keeping staff personal records	2.45	0.81	Little Extent
2	Use of electronic attendance for staff	2.18	0.76	Little Extent
3	Use of ICT for staff appraisal documentation	2.30	0.84	Little Extent
4	Use of email for personnel communication	2.35	0.79	Little Extent
5	Use of database for staff qualification records	2.20	0.82	Little Extent
6	Use of ICT for leave records management	2.15	0.75	Little Extent
7	Use of digital platform for staff deployment	2.25	0.80	Little Extent
8	Use of ICT for payroll information management	2.40	0.77	Little Extent
9	Use of electronic system for staff professional development records	2.22	0.83	Little Extent
10	Use of ICT for personnel planning and forecasting	2.18	0.78	Little Extent
Cluster Mean		2.27	0.79	Little Extent

Table 1 shows that all items 1-10 had mean scores between 2.15 and 2.45 which fall within little extent category. The cluster mean of 2.27 indicates that ICT utilization for personnel administration is at a little extent. This suggests that personnel records are still predominantly managed manually in secondary schools in Enugu Education Zone.

Research Question 2:

What is the extent of ICT utilization for instructional programme management?

Table 2: Mean and Standard Deviation Scores on Extent of ICT Utilization for Instructional Programme Management

S/N	Item Statement	Mean	SD	Decision
11	Use of computer for timetable preparation	2.35	0.81	Little Extent
12	Use of ICT for lesson plan monitoring	1.95	0.74	Little Extent
13	Use of electronic system for student assessment records	2.10	0.79	Little Extent
14	Use of ICT for curriculum implementation tracking	1.98	0.76	Little Extent
15	Use of digital tools for instructional supervision	2.05	0.80	Little Extent
16	Use of ICT for student attendance monitoring	2.18	0.82	Little Extent
17	Use of e-learning platforms for instructional delivery support	2.00	0.77	Little Extent
18	Use of computer for examination records management	2.15	0.75	Little Extent
19	Use of ICT for instructional resources inventory	1.92	0.78	Little Extent
20	Use of digital communication for instructional coordination	1.98	0.81	Little Extent
Cluster Mean		.05	0.78	Little Extent

Table 2 reveals that mean scores for items 11-20 ranged from 1.92 to 2.35, all within little extent. The cluster mean of 2.05 shows low ICT utilization for instructional programme management. This implies that instructional monitoring and coordination are still largely manual, limiting efficiency in tracking teaching and learning activities.

Research Question 3: What is the extent of ICT utilization for financial management?

Table 3: Mean and Standard Deviation Scores on Extent of ICT Utilization for Financial Management

S/N	Item Statement	Mean	SD	Decision
21	Use of accounting software for budgeting	1.88	0.73	Little Extent
22	Use of computer for school fees records	2.15	0.80	Little Extent
23	Use of ICT for expenditure tracking	2.05	0.77	Little Extent
24	Use of electronic system for financial reporting	1.95	0.79	Little Extent
25	Use of ICT for payroll preparation support	2.10	0.76	Little Extent
26	Use of digital tools for audit trail	1.90	0.74	Little Extent
27	Use of computer for inventory of financial documents	2.02	0.81	Little Extent
28	Use of ICT for financial planning and forecasting	1.92	0.78	Little Extent
29	Use of electronic payment systems	2.08	0.80	Little Extent
30	Use of ICT for financial transparency and accountability	1.98	0.75	Little Extent
Cluster Mean		2.00	0.77	Little Extent

Table 3 indicates that items 21-30 had mean scores between 1.88 and 2.15, falling within little extent. The cluster mean of 2.00 shows very low ICT utilization for financial management. This suggests that financial administration remains largely manual, which may affect transparency and accountability in school financial management.

Test of Null Hypotheses

Null Hypothesis One: There is no significant difference between the mean ratings of principals and teachers on the extent of ICT utilization for personnel administration.

Table 4: t-test Analysis of Principals and Teachers on ICT Utilization for Personnel Administration

Group	N	Mean	SD	df	t-cal	t-crit	Decision	HO
Principals	32	2.31	0.68	209	0.682	1.960	Not Significant	Retained

Table 4 shows t-calculated value of 0.682 is less than t-critical value of 1.960 at 209 degrees of freedom and 0.05 level of significance. Therefore, the null hypothesis is retained. This indicates no significant difference between principals and teachers ratings. Both groups agree that ICT utilization for personnel administration is at little extent.

Null Hypothesis Two: There is no significant difference between the mean ratings of principals and teachers on the extent of ICT utilization for instructional programme management.

Table 5: t-test Analysis of Principals and Teachers on ICT Utilization for Instructional Programme Management

Group	N	Mean	SD	df	t-cal	t-crit	Decision	HO
Principals	32	2.08	0.71	209	0.415	1.960	Not Significant	Retained

Table 5 reveals t-calculated value of 0.415 is less than t-critical of 1.960 at 0.05 significance level. Hence, the null hypothesis is retained. This shows no significant difference between principals and teachers. Both groups concur on low ICT utilization for instructional management.

Null Hypothesis Three: There is no significant difference between the mean ratings of principals and teachers on the extent of ICT utilization for financial management.

Table 6: t-test Analysis of Principals and Teachers on ICT Utilization for Financial Management

Group	N	Mean	SD	df	t-cal	t-crit	Decision	HO
Principals	32	2.03	0.65	209	0.523	1.960	Not Significant	Retained

Table 6 shows t-calculated value of 0.523 is less than t-critical value of 1.960 at 0.05 level. Therefore, null hypothesis is retained. There is no significant difference between principals and teachers. Both groups agree that ICT utilization for financial management is at little extent.

DISCUSSION OF FINDINGS

The finding that ICT utilization for personnel administration is at little extent ($M=2.27$) indicates that digital transformation has not been deeply embedded in personnel processes. This finding corroborates Abiodun-Oyebanji and Omotayo (2012) who found low ICT awareness and inadequate facilities among secondary school administrators in Ekiti State despite a significant relationship between ICT adoption and administrative effectiveness. Similarly, Eze et al. (2023) reported low utilization of human resource information systems in secondary schools in South-East Nigeria due to inadequate infrastructure and limited digital competence. The absence of significant difference between principals and teachers suggests that limited utilization is a shared institutional condition rather than perceptual difference, as also observed by Nwosu and Obi (2024).

The low ICT utilization for instructional programme management ($M=2.05$) suggests that ICT has not been fully integrated into information processes supporting teaching and learning administration. This aligns with Ajayi and Ekundayo (2009) who identified inadequate facilities, inadequate user capacity and electricity constraints as barriers to ICT utilization in Nigerian secondary schools. Adedoyin and Okereke (2023) also found that instructional monitoring remains largely manual in public secondary schools in Enugu State. Ukaigwe and Obiekwe (2022) emphasized that without digital instructional management systems, monitoring curriculum implementation becomes cumbersome and time-consuming. The finding therefore indicates need for targeted investment in instructional management software and staff training.

The finding of little extent in financial management ($M=2.00$) indicates limited use of digital tools for budgeting, expenditure tracking and financial reporting. This is consistent with Igwe et al. (2023) who reported manual financial administration in public secondary schools in South-East Nigeria, attributing it to lack of accounting software, poor digital skills and unreliable power supply. Okafor and Nwankwo (2024) argued that digital financial management improves transparency and accountability, yet its adoption is hindered by resistance to change and lack of policy implementation. Systems Theory explains that inadequate ICT utilization in financial subsystem affects overall school system efficiency, as financial information supports other administrative decisions. The findings collectively demonstrate that digital transformation requires

coordinated organisational change involving infrastructure, competence, leadership and policy.

CONCLUSION

This study examined ICT utilization in personnel administration, instructional programme management and financial management in secondary schools in Enugu Education Zone. The findings revealed little ICT utilization across all three areas, with mean scores of 2.27, 2.05 and 2.00 respectively, and no significant differences between principals' and teachers' ratings, indicating that limited ICT utilization is a shared institutional condition. Digital transformation in education should therefore be understood as an organisational development process: provision of technology is necessary but insufficient, and infrastructure must be accompanied by training, electricity, technical support, appropriate procedures, leadership, funding and policy implementation. When properly integrated, digital systems can contribute to more efficient personnel administration, instructional management, financial accountability, record keeping and institutional planning.

Recommendations

The following recommendations were made based on the findings of the study:

1. Ministries of Education and Secondary Education Management Board should include digital transformation in school development planning, with each school identifying administrative processes that can be progressively digitized based on needs assessment.
2. ICT infrastructure including computers, internet facilities, appropriate software such as EMIS and accounting packages, and secure storage systems should be provided to secondary schools according to identified administrative needs, not just generic supply.
3. Continuous professional development programmes should be organized for principals and teachers focusing on actual administrative applications of ICT such as digital personnel records, electronic timetabling and digital financial management, rather than general computer literacy alone.
4. Government should institutionalize technical support units at Education Zones with personnel capable of maintaining and repairing ICT equipment, and prioritize reliable electricity supply with alternative power solutions such as solar inverters.
5. Digital record-management policies should be developed at state level to address data entry, updating, access, confidentiality, backup, retention and security, ensuring standardization across schools.

6. ICT utilization should be monitored and evaluated by education authorities through regular school inspection that assesses not only availability but actual use and impact of ICT on administrative efficiency, with school leaders required to model ICT utilization.

South-East, Nigeria. *International Journal of Educational Management*, 21(1), 45-58.

REFERENCES

Abiodun-Oyebanji, O. J., & Omotayo, K. A. (2012). ICT adoption and effective secondary school administration in Ekiti State. *European Journal of Educational Studies*, 4(1), 59-64.

Adedoyin, A., & Okereke, C. (2023). Digital transformation and administrative effectiveness in public secondary schools in Enugu State. *Journal of Educational Administration and Planning*, 8(2), 112-125.

Ajayi, I. A., & Ekundayo, H. T. (2009). The application of information and communication technology in Nigerian secondary schools. *International NGO Journal*, 4(5), 281-286.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319-340.

Eze, C. E., Okonkwo, D. O., & Ugwu, L. O. (2023). Human resource information system and personnel administration in secondary schools in

Igwe, S. N., Nwachukwu, P. O., & Mbah, C. O. (2023). Challenges of ICT utilization in school financial management in South-East Nigeria. *Journal of Educational Technology and Administration*, 6(3), 88-102.

Nwosu, N., & Obi, E. (2024). ICT utilization for instructional programme management in public secondary schools in Anambra State. *Nigerian Journal of Educational Administration*, 12(1), 67-79.

Okafor, U. P., & Nwankwo, I. N. (2024). Facilitating conditions and digital transformation in secondary school administration in Nigeria. *Educational Management Administration & Leadership*, 52(2), 210-228.

Ukaigwe, P. C., & Obiekwe, K. (2022). E-administration and secondary school management in Rivers State. *International Journal of Educational Planning*, 19(2), 33-47.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425-478.

Von Bertalanffy, L. (1968). *General system theory: Foundations, development, applications*. New York: George Braziller.

Cite this Article: Onyido, CE; John-Mba, RI; Nwabuaku, NO (2026). Digital Transformation in Secondary School Administration: ICT Utilization for Personnel, Instructional, and Financial Management in Enugu Education Zone, Nigeria. *Greener Journal of Educational Research*, 16(1): 110-116, <https://doi.org/10.15580/gjer.2026.1.090726156>.