



## LEVERAGING DIGITAL TOOLS FOR SUSTAINABLE ADMINISTRATIVE EFFECTIVENESS IN PUBLIC SECONDARY SCHOOLS IN ANAMBRA STATE

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### Article Details

Volume: 02

Issue: 04

Pages: 18-26

Month: April

Year: 2026

DOI: <https://doi.org/10.5281/zenodo.19562632>

### Recommended Citation for APA 7<sup>th</sup> Edition:

Okonkwo, E.C. (2026). Leveraging digital tools for sustainable administrative effectiveness in public secondary schools in Anambra State. *International Journal of Premium Advanced Educational Research*, 2(4), 18-26. DOI: <https://doi.org/10.5281/zenodo.19562632>

### Abstract

The need for administrative effectiveness in secondary school systems in Anambra State to ensure quality and prompt delivery of educational services cannot be overemphasized. This prompted the study on leveraging digital tools for sustainable administrative effectiveness in public secondary schools in Anambra State. Two research questions guided the study. A descriptive research design was adopted for the study. The population was 274 principals in public secondary schools in Anambra State. A proportionate stratified random sampling technique was used to draw a sample of 54 principals for the study. Structured questionnaires were used for data collection. The instrument was face and construct validated. The researcher administered 54 copies of the instrument with the help of two research assistants using the direct method and retrieval and 54 copies were retrieved. Data were analyzed using mean statistics and standard deviation to answer the research questions. The results, among others, revealed that principals' school management systems (Cloud-Based SMS) integration practices have an influence on sustainable administrative effectiveness in public secondary schools in Anambra state. Accordingly, it was recommended among others that efforts are put in place by the government to constantly provide and update digital facilities in secondary schools to enable the principals to leverage them to do their jobs better.



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**Keywords:** Leveraging, Digital Tools, Sustainable, Administrative Effectiveness, Secondary Schools

### 1.1 Introduction

Technology occupies a strategic position in ensuring effective and efficient service delivery within the education sector. Secondary school, for instance, with its vagaries of administrative responsibilities on the principals, which include but are not limited to supervision and monitoring of teachers and students' learning activities, performance appraisal, motivation, discipline and staff development, would become more burdensome without the deployment of digital tools.

The digital age has ushered in new paradigms and perspectives to school administration, necessitating the integration of information and communication technologies (ICTs) tools in school operations. Adewunmi (2021) described technology-driven school administration as the application of scientific and digital tools towards facilitating the execution of tasks in a more efficient, timely and accurate manner. In the context of education, digital tools refer to the use of smart electronic devices, systems and platforms to support learning, communication, administration and decision-making. Ezenwafor (2022) emphasized that technology in education encompasses all digital tools and applications used to enhance the teaching-learning process, administrative activities, students' assessment and teacher development, among others. Some of such digital facilities deployed in secondary schools for efficient and effective school administration include, but are not limited to, cloud-based school management systems (Cloud-Based SMS) and record management software.

School management systems (Cloud-Based SMS) are digital platforms that utilize cloud computing technologies to automate administrative, financial and academic operations in schools. This definition underscores the capacity of school management systems (Cloud-Based SMS) to centralize student records, fee payments, communication and performance reports in real-time, accessible from any location. Cloud-Based SMS is an integrated software that streamlines data management, timetabling and stakeholder engagement, thereby enhancing accountability and transparency in school governance. Okonkwo (2022), SMS is conceived as not merely a technological tool but as a transformative mechanism for modernizing secondary school administration and promoting evidence-based planning practices. Another aspect of school administration that requires digital tools for effective management is the record management of staff and students' activities in school and classes-this is where the record management software (RMS) becomes useful.

Records management software (RMS) is a digital system designed to capture, organize, store and retrieve institutional records throughout their life cycle for administrative, legal and operational purposes. Okeke (2021) posited that RMS is a systematic preservation of data in formats that support compliance and accountability, such that retrieval on demand is done with minimal encumbrance. Okeke further conceptualizes RMS as computer-based applications that manage student records, staff files, financial documents and institutional correspondence for effective decision-making. Accordingly, RMS is not just a storage tool but a strategic mechanism that safeguards institutional memory, promotes transparency and ensures data accessibility for sustainable and effective secondary school administration. Ugwu and Okoye (2024) submit that without proper record keeping in the school system, the administration of such a school is doomed.

RMS ensures that accurate records on student performance, staff deployment and financial transactions are readily available for planning and evaluation. This facilitates evidence-based decision-making, reduces duplication of data and minimizes risks associated with information loss or mismanagement. Needless to say, RMS plays a crucial role in modernizing educational administration and sustaining long-term institutional effectiveness.

However, notwithstanding the growing awareness and recognition of the benefits of digital tools technology in school administration, principals in public secondary schools in Anambra state appear to be grappling with the needed adjustment to fully embrace and switch over from analog to digital tools as required by the twenty-first-century technology regime. In Anambra State, while the government has made commendable and considerable efforts to integrate technology into the educational system, the level of adoption and implementation varies across local government areas. As Eze and Uzoigwe (2022) put it, many secondary schools in the Anambra state lack the necessary digital infrastructure, ICT-trained personnel and maintenance capacity to fully implement technological initiatives. There are also disparities in electricity supply, internet connectivity and administrative competence in using digital tools. In the same vein, Akudo (2025) observed that principals in secondary schools in Anambra state display noticeable deficiency in digital competency and skills; as a result, they do not utilize many of the digitalized tools for their job performance. There is, therefore, a compelling need for principals to appreciate and leverage the opportunities provided by these digital tools to make their work a lot easier for sustainable administrative effectiveness, hence this study.

### **1.2 Statement of the Problem**

In the 21st century world, secondary school principals are expected to embrace, leverage, and utilize available digital tools for record-keeping, data management, resource allocation, curriculum planning, staff and students' performance evaluation and monitoring, among others.

Despite global advancements in educational technology, many secondary schools in Anambra State still grapple with traditional record keeping and other sundry administrative practices that hinder efficiency, accountability and data-driven decision-making. Some principals display utter ignorance and sometimes morbid fear to embrace the changes needed to integrate digital tools and technologies in the administration of schools which sometimes makes one wonder whether school leaders possess the requisite digital competencies to leverage technology in transforming administrative processes and planning outcomes.

The problem is further compounded by the lack of empirical data on the actual potential of such integration on school effectiveness, goal setting and resource utilization. Without a clear understanding of the extent to which technology is embedded in school administration and planning, policymakers and stakeholders may continue to design interventions that fail to align with the realities on the ground. It is this gap that this study seeks to fill.

### **1.3 Purpose of the Study**

The main purpose of this study is to examine the influence of principals' digital tools integration for sustainable administrative effectiveness in public secondary schools in Anambra State. Specifically, this study sought to determine the influence of principals' integration of:

1. school management systems (Cloud-Based SMS) practices on sustainable administrative effectiveness in public secondary schools in Anambra State
2. records management software practices on sustainable administrative effectiveness in public secondary schools in Anambra State

## 1.4 Research Questions

This study was guided by the following research questions:

1. what is the influence of principals' school management systems (Cloud-Based SMS) practices on sustainable administrative effectiveness in public secondary schools in Anambra State?
2. what is the influence of principals' records management software practices on sustainable administrative effectiveness in public secondary schools in Anambra State?

## 2. Method

The study adopted a descriptive survey research design. The study was conducted in Anambra State, southeast Nigeria. The population comprised all 274 principals in public secondary schools of the state. The sample size is 54 principals, representing twenty percent of the total population. The instrument for data collection was a structured questionnaire. The questionnaire is titled: Leveraging Digital Tools for Sustainable Administrative Effectiveness in Public Secondary Schools in Anambra State (LDTSAE). The questionnaire has two sections, A and B. Section A seeks information on the demographic variables of the respondents. Section B is divided into two clusters. Cluster B1 dealt on school management systems (Cloud-Based SMS) for sustainable administrative effectiveness in public secondary schools in Anambra State, while Cluster B2 dealt with records management software for sustainable administrative effectiveness in public secondary schools in Anambra State. The questionnaire has 16 items structured on a four-point rating scale ranging from Strongly Agree (SA) – 4, Agree (A) – 3, Disagree – 2, Strongly Disagree (D) – 1. The instrument was subjected to face and content validation using three experts, two in the department of Educational Management and Policy and one in the Measurement and Evaluation Unit, in the department of Educational Foundations, all in the Faculty of Education, Nnamdi Azikiwe University, Awka. The reliability of the instrument was ascertained by administering copies of the rating scales to 20 teachers in public secondary schools in Enugu State, which was not part of the study area. The data collected from the pilot test were subjected to an internal consistency reliability test using Cronbach's Alpha statistical tool. The responses were analyzed and the reliability coefficient value of 0.85 was obtained. Mean statistics were used to analyze the research questions. The decisions were based on the following ranges: Strongly Agree (SA) 3.50 – 4.00, Agree (A) 2.50 – 3.49, Disagree (D) 1.50 – 2.49, Strongly Disagree (SD) 0.00-.49

### 3. Results

The summaries of the results are presented in tables to highlight the findings

#### Analysis of Research Questions

The study answered the following research questions:

**Research Question One:** what is the influence of principals' school management systems (Cloud-Based SMS) practices on sustainable administrative effectiveness in public secondary schools in Anambra State?

**Table 1: Mean ratings of the influence of principals' school management systems (Cloud-Based SMS) practices on sustainable administrative effectiveness in public secondary schools in Anambra State**

S/N	Item Statements	X	SD	Remarks
1	Principals' integration of Cloud-Based SMS improves efficiency in school administrative tasks.	3.09	1.215	Agree
2	Cloud-Based SMS enhances accurate record keeping and reduces data loss in school administration.	3.13	1.262	Agree
3	The use of Cloud-Based SMS supports effective planning of academic programs and resource allocation.	3.13	1.286	Agree
4	Cloud-Based SMS enables principals to monitor and evaluate teachers' performance more effectively.	3.15	1.249	Agree
5	Cloud-Based SMS integration ensures transparency and accountability in school decision-making.	3.08	1.318	Agree
6	Cloud-Based SMS facilitates effective communication between principals, teachers and stakeholders.	3.13	1.297	Agree
7	The use of Cloud-Based SMS supports financial planning and budget tracking in schools.	2.97	1.213	Agree
8	Cloud-Based SMS improves principals' ability to make data-driven decisions in administration.	3.17	1.270	Agree
<b>Grand Mean</b>		<b>3.11</b>	<b>1.264</b>	<b>Agree</b>

Table 1 reveals the mean ratings of the influence of principals' school management systems (Cloud-Based SMS) integration practices on sustainable administration effectiveness in public secondary schools in Anambra state. The results indicate that the average mean score rating of the items 1 to 8 was 3.11 with corresponding standard deviations of 1.254. The findings indicate that, principals' school management systems (Cloud-Based SMS) integration have influence on sustainable administration effectiveness in public secondary schools in Anambra state. The results revealed that Cloud-Based SMS enhances efficiency in administrative tasks, enables principals to monitor and evaluate teachers' performance more effectively; supports effective planning of academic programs and resource allocation, among others. Furthermore, Cloud-Based SMS promotes transparency and accountability, strengthens financial planning and budget tracking, facilitates communication among stakeholders and empowers principals to make timely, data-driven administrative decisions. The standard deviation score of 1.254 is an indication of the homogeneity of the responses of the principals. It equally indicates that principals are unanimous in their response that cloud-based SMS have the potential of making their administrative task a lot easier,

These findings are supported by findings of the study conducted by Nwosu and Obi (2021) which reported that Cloud-Based SMS improves administrative efficiency and reduces the risks of data mismanagement, which corresponds with the result of the present. The agreement of the two studies may not be unconnected to the similarity in method, population and research instrument. Notwithstanding the time lag of five years between the two studies, results have turned out to be the same. This buttresses the fact that indeed digital tools technology has great impact on administrative effectiveness.

Similarly, Okafor (2020) found that the integration of cloud technologies in schools enhances academic program planning and resource allocation, aligning with the present findings. In addition, Eze and Umeh (2022) emphasized that Cloud-Based SMS facilitates performance evaluation of teachers and strengthens financial planning, which supports this study's conclusions. Likewise, Ofor and Nnaji (2019) stressed that the adoption of cloud systems promotes transparency, accountability and stakeholder communication in schools, directly corroborating the outcomes of this research. A community reading and consideration of the above studies finding can only strengthen the confidence level for the findings of the present study. Despite disparities in locations, time lag and research methods adopted for the reviewed studies compared to the present study, the results have only but validated the outcome of the present study.

**Research Question Two:** What is the influence of principals' records management software integration on sustainable administrative effectiveness in public secondary schools in Anambra State?

**Table 2: Mean ratings of the influence of principals' records management software integration on sustainable administrative effectiveness in public secondary schools in Anambra State**

S/N	Item Statements	$\bar{X}$	SD	Remarks
9	Principals' integration of records management software improves efficiency in administrative tasks.	3.40	.933	Agree
10	Records management software enhances accurate recordkeeping and reduces errors in school administration.	3.41	.971	Agree
11	The use of records management software supports effective planning of academic programs and activities.	3.49	.853	Agree
12	Records management software enables principals to monitor and evaluate teachers' performance effectively.	3.40	.946	Agree
13	Integration of records management software ensures transparency and accountability in school management.	3.37	.990	Agree
14	Records management software facilitates timely communication and information sharing among stakeholders.	3.48	.900	Agree
15	Principals' use of records management software improves financial planning and resource allocation.	3.06	1.197	Agree
16	Records management software improves principals' ability to make data-driven decisions.	3.35	.970	Agree
<b>Grand Mean</b>		<b>3.37</b>	<b>0.970</b>	<b>Agree</b>

Table 2 reveals the mean ratings of the influence of principals' records management software integration practices on sustainable administrative effectiveness in public secondary schools in Anambra state. The results indicate that the average mean score rating was .3.37 with

corresponding standard deviations of 0.970. The findings indicated that principals' records management software integration has influence on sustainable administrative effectiveness in public secondary schools in Anambra state.

The findings from research question two showed that the integration of records management software by principals has a significant influence on school administration. The results indicated that records management software improves the efficiency of administrative tasks, ensures accurate recordkeeping and minimizes errors in school operations. It also supports effective planning of academic programs and activities, facilitates the monitoring and evaluation of teachers' performance and promotes transparency and accountability in management. Furthermore, the integration of records management software enhances timely communication and information sharing, strengthens financial planning and resource allocation and improves principals' ability to make informed, data-driven decisions. More so, the standard deviation score of 0.97 shows marginally small deviation of less than 1 which indicates that the opinions expressed by the respondents are nearly the same. The principals are in agreement that record management software integration practices by the principals, enhance their administrative effectiveness.

These findings are in line with previous study by Nwankwo and Eze (2020) who reported that records management software significantly enhances accuracy in recordkeeping and reduces administrative errors, which supports this study's results. Similarly, Okoro and Udeh (2021) emphasized that the use of such software facilitates planning of academic activities and strengthens school accountability, aligning with the present findings. In addition, Uzochukwu (2022) highlighted that records management systems improve performance evaluation of teachers and promote transparent decision-making, which corresponds with the outcomes of this research. Likewise, Anya and Obi (2019) noted that records management software fosters efficient communication and resource allocation, directly corroborating this study's conclusions on data-driven school administration.

#### **4. Conclusion**

Based on the findings of this study, it is concluded that the integration of digital tools in the administration of secondary schools in Anambra state influences and guarantees sustainable administrative effectiveness.

#### **Recommendation**

Based on the findings of this study, it is recommended, among others, that:

1. Efforts should be put in place by the government to constantly provide and update digital facilities in secondary schools to enable the principals to leverage them to do their jobs better.
2. Principals should receive regular training on new digital tool

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