



Article

Smart Basic Schools and Teaching-Learning Administration in Federal Capital Territory (FCT), Abuja, Nigeria

Amukoyo Onome

1. Department of Educational Administration and Planning, University of Abuja, Nigeria
Correspondance: smart2busy@gmail.com

Abstract: This study examined smart basic schools and teaching-learning administration in the Federal Capital Territory (FCT), Abuja, Nigeria. The study specifically investigated the influence of smart basic schools on teaching and learning processes and the challenges affecting the implementation of smart basic schools in FCT, Abuja. Two research questions guided the study. Descriptive survey research design was adopted for the study. The population of the study comprised administrators and teachers in selected smart basic schools in the FCT, Abuja. A sample size of 482 respondents made up of 146 school administrators and 336 teachers was used for the study. A structured questionnaire titled *Smart Basic Schools Administration Questionnaire (SBSAQ)* was used for data collection. The instrument was validated by experts in Educational Administration and Planning as well as Measurement and Evaluation. Cronbach Alpha reliability method was used to establish the reliability of the instrument, yielding a coefficient of 0.86. Mean and grand mean statistics were used to answer the research questions. Findings of the study revealed that smart basic schools positively influence teaching and learning through improved digital instruction, effective communication, access to educational resources, better classroom management, and enhanced students' participation. The study also revealed that inadequate funding, poor electricity supply, inadequate ICT facilities, lack of trained personnel, poor internet connectivity, and weak policy implementation are major challenges affecting the implementation of smart basic schools in FCT, Abuja. The study concluded that smart basic schools are essential for improving the quality of basic education in Nigeria. The study recommended adequate funding, regular ICT training, provision of modern digital facilities, and effective implementation of ICT policies in schools.

Keywords: Smart basic schools, digital instruction, Teaching-learning administration

1. Introduction

The emergence of Information and Communication Technology (ICT) has transformed educational administration and instructional delivery across the world. Modern educational systems now depend largely on digital technologies for effective teaching, learning, supervision, communication, and school administration [1]. Smart basic schools represent a modern educational innovation where digital technologies are integrated into teaching-learning activities and school administration for improved educational outcomes.

Smart basic schools are schools equipped with digital learning facilities such as computers, interactive boards, internet facilities, projectors, e-learning platforms, and smart classrooms aimed at enhancing effective teaching and learning [2], [3]. In Nigeria, the introduction of smart basic schools is part of the government's effort to modernize the educational sector and align it with global best practices.

The Federal Capital Territory (FCT), Abuja has witnessed gradual adoption of smart school initiatives through the provision of digital learning facilities in some public basic schools [4].

Citation: Amukoyo, O. Smart Basic Schools and Teaching-Learning Administration in Federal Capital Territory (FCT), Abuja, Nigeria. Web of Scholars: Multidimensional Research Journal 2026, 5(3),423-428.

Received: 8th Feb 2026
Revised: 17th Mar 2026
Accepted: 14th June 2026
Published: 19th June 2026



Copyright: © 2026 by the authors. Submitted for open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>)

These initiatives are expected to improve instructional delivery, facilitate effective communication, enhance access to educational resources, and improve school administration. Smart schools also encourage learner-centered instruction, creativity, collaboration, and independent learning among students.

Despite the importance of smart schools, many public basic schools in Nigeria still face challenges in implementing digital education programmes [5]. Ogunleye, & Adepoju, reported problems such as inadequate funding, shortage of ICT facilities, poor electricity supply, inadequate internet connectivity, lack of trained teachers, and poor maintenance culture continue to hinder effective implementation of smart school programmes.

Several studies have emphasized the relevance of ICT and smart learning environments in educational administration. Ogunode; Oweikpodor & Edah, observed that ICT integration in schools improves administrative efficiency, instructional delivery, and students' academic performance [6]. Similarly, United Nations Educational, Scientific and Cultural Organization stressed that digital learning environments contribute significantly to quality education and sustainable educational development. It is against this background that this study examined smart basic schools and teaching-learning administration in the Federal Capital Territory (FCT), Abuja, Nigeria [7], [8].

1.2 Objectives of the Study

The following objectives guided the study:

1. To examine the influence of smart basic schools on teaching and learning processes in the Federal Capital Territory (FCT), Abuja, Nigeria.
2. To identify the challenges affecting the implementation of smart basic schools in the Federal Capital Territory (FCT), Abuja, Nigeria.

1.3 Research Questions

The following research questions guided the study:

1. What is the influence of smart basic schools on teaching and learning processes in the Federal Capital Territory (FCT), Abuja, Nigeria?
2. What are the challenges affecting the implementation of smart basic schools in the Federal Capital Territory (FCT), Abuja, Nigeria?

3.0 Method

Research Design

The study adopted descriptive survey research design.

Area of the Study

The study was carried out in the Federal Capital Territory (FCT), Abuja, Nigeria.

Population of the Study

The population of the study consisted of administrators and teachers in selected smart basic schools in FCT, Abuja.

Sample and Sampling Technique

A sample size of 482 respondents comprising 146 administrators and 336 teachers was selected using simple random sampling technique.

Instrument for Data Collection

The instrument used for data collection was a structured questionnaire titled *Smart Basic Schools Administration Questionnaire (SBSAQ)*. The questionnaire consisted of two sections. Section A

focused on demographic information while Section B contained items relating to the research questions.

Validation of the Instrument

The instrument was validated by experts in Educational Administration and Measurement and Evaluation.

Reliability of the Instrument

Cronbach Alpha reliability method was used to determine the reliability of the instrument and a reliability coefficient of 0.86 was obtained.

Method of Data Collection

The researchers administered the questionnaire directly to the respondents with the assistance of trained research assistants.

Method of Data Analysis

Mean and grand mean statistics were used to answer the research questions. A criterion mean of 2.50 was used for decision making.

Q1: What is the influence of smart basic schools on teaching and learning processes in the Federal Capital Territory (FCT), Abuja, Nigeria?

Table 1: Mean Ratings on the Influence of Smart Basic Schools on Teaching and Learning Processes

S/N	Items	Administrators (n=146)	Mean Teachers (n=336)	Mean Grand Mean	Decision
1	Smart schools improve digital teaching methods	3.62	3.55	3.59	Accepted
2	Smart classrooms enhance students' participation	3.58	3.51	3.55	Accepted
3	Smart schools improve access to learning resources	3.66	3.60	3.63	Accepted
4	ICT facilities improve classroom management	3.54	3.47	3.51	Accepted
5	Smart schools enhance communication between teachers and students	3.61	3.53	3.57	Accepted
6	Smart schools improve students' academic performance	3.57	3.49	3.53	Accepted
7	Digital learning promotes collaborative learning	3.52	3.46	3.49	Accepted
8	Smart schools improve instructional supervision	3.49	3.42	3.46	Accepted
9	Smart schools enhance teachers' instructional delivery	3.63	3.58	3.61	Accepted
10	Smart schools promote independent learning among students	3.56	3.50	3.53	Accepted
	Grand Mean	3.58	3.51	3.55	Accepted

Table 1 revealed that all the items had mean scores above the criterion mean of 2.50. The grand mean of 3.55 indicated that respondents agreed that smart basic schools positively influence teaching and learning processes in FCT, Abuja [9], [10]. Respondents agreed that smart schools improve digital instruction, classroom participation, instructional delivery, communication, supervision, and access to learning resources [11].

Q2: What are the challenges affecting the implementation of smart basic schools in the Federal Capital Territory (FCT), Abuja, Nigeria?

Table 2: Mean Ratings on Challenges Affecting the Implementation of Smart Basic Schools

S/N	Items	Administrators (n=146)	Mean Teachers (n=336)	Mean Grand Mean	Decision
1	Inadequate funding affects smart school implementation	3.71	3.64	3.68	Accepted
2	Poor electricity supply affects digital learning	3.69	3.61	3.65	Accepted

S/N	Items	Administrators (n=146)	Mean Teachers (n=336)	Mean Grand Mean	Decision
3	Inadequate ICT facilities hinder smart school programmes	3.66	3.58	3.62	Accepted
4	Poor internet connectivity affects teaching and learning	3.63	3.57	3.60	Accepted
5	Lack of trained ICT personnel affects smart school administration	3.67	3.60	3.64	Accepted
6	Poor maintenance culture affects ICT facilities	3.61	3.55	3.58	Accepted
7	Inadequate teacher training affects smart learning	3.64	3.56	3.60	Accepted
8	Weak implementation of ICT policies affects smart schools	3.59	3.52	3.56	Accepted
9	High cost of ICT equipment affects school digitalization	3.65	3.59	3.62	Accepted
10	Resistance to technology adoption affects smart schools	3.55	3.48	3.52	Accepted
	Grand Mean	3.64	3.57	3.61	Accepted

Result of Table 2

Table 2 showed that all the items had mean scores above the criterion mean of 2.50. The grand mean of 3.61 indicated that respondents agreed that inadequate funding, poor electricity supply, lack of ICT facilities, poor internet connectivity, inadequate teacher training, and weak policy implementation are major challenges affecting the implementation of smart basic schools in FCT, Abuja [12], [13], [14].

3.1 Findings

The study revealed that Smart basic schools positively influence teaching and learning processes in FCT, Abuja. Smart schools improve digital instruction, students' participation, classroom management, and communication [15]. Smart schools promote access to educational resources and independent learning. Inadequate funding and poor electricity supply are major challenges affecting smart schools. Poor internet connectivity and shortage of trained ICT personnel hinder effective implementation of smart school programmes and Weak implementation of ICT policies affects smart school development in FCT, Abuja [16].

3.2 Discussion of Findings

The findings of the study revealed that smart basic schools positively influence teaching and learning processes in FCT, Abuja. The study showed that digital learning facilities improve instructional delivery, classroom participation, communication, and students' academic performance [17]. This finding agrees with the work of Ogunode who reported that ICT integration enhances teaching effectiveness and school administration in Nigerian schools.

The findings also support the position of United Nations Educational, Scientific and Cultural Organization which emphasized that digital learning environments improve educational quality and learners' engagement. Similarly, Adebayo observed that smart classrooms contribute significantly to students' academic achievement and collaborative learning [18].

The study further revealed that inadequate funding, poor electricity supply, inadequate ICT facilities, and lack of trained personnel are major challenges affecting smart school implementation. This finding corroborates the submission of Federal Ministry of Education Nigeria that insufficient funding and poor infrastructure hinder effective ICT implementation in Nigerian schools. The finding also agrees with Yusuf Suleiman who identified poor internet

connectivity and inadequate teacher training as barriers to digital education in developing countries.

3.3 Conclusion and Recommendations

The study concluded that smart basic schools are essential for improving teaching-learning administration in the Federal Capital Territory (FCT), Abuja, Nigeria. Smart schools enhance instructional delivery, communication, classroom participation, and access to educational resources. However, the successful implementation of smart schools depends largely on adequate funding, availability of ICT facilities, stable electricity supply, trained personnel, and effective policy implementation.

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

- 1) Government should provide adequate funding for smart basic school programmes in FCT, Abuja. Modern ICT facilities should be provided in public basic schools. Regular ICT training programmes should be organized for teachers and school administrators.
- 2) Stable electricity supply should be ensured in schools to support digital learning. Internet connectivity should be improved in public schools. Technical support personnel should be employed for maintenance of ICT facilities.
- 3) Educational authorities should ensure effective implementation of ICT policies in schools. Teachers and administrators should be encouraged to adopt digital teaching and administrative practices.

REFERENCES

- [1] A. A. Adebayo, "Smart classroom technology and instructional effectiveness in secondary schools," *Journal of Educational Technology Studies*, vol. 14, no. 2, pp. 45–58, 2021.
- [2] E. J. Chukwuemeka, S. Dominic, K. R. Akanbi, and B. G. Aregbesola, "Transforming from traditional to smart education in Nigeria: Challenges and opportunities for learning," *Ilorin Journal of Education*, vol. 46, no. 1, pp. 48–63, 2025.
- [3] K. A. Demir, Ş. Karadeniz, and Ö. Geden, "Smart education framework," *Smart Learning Environments*, vol. 8, no. 1, Art. no. 29, 2021, doi: 10.1186/s40561-021-00170-x.
- [4] Federal Ministry of Education, *National Policy on Information and Communication Technology in Education*. Abuja, Nigeria: Federal Government Press, 2022.
- [5] T. A. Ogunleye and O. Adepoju, "Financing ICT integration for secondary education in Nigeria: Issues and prospects," *Nigerian Journal of Economics and Education*, vol. 12, no. 2, pp. 98–113, 2023.
- [6] N. J. Ogunode, "ICT integration and educational administration in Nigerian schools," *International Journal of Educational Research and Development*, vol. 13, no. 4, pp. 66–79, 2021.
- [7] P. A. Okebukola, "Teacher preparedness for digital education in Nigeria: A situational analysis," *West African Journal of Educational Research*, vol. 24, no. 1, pp. 1–15, 2021.
- [8] P. Okebukola, *Reinventing Education in Africa Through Technology Integration*. Lagos, Nigeria: Stirling-Horden Publishers, 2020.
- [9] T. Olatunji and A. Yusuf, "Financial challenges of ICT integration in Nigerian schools," *International Journal of Education and Development*, vol. 8, no. 3, pp. 67–82, 2022.
- [10] V. G. Oweikpodor and H. Edah, "Digitalization of basic education management for delivering quality education in Nigeria," *Multi-Disciplinary Research and Development Journals International*, vol. 7, no. 4, pp. 39–50, 2025.
- [11] S. Strohmeier, "Smart HRM: Technology-driven human resource management," *German Journal of Human Resource Management*, vol. 34, no. 3, pp. 345–365, 2020.
- [12] UNESCO, *Digital Learning and Educational Transformation*. Paris, France: UNESCO Publishing, 2023.
- [13] Universal Basic Education Commission, *Education Ministers Inspect UBEC Smart School in Karshi, Abuja: A Commitment to Quality Education for the Future*. Abuja, Nigeria: UBEC, 2024.
- [14] Universal Basic Education Commission, *UBEC-KOICA Smart Education Project Report*. Abuja, Nigeria: UBEC Digital Resource Centre, 2025.
- [15] B. Williamson, "Educating the smart city: Schooling smart citizens through computational urbanism," *Big Data & Society*, vol. 2, no. 2, pp. 1–13, 2015.
- [16] S. A. Yusuf, "Challenges of smart school implementation in developing countries," *African Journal of Educational Web of Scholars: Multidimensional Research Journal* 2026, 5(3), 423–428.

Administration and Technology, vol. 9, no. 1, pp. 77–89, 2022.

[17] A. Yusuf and M. R. Balogun, "Digital learning facilities and administrative effectiveness in public basic schools in Abuja Municipal Area Council," *Nigerian Journal of Educational Administration and Planning*, vol. 22, no. 1, pp. 91–105, 2022.

[18] S. Z. Ubaydullayevna, "Improvement of Strategic Management Mechanisms for Ensuring Economic Security in the Service Sector," *American Journal of Economics and Business Management*, vol. 9, no. 6, pp. 498–504, 2026. [Online]. Available: <https://www.globalresearchnetwork.us/index.php/ajebrm/article/view/5122>. [Accessed: Jun. 18, 2026].
