



## Examining School Principals' Roles in Implementing ICT Policy in Lagos State Secondary Schools, Nigeria

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### Abstract

The qualitative study underpinning this paper examined the roles of school principals in implementing information and communication technology policies in Lagos State secondary schools in Nigeria. The research problem centres on the complexities and gradations faced by school principals as they navigate the implementation of ICT policy in developing country settings. Drawing on Lipsky's (1980) Policy Implementation Theory from a Bottom-Up approach, the study delved into the intricate dynamics of policy implementation within the context of education. The study interviewed eight school principals whose data was thematically analysed to capture their perspectives on policy implementation. Therefore, this paper aims to shed light on the roles and experiences of school principals and uncover key insights to inform policy implementation processes and practices. The findings revealed numerous challenges school principals face, including limited resources, inadequate training, and resistance to change. The findings also indicated that secondary school principals have a positive attitude towards ICT despite the odds involved in managing the implementation of ICT in their school environments. Results also revealed that they could not act as instructional leaders in implementing ICT in educational settings because of the unclarity of their roles in the policy guidebook.

**Keywords** *Bottom-Up Approach; Information and Communication Technology; ICT Policy; Policy Implementation; School Principals Role*

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## Introduction

Globally, the integration of information and communication technology (ICT) has emerged as a transformative force in all sectors of the economy. United Nations (2021) identified the persistent emergence of transformative technologies in the world educational system as the main feature of the twenty-first century. The development of interactive digital boards, eLearning and distance education are just a few examples of how this transition has influenced teaching and learning (UNESCO, 2023). Hence, it is evident that schools must employ principals who possess ICT proficiency and are supported by well-structured policies to adopt the changing technology improvements in education (Van Greunen et al., 2021). The evaluation and supervision of information across an internet connection for communication is made easier and more possible by ICT, a product generated by scientific research and innovation. The National ICT Policy for Education in Nigeria (FMOE, 2019) described ICT as the art and applied sciences which comprise data and information. According to Onyebuchi, who was cited by Achukwu and Nnajofofor in 2012, ICT refers to any device, linked framework, or component of a system that is used to manage, move, control, display, switch, exchange, transmit, or receive data or information processing and electronic communications.

Acknowledging this significance, Nigeria, as a developing nation, established the National Policy on Information and Communication Technology (ICT) in Education in April 2010 to deliver a globally competitive education. Thus, human capital development, research and development, governance, financing, and monitoring and evaluation have been identified in the reviewed national policy on ICTs in education as its seven focal areas of policy that are urgently needed for the modification of pedagogical activities and educational administration in Nigeria (FMOE, 2019). This policy will also hasten the reformation of educational leadership and schooling in Nigeria. As the global key pedagogical leaders, school principals must be prepared for the 21st-century classroom and the fourth industrial revolution and its difficulties (Battons, 2018). As such, understanding their views and opinions on implementing ICT policy in education can have a significant bearing on the extent to which new technologies will become embedded in the teaching and learning process. The provision of leadership in implementing ICT in learning and teaching will accelerate its entrenchment in the leadership and vision of schools (Van Greunen et al., 2021). Thus, it becomes imperative that school principals have the necessary knowledge and abilities to alter and develop educational institutions and their digital citizens (Raman et al., 2019).

However, Jita (2016) pointed out that the ICT vision policy lacked clarification on the school principals' roles in achieving the policy obligation, thus limiting its effective implementation. Quest (2014) also noted the non-identification of specific roles for school principals within the ICT policy structure as the major challenge in embedding technology into school practices. Therefore, investigating the insights of school principals' usage and inclusion of ICT policy in pedagogy may reveal gaps in policy implementation. A survey by the Federal Ministry of Education (2019) found that most secondary schools in Nigeria were at the foundation level in implementing ICT policy guidelines with their school principals and teachers embedding ICT differently in the school environment. Despite using the same ICT policy and working in similar socio-economic learning environments, the predicament of school principals implementing ICT policies differently remains. Thus, examining the insights of school principals' usage and inclusion of ICT policy in pedagogy may reveal gaps in policy implementation.

## Literature Review

Information and Communication Technology (ICT) has been increasingly prevalent in education across the globe in the twenty-first century, and this can be attributed to the willingness of all nations, including Nigeria, to invest in technological innovation that offers an innovative, practical environment for teachers and students guided with sound policies. The United Nations (2021) defines information and communication technology (ICT) as a broad range of digital instruments that transmit, save, acquire, or gather material. This means that ICT encompasses a wide range of technologies such as telephones, computers, TVs, video, DVDs, software, and hardware, to mention but a few. Chowdhury (2019) pointed out that ICT has much potential to enable novel approaches to improve school principals' and students' engagement. This merit has caused most governments to make significant investments in ICT with a high level of progress in implementing ICT policy (Hanafizadeh, Khosravi & Badie, 2019).

The Nigeria government, in recognition of the pivotal role of ICT in education, reviewed the National Policy on ICT in Education in May 2019 with the vision of creating an educational environment that is freely accessible, inclusive,

empowering, and enriching with guidance on expectations from all stakeholders in the entire process of ICT integration (FMOE, 2019). From a structural point of view, the purpose of ICT policy in education is to contribute to the teaching and learning process by promoting digital-based innovations such as introducing e-learning resources and providing a laptop (e.g., the One Laptop per Child project). The policy papers describe the strategic plans, sub-strategies, operations, targets, executing agencies, deadlines, and key performance indicators (KPIs) to fulfil the policy objectives effectively. However, achieving these policy visions, aims, and objectives relies heavily on school principals' leadership and management skills. Roblyer and Doering (2016) posit that heads are supposed to work as technological experts and instructors as implementors to offer the skills and knowledge for education in this current century. Afzaal (2017) argues that school principals must use basic computer skills to accomplish administrative and managerial tasks. Ghavifekr, Afshari, Siraj and Seger (2016) observed that the principal use of email to inform teachers of a meeting, send a memorandum, and send important internal and national policy documents has several advantages. To effectively promote ICT in schools, school principals must be capable of developing a notion of sustainable technology usage that teachers can share. To support this argument, Yahya (2016) identified team teaching, shared planning time, shared decision-making, and chances to learn from colleagues as mechanisms that need to be developed for technology to be integrated into the everyday work of teachers. Thus, this manuscript investigates the roles of school principals in implementing ICT policy in Lagos State Secondary School, Nigeria (Popoola, 2024).

### **Theoretical Framework**

Policy implementation theory from the bottom-up approach viewpoint developed by Lipsky in 1980 was identified as a suitable framework for this study. According to Lipsky (1980), the bottom-up approach is characterised by its inclusion of street-level bureaucrats as policymakers. Sabatier (2005), in his study, pointed out that this approach adds local actors, such as school principals and teachers, as top policy decision-makers. This can be attributed to the fact that their interactions with the individuals they manage will help them to have a more comprehensive insight into their needs (Hill & Hupe, 2014). The bottom-up approach condemns the idea of authoritarian instructions and focuses on the field players at the bottom of the political-administrative system (O'Toole Jr, 2000). The bottom-up approach assumes that street-level bureaucrats should be involved in policy decision-making rather than government and legislative. In this approach, the school principal, as a bureaucrat, is involved in the policy's decision-making. Thus, they will be able to formulate procedures and strategies that can assist them in overcoming challenges, resulting in a productive implementation process.

To fully understand school principals' implementation of ICT policy in secondary schools, the bottom-up approach applies to this study because it provides a more feasible and dependable substitute to the top-down approach, which sees the government as the solitary player in policymaking (Pülzl & Treib, 2007). This theory guides this study because it argues for some factors that mainly determine the success of the implementation process, such as the involvement of school principals in the design of the policy standards and objectives, policy resources, and target-group behaviours, amongst other factors. As a result, implementation is seen as a mechanism and outcome that incorporates decisions and activities required to put an authorised decision into effect by the law's objective (Paudel, 2009).

### **Methodology**

This interpretive study employed a qualitative approach to gain a more descriptive and detailed understanding of the school principals' experiences of perceiving the ICT policy and interacting within their social environment (Litchman, 2017). A case study research design was used to investigate current events in the context of school principals' daily lives, especially "where the boundaries between the environment and incidence are intuitively unclear" (Maree, 2016). This research design was considered appropriate because it focuses on human experiences.

The purposive sampling method was used to select eight secondary school principals from Surulere and Mushin local governments of Lagos state for convenience and to promptly conduct a complete and in-depth data analysis. In qualitative research, purposive sampling is often used to select participants interested in the matter under investigation (Palinkas et al., 2015). The participants were selected based on the criteria of whether they had an ICT laboratory or a fully dedicated computer room. Also, they must have been implementing ICT in their teaching and learning activities (Etikan, Musa & Alkassim, 2016).

The data collected for this study was designed to acquire helpful information to answer the research questions about school principals' implementation of ICT policies (Masha, 2017). Semi-structured interviews were designed and conducted physically. The school principals were interviewed individually during their leisure time within 30 minutes, and an audio tape was used to record the conversation verbatim. A semi-structured interview was considered because it is an unstructured and unrestrained interview method (Joseph & Russell, 2012), and it also allows researchers to clarify concepts, probe for more details and ask participants to explain their responses (Bless et al., 2013). The participants were involved in a question-answer session using open-ended questions to elicit information on the subject matter: their perceived roles in implementing ICT policy in Lagos state secondary schools in Nigeria.

The transcribed data was analysed and interpreted using Braun and Clarke's (2006) six phases of thematic analysis to understand its scope. Having identified the themes and sub-themes, the transcribed data was coded to denote each theme, with the responses grouped according to the research questions. Afterwards, a detailed analysis of these themes was used to structure and guide the research findings. The University of Pretoria's Faculty of Education Ethics Committee permitted this study in eight secondary schools in Surulere and Mushin, a local government area in Lagos state. In addition, an authorisation letter was obtained from the Lagos State Ministry of Education before letters were sent to the school principals to seek their permission for an interview. The study adhered to the ethical guidelines of voluntary participation and informed consent, confidentiality, anonymity, and participants' well-being.

### **Research findings**

This study examined the roles of school principals in implementing ICT policies in Lagos state, Nigeria. The research question 'How do school principals in Lagos state secondary schools understand their roles in implementing the ICT policy?' was formulated to reveal the school principals' understanding of their roles in executing ICT policies in their respective schools. Below are the research findings from the eight participants who participated in this study.

*My role in the implementation process is crucial and tasking. As the school head, my role is to understand the ICT policy and strategy needed for its implementation. When I understand this fully, I can impact the factors involved in joining me to fully implement these policies, talking about the staff and students so that they can actively participate in the implementation process. P5 – SE.*

*My role in this aspect is to ensure that things are done effectively and efficiently as designed by the government policy because if we do not do it that way, we will have issues with the government. I work with my teachers to ensure that the ICT policy is being embraced in my school. For instance, writing lesson notes is no longer done manually. It is done electronically. P3 – SC.*

*My role as a school leader is to organise manuals and direct the school according to what will benefit teachers and students, using the ICT policy in education as a manual. P1 - SA.*

*I ensure that all students and teachers can use this equipment effectively. I also ensure that students are independent. In their leisure time, they can go to the computer room and operate the system without supervision. I also ensure that the equipment we have at our disposal is well taken care of. P4 – SD.*

While some participants believed their participation in the implementation process was significant, others regarded teachers as the major implementers of ICT policies.

*As a school principal, I have a crucial role in the implementation process. However, I do not consider myself the main factor here. We must consider other factors such as teachers, students, school buildings, school preparations, external supervision, and administration. P2 – SB.*

*My role as the school's general overseer is to ensure that the teachers who implement this policy effectively perform their duties. P8 – SH.*

*My role in the implementation process is unclear, except that I must monitor and ensure that my teachers follow the policy guidelines. I see the teachers as the primary implementers of this policy because they are the ones who majorly impart knowledge to students. P6 – SF.*

*My role is to ensure that policy is adhered to, as the policy seems to focus more on the teachers. So, all I have to do is monitor and supervise.* P7 – SG.

Most school principals saw themselves as intermediaries between the government and the school through policy implementation and assessment. They saw themselves as technology leaders meant to play the monitoring and supervisory role in ensuring the policy guidelines are strictly followed. Although the ICT policy did not specify their role in the implementation process, it can be deduced that the school principals saw themselves as technology leaders. Thus, they demonstrated a positive attitude by motivating and propelling the teachers to incorporate technology into their pedagogical activities.

Their narratives also indicated that they *created an atmosphere for an innovative culture* so that the staff and students were included in the innovation process. The school principals confirmed that human and physical resources such as teachers, students, external monitoring and supervision, and school facilities were essential to implementing ICT policy in secondary schools. It is vital to indicate that some school principals felt uncertain about their role in implementing the ICT policy. They believed that teachers should be in charge of implementing ICT policies since they are the ones who utilise ICT.

### Discussion of Findings

To establish how ICT policies are being implemented in Lagos State secondary schools, it was essential to comprehend the roles of school principals in the implementation process. The eight school principals ascribed meanings to and voiced various understandings of their roles in implementing ICT policies.

As an intermediary between the government and schools, I fulfil monitoring and supervisory roles to ensure that policy guidelines are strictly followed. This supported Moore's (2016) assertion that principals must comprehend their roles in helping to integrate ICTs into teaching methodologies. P7 – SG summed up the general view in this way: *My role is to ensure that policy is adhered to as the policy seems to focus more on the teachers, so all I have to do is monitor and supervise.* P7 – SG. In line with the above participant's view, Harris and Jones (2017) opined that the supervision and monitoring of teachers remain core responsibilities of school principals towards ensuring the quality of teaching and learning and that government policies are well adhered to. In order to track how policies are being implemented in schools, the Nigerian Federal Ministry of Education highlighted monitoring and evaluation as viable tools in ICT education (FMOE, 2019). This also gave credence to the policy implementation theory from the bottom-up approach by Lipsy (1980) that the government should involve the street bureaucrats, who in my study are the school principals and teachers, in the policy formulation and decision-making process since they are the primary implementers of the policies.

Secondly, the school principals saw themselves as technology leaders. They thus demonstrated a positive attitude towards teachers incorporating technology into their pedagogical activities even though their roles were not specified in the policy handbook. One of the principals summed it up as follows: *I ensure that all students and teachers can use this equipment effectively. I ensure that students are independent. They can go to the computer room and operate the system without supervision in their leisure time. I also ensure that the equipment we have at our disposal is well taken care of.* P4 – SD. According to McLeod (2015), school principals' numerous obligations hinder their ability to carry out educational changes, highlighting the significance of assigning tasks and responsibilities to teachers and ICT specialists in various subject teams. It is still evident that if ICTs are to be effectively used by staff in delivering the school curriculum, school principals must ensure the participation of all stakeholders in decision-making.

Lastly, the study findings revealed that the school principals created an innovative culture to include all staff in the policy implementation process. *I have a vital role in the implementation process, but the principal is not the main factor as there are many other factors such as teachers, students, school buildings, school preparations, external supervision and administration.* P2 – SB. This statement supported Bellibas, Bulut, Hallinger and Wang's (2015) claim that school principals need to re-evaluate their leadership responsibilities in order to foster a positive and supportive relationship with teachers and improve the efficiency with which ICT policies are implemented in classrooms. As a result, school principals must be positioned to serve as role models, facilitators, monitors, supporters, and links among teachers for mentoring in order to establish a school atmosphere of experimenting with new methods of

management, instruction, and learning (Arokiasomya, Bin Abdullah & Ismail, 2015). Even though the policy did not expressly state their duties, the study participants could describe those roles and how they were played.

### Conclusion

This study examined the roles of school principals in implementing ICT policies in Lagos state, Nigeria. There is no doubt that school principals' roles in the effective and efficient implementation of ICT policies in Lagos state secondary schools are pivotal. Their leadership skills, resource management, advocacy and strategic planning are instrumental in creating technology-rich learning environments. However, their roles in the policy handbook must be clearly defined to facilitate collaborative participation among the school principals. The study recommends that the government and policymakers include school principals in the policy review. Their inclusion will aid the policy decision-making process and the successful implementation of ICT in education policy since they are the heads of schools.

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