ASSESSMENT OF THE EXTENT OF UTILIZATION OF INFORMATION AND COMMUNICATION TECHNOLOGY IN THE MANAGEMENT OF SCHOOLS

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Abstract

The use of information and communication technology (ICT) in 21st-century schools has become crucial. The Nigerian educational system has been impacted by this trend, much as the coronavirus 2019 (COVID-19) pandemic has caused most countries to prioritize the use of ICT technologies for school management. This is because it is unclear how prepared the principals are to adopt the usage of ICT in the management of schools. The literature on the use of ICT in the classroom by Nigerian secondary school principals is scant. Thus, the usage of ICTs by secondary school administrators in running their institutions was evaluated in this study. Using a descriptive survey research approach, 132 secondary school principals in Ebonyi State, Nigeria, were sampled for the study. For this study, the researchers developed and verified an information and communication technology use questionnaire. The internal consistency reliability index of the instrument's items was determined to be 0.81 using the Cronbach alpha method. Data were collected when the researchers visited the study's schools. Frequency and percentage were used in the data's quantitative analysis. It was found that principals of secondary schools to a very low extent use ICT in the management of schools. This implies that if prompt action is not taken to encourage principals to use ICT for school management, the adoption of online school management will not be feasible. As a result, it was suggested that in-service training is needed to motivate secondary school principals to use ICT in the management of school.

Keywords: Assessment, ICT, School management, Secondary school principals

Introduction

The twenty-first-century classroom is no longer appropriate for the antiquated school management structure. Most industrialized countries are now compelled to use online or remote teaching and learning methods in addition to online school administration due to the implementation of COVID-19. Several countries and educational sectors have been forced to use online learning as a result of the COVID-19, according to (Adarkwah, 2021). Everyone should be prepared to use digital media in the twenty-first century for learning, teaching, gathering, producing, and sharing knowledge for educational objectives, according to the 2019 standards of the International Society for Technology in Education (Cobanoglu & Cobanoglu, 2021). Principals in the twenty-first century ought to expand their horizons in terms of online, remote, or hybrid (online and in-person) school administration experiences (Cobanoglu & Cobanoglu, 2021). Information and communication technology (ICT) is widely regarded as a reliable instrument for promoting global educational reform and advancement (Adarkwah,

2021). Rapid advancements in information and communication technology (ICT) have revolutionized teaching and learning, as well as school administration and management.

The use of ICT has changed how pedagogy and education are delivered during the past two years, providing students with a wide range of learning opportunities (Amin et al., 2021). Students utilize technology to increase their creativity, understanding, and tailored learning (Amin et al., 2021). Educational institutions are utilizing information and communication technology (ICTs) to support the teaching-learning process (Colmenero et al., 2021). Information and communication technology is essential for training teachers and providing high-quality instruction (Eufrasio, 2021). But parents' and teachers' acceptance of the idea is a prerequisite for the success of any attempts to achieve this goal (Colmenero et al., 2021). Elementary school instructors were more likely to utilize mobile devices in the classroom than teachers at high schools or general/vocational lyceums (Nikolopoulou et al., 2021). Given the current situation, one would question how much information and communication technology (ICT) is used by secondary school principals in Nigeria. One of the educational problems facing teacher education today is the rise in digital competency among educators as a result of the integration of information and communication technologies into the classroom. A crucial component is the teachers' proficiency and capacity to use information and communication technology (ICT) into the teaching-learning process (Daz- et al., 2016).

Assessing preschool teachers' ICT proficiency is essential if they want to employ online learning during and after the Covid-19 pandemic. Motivation, school leadership practices, and teacher and student ICT orientation for online learning all impact ICT integration in education (Adarkwah, 2021). Both a policy support infrastructure and a technical support infrastructure preceded the adoption of ICT in Zimbabwean universities (Rudhumbu, 2020). The findings indicate that virtual competency and motivating variables are the most important elements influencing the effectiveness of e-learning.

Being "digital natives" means having the necessary digital abilities, which prevents early childhood educators from using ICT in their academic or professional lives (Martn et al., 2019). ICT skills and abilities of teachers and students, as well as a lack of technological resources, must be considered for effective online teaching and learning (Turgut & Aslan, 2021). Gender, age, and academic standing have an impact on the development of digital abilities, but they do not influence the amount of ICT utilized (Cabezas-gonz & Casillas-mart, 2021). Age and gender have an impact on the teaching staff's level of pedagogical digital competency, but not the academic level at which they work (Guillén et al., 2020). During the previous shutdown, students' academic performance was mostly based on their own drive to learn and the potential enjoyment or fulfillment that came with participating in digital learning activities. This resulted from the teachers' deficiency in basic ICT competencies (Christopoulos & Sprangers, 2021). Digital literacy as a set of competencies lays the groundwork for educators to fully engage in the knowledge society and for students to demonstrate their talents (Zabolotska et al., 2021). There are a number of things to take into account while embracing online teaching and learning, such as ICT ownership and daily use, ICT frequency, professional ICT education or training, and ICT talents (Dong & Xu, 2021). Pre-service teachers have a mediocre level of digital literacy and struggle with material development (Galindo-Dominguez & Bezanilla, 2021).

Because of their mediocre levels of digital literacy, pre-service teachers find it difficult to generate content (Yi et al., 2021). Rather of incorporating ICT into the curriculum, Chinese

primary school teachers opted to limit the use of ICT in Early Childhood Education (International et al., 2019). The study found that while most Indonesian students were willing to learn online, a number of obstacles, including their lack of ICT proficiency, prevented them from doing so (Suci et al., 2021). It has been demonstrated that teachers struggle with all five of the digital dimensions, but especially with creating digital content (Garz, 2020). Instead of incorporating ICT into the curriculum, Chinese primary school teachers choose to restrict the use of ICT in Early Childhood Education (Asio et al., 2020). Based on self-reported use, competency, and the requirement for professional training in digitalization in teaching, it was demonstrated that teacher educators do not use digital resources primarily for pedagogical aims (Amhag et al., 2019).

The aforementioned literature evaluation has demonstrated that principals' ICT usage levels influence the uptake of online teaching and learning. According to the literature, principals find it challenging to properly employ the online reaching option due to a number of variables. In Ebonyi State, no research has been done on the extent to which ICT is used by secondary school managers for management purposes. This inquiry was prompted by this gap in the literature.

Methods

This study used a descriptive survey research design, which was informed by the scientific research paradigm and the quantitative research technique. Similar recent studies by Okeke, Okeke and Ugwuanyi (2020), Ugwuanyi et al. (2020), Okenyi et al. (2021), Okeke, Ugwuanyi and Mufutau (2020), Eze et al. (2020), Ezema et al. (2021), and Ezeaku et al. (2021) have all employed this design. The study included 48 secondary school principals who were selected from among all the government secondary schools in Enugu State, Nigeria. The secondary school principals in the research area comprised the population from which this sample was randomly selected.

Out of all the secondary schools in the study area, 44 schools were randomly selected for the first phase of the project. A sample of 132 secondary school principals from the sampled schools were then chosen at random using a simple random selection procedure. This method of selection was employed to give each principal who took part in the study an equal chance of getting chosen. The data was gathered using a questionnaire that the researchers designed to assess how principals use ICT in the classroom. The questionnaire was divided into two sections: Section A and Section B.

The researchers obtained demographic information from the participants in Section A, and they discovered how much secondary school principals used ICT for school management by asking them ten questions in Section B. The survey items were structured on a four-point Likert scale: strongly disagree, disagree, agree, and strongly agree. Three experts from the University of Nigeria, Nsukka's Faculty of Education validated the instrument/measure: one expert in educational research and two experts in early childhood care and education. Cross-referencing the instrument's items with the study's objectives fell to the specialists. The instrument was created based on recommendations from the validators before trial testing.

After that, 20 secondary school principals who were not involved in the study were given the instrument as a trial run. The internal consistency dependability of the instrument's items was assessed using a Cronbach alpha reliability estimate applied to the data. The results of the inquiry were used to assign a dependability index of 0.81. The research ethics committee

of the University of Nigeria gave the project its blessing. Informed permission forms were signed by participants prior to data collection. Access to the research facilities was granted with fast authorization letters from the heads of each participating school. Visits to each of the participating schools in the study were used to gather data. As a result, it was agreed to administer the device immediately. Copies of the instrument were distributed to participants at their individual schools, and they were given 20 minutes to respond before being picked up. A quantitative analysis of the data was done using percentage and frequency.

Results

Table 1: Percentage analysis of the extent of principals' utilization of ICT for school management

S/No	Item Statement	VHE f (%)	HE f(%)	LE f(%)	VLE f(%)	Remark
1	Booting a computer for management purposes	10((7.60)	15(11.40)	28(21.20)	79(59.80)	VLE
2	Shutting the computer following a meeting with school managers	15(11.40)	10(7.60)	38(28.80)	69(52.30)	VLE
3	Conducting an online management meeting via a computer	0(0.00)	10(97.60)	29(22.00)	93(70.5)	VLE
4	Obtaining internet support for school management	0(0.00)	12(9.10)	25(18.90)	95(72.00)	VLE
5	Sending out agendas for school meetings via mail	0(0.00)	5(3.80)	22(16.70)	105(79.50)	VLE
6	Notifying parents for PTA meeting via email.	0(0.00)	6(4.50)	10(7.60)	116(87.90)	VLE
7	Providing up-to-date internet information about school management	0(0.00)	0(0.00)	27(20.50)	105(79.50)	VLE
8	Engaging in virtual dialogue with fellow school principals	0(0.00)	5(3.80)	25(18.90)	102(77.30)	VLE
9	Speaking to teachers using video conference	5(3.80)	0(0.00)	38(28.8)	89(67.40)	VLE
10	Submitting an online inquiry to the government regarding school management	6(4.50)	11(8.30)	31(23.5)	84(63.60)	VLE

Table 1 shows that a higher proportion of the principals to a very low extent utilize ICT for school management. This shows that school principals to a very low extent can Boot a

computer for management purposes, Shut down the computer following a meeting with school managers, Conduct an online management meeting via a computer, Obtain internet support for school management, Send out agendas for school meetings via mail, Notify parents for PTA meeting via email, Provide up-to-date internet information about school management, Engage in virtual dialogue with fellow school principals, Speak to teachers using video conference, Submit an online inquiry to the government regarding school management. Thus, Figure 1 shows that 63.6% of the school principals to a very low extent can use ICT for school administration.

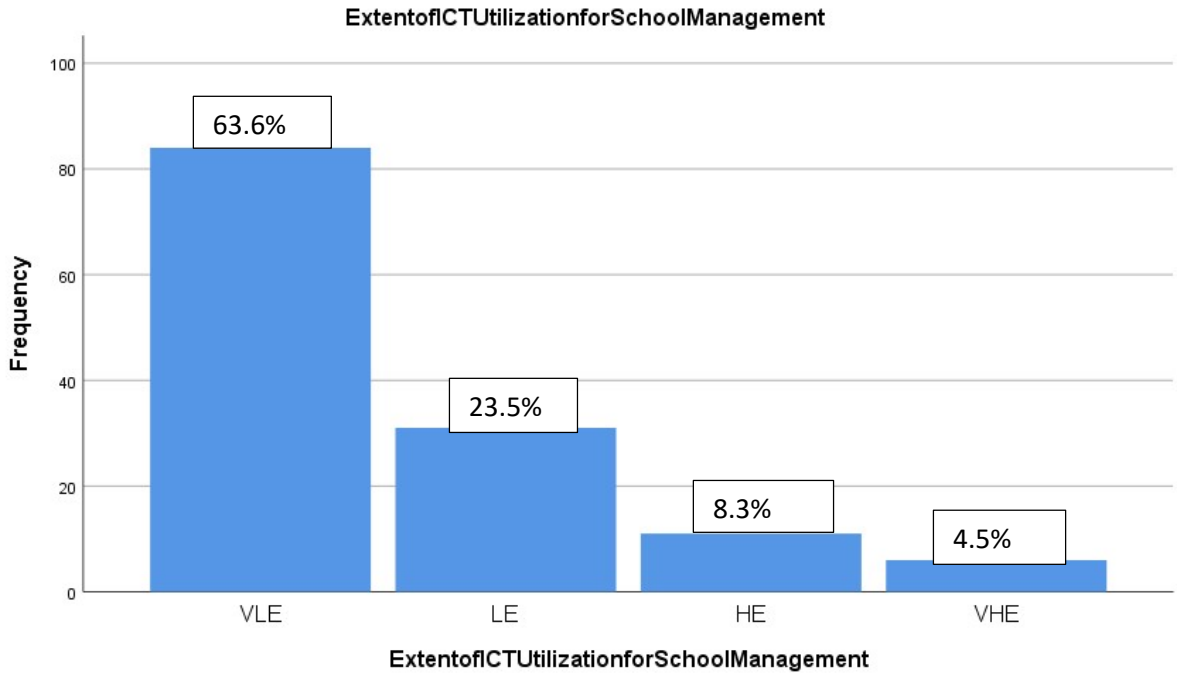

Figure 1: *Bar chart representation of the extent of principals' utilization of ICT in the management of schools*

Discussion

This study sought to ascertain the frequency with which secondary school principals used information and communication technology (ICT) for school management. The results indicated that a relatively small percentage of secondary school principals use ICT for THE management of schools. The reasons for the poor ICT use by secondary school principals may be multifaceted, including the lack of in-service training on computer use in the classroom, or the inadequate ICT infrastructure in schools. These findings are supported by the most recent empirical studies. Students' academic achievement during the prior lockout, which was brought on by teachers' lack of basic ICT skills, was primarily determined by their own desire to learn and the potential pleasure or enjoyment that came with engaging in digital learning activities (Christopoulos & Sprangers, 2021). Chinese primary school teachers wish to limit the function and extent of ICT use in Early Childhood Education rather than incorporate it into the curriculum (Dong & Mertala, 2019). Only those students who were thought to be capable of studying online demonstrated a connection between achievement and online learning (Yi, Lau

et al., 2021). Pre-service teachers have a moderate level of digital literacy and struggle to develop content (Galindo-domínguez & Bezanilla, 2021).

Most Indonesian students wanted to study online, but they were unable to do so for a variety of reasons, including a lack of ICT proficiency (Suci et al., 2021). Lack of funds, expertise, resources, and equipment for distance learning hinders online teaching and learning (Cabezas-González et al., 2021). Teacher educators were found to not use digital resources primarily for pedagogical goals, based on self-reported use, competency, and the necessity for professional training in digitalization in teaching (Amhag et al., 2019). It was discovered that instructors' practices were lacking in all five digital dimensions, particularly when it came to creating digital content (Garzon Artacho et al., 2021).

Conclusion and Recommendations

The results of the study persuaded the researchers that although secondary school principals utilize ICT sparingly, this does not ensure that an online teaching strategy will be successfully implemented. Preschool teachers' inadequate use of ICT will severely hinder the implementation of online teaching modes in the post-Covid-19 era. Subsequently, the researchers recommended that the Local Government Education Authority 1) set up sufficient protocols for educating in-service teachers on ICT use in teaching and learning, and 2) provide the necessary ICT infrastructure for online learning environments.

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