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Usability of ICT for Class Size Remediation and Learning Among Secondary Schools

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ABSTRACT

The use of Information and Communication Technology (ICT) for learning and reducing class size in secondary schools in Lagos was examined in this study. Secondary data were utilized in the paper study, and those secondary data came from both print and internet sources. The research identified several issues that prevent the effective administration of ICT in Nigerian secondary schools, including remediation of ICT in secondary such schools as adequate ICT facilities in secondary schools, unstable power supply, high costs of ICT facilities, poor implementation of Government policies on ICT, poor network service and coverage, and low ICT literacy. This research recommends that the government enhance funds for ICT education, provide professional development for teachers and school administrators, provide enough ICT facilities and implement all ICT educational legislation.

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1. INTRODUCTION

Secondary education is the education that learners receive following primary education but before higher education, according to the national policy on education. The broad goals of Secondary Education according to the National Policy on Education include the preparation of the individual for useful living within society and Higher education (Evoh, 2007). In specific terms, the objectives are regardless of their gender, social standing, religion, or racial heritage, to give all primary school graduates the chance to pursue further education. Information and Communication Technology (ICT) application is a necessity in all human endeavors, especially in the field of education, so educational systems around the world have been fully incorporated with ICT. ICTs have undoubtedly had an impact on teaching, learning, and research in the field of education (Yusuf, 2005). The use of computers and web technology in the classroom is a crucial concern for teachers all around the world (Abdul & Obakhume, 2012). According to Deebom and Zite (2016), the use of ICT in senior secondary school teaching and learning can help lessen the workload of the instructors by using it for lesson planning, instruction delivery, and teaching and learning evaluation.

Secondary school instructors will evolve into learning facilitators, collaborators, coaches, mentors, knowledge navigators, and co-learners rather than simply dispensing information (Deebom & Zite, 2016). The ICT tool used in Nigerian schools was to be incorporated into the educational reform policies. The application of ICT tools in education is essential for three main goals, as stated in the Nigerian National Policy for ICT; To equip students with ICT abilities, Integrate ICT into the core of education and training to prepare students for global competition, and create institutions that use ICT in many different ways as centers of excellence. To properly address the difficulties of the 21st century, where global life is being digitalized, the statement notably underlined the need for revamping the educational system at all levels. Basic education is necessary for someone to be able to acquire and use knowledge in a world that is changing quickly. ICT must be a part of this ability in the global village. The ability to access and use information is now a requirement for growth, according to the Economic Commission for Africa. Unfortunately, ICT application and use are still limited in many developing countries, notably in Africa (Aduwa & Iyamu, 2005).

The Federal Government of Nigeria ordered a Mobile Internet Unit (MIU) through the Nigerian National Information Technology Development Agency to provide secondary schools in Nigeria with suitable ICT services (NITDA) (Bolaji & Adeoye, 2022). The MIU is a vehicle that has been modified to function as both a mobile station and a digital hub. It consists of ten workstation PCs that are arranged and connected to the internet. Printers, scanners, and other multimedia conveniences are also included with the MIU. VSAT, a 1.2-meter satellite dish mounted to the transport van's roof and equipped with a small power source to ensure a regular supply of electricity, is used to provide internet connectivity. The MIU provides web services to several institutions (Abdul & Obakhume, 2012). The purpose of this essay is to analyze the difficulties in managing ICT facilities in Nigerian secondary schools and offer potential solutions.

2. METHOD

This study is a literature review. Data was collected from articles on the internet and international journals, which were then compiled and rediscussed.

3. RESULTS AND DISCUSSION

3.1. Concept of School's Administration

The capacity to deploy both people and material resources in support of organizational objectives is known as the administration. The administration is the methodical and careful arrangement and use of human and material resources, circumstances, and opportunities for the accomplishment of specific goals. Lists the objectives of educational administration as:

- (i) To provide proper education to students
- (ii) To ensure adequate utilization of all resources
- (iii) To ensure professional ethics and professional development among teachers
- (iv) To plan educational initiatives that would provide students with outstanding preparation for democratic citizenship and introduce them to the art of democratic living.
- (v) To successfully plan extracurricular activities for the development of student abilities and the productivity of educational teachers.

The fundamental duties of educational administration include developing policies and plans for programs, hiring and training employees, developing curricula and instruction plans, and managing personnel and students. Information and communication technology administration is the practice of utilizing ICT resources effectively and efficiently to realize educational goals and objectives. The administration of information and communication technology works to make sure that educational goals are achieved by making the most use of available infrastructure (Rachmawati, 2019).

3.2. Concept of Information Communication Technology

Deebom and Zite (2016) saying that ICT is a broad term that has to do with improving the productivity, the spread, and the efficiency of set program activities geared toward the achievement of clearly defined goals. Information technology, or IT, and ICT are frequently used interchangeably. The essential distinction is that information technology (IT) refers to an entire business that uses computers, networking, software, and frequent equipment to manage information, whereas ICT covers all types of communication, including telephone, mobile phones, etc. Al-Harthy (2017) describe ICT as electronic media, gadgets, and applications utilized in the classroom to support efficient teaching and learning procedures. Teaching and learning materials include all such as ICT-provided content, media, and tools that engage all the senses, emotions, and cognitive processes.

3.3. Information and Communication Technology Use in Secondary Schools in Nigeria

The availability of ICT or computer-assisted instruction (CAI) shows the potential to provide concrete and practical experiences that make managing information less difficult, quicker, and more efficient. This is because it brings outside experiences into the classroom, giving students the chance to go beyond what their teachers are capable of. In Nigerian secondary schools, there is slight use of information and communication technologies. Due to numerous circumstances and difficulties, many secondary schools in Nigeria have not yet been completely integrated into the ICT world. It notes that secondary school teachers in Nigeria have not been using ICT to deliver their instruction constantly. ICT usage among secondary school teachers in Nigeria is below average. Mkpanang (2010) bemoaned the fact that Enugu State's post-primary institutions only have a few PCs that are used for administrative tasks and not for learning or teaching assistance. Inadequate ICT infrastructure, inconsistent power supplies, a lack of computer proficiency, and the exorbitant cost of ICT facilities are just a few of the reasons why Nigerian instructors don't use ICT as much as they should. The number of PCs available in schools is not enough for the number of students (Abdul & Obakhume, 2012).

The use of ICT by school administrators in secondary schools in Nigeria was also found to be poor. As crucial as ICT is to supporting efficient school administration, many school administrators do not use these resources to support their administrative responsibilities. There are several reasons why school administrators in Nigeria don't use ICT effectively, including a lack of computer literacy, inadequate ICT infrastructure, subpar internet connectivity and services, and expensive network services. Additionally, research has shown that most Nigerian post-primary institutions have low ICT awareness levels (Abdul & Obakhume, 2012).

According to Deebom and Zite (2016), public senior secondary schools in Rivers State's Ogoni Area used information and communication technology (ICT) to teach and learn. For the study, a sample of 300 learners and 100 teachers was used to discover that the school did not make use of ICT resources. Abdul and Obakhume (2012) performed research to examine how students, teachers, and administrators perceived the use of ICT in teaching and learning in Nigerian public secondary schools, particularly those in the Northeastern States. The outcome demonstrates that there is relatively little utilization of ICT resources, which is linked to inadequate policy execution, a lack of fundamental social amenities, and insecurity.

3.4. Benefits of Information Communication Technology to the Nigerian Secondary Schools

The need for ICT literacy is constantly increasing as workers realize that staying current with new technology is the best way to secure their jobs as it gives them the greatest amount of job security. Applications of ICT in education have been beneficial in boosting the educational system in Nigerian public schools and providing pupils with a better education. For a country to develop effectively, human capital must be improved (Abdul & Obakhume, 2012). Deebom and Zite (2016) stated that a good teacher can use a variety of teaching and learning technologies (like a computer, the internet, and multimedia resources) that are increasingly being used in support of teaching and learning process in presenting new challenges and opportunities for teachers and students to transform information into relevant knowledge that a student can understand, retain, and pass on to others under a favorable school environment. Deebom and Zite (2016) cited (Schiller & Tillett, 2004) stated that the ICT expands possibility by giving teachers the ability to do what they are capable of, by giving students access to content and inquiries that would not be possible without the use of ICT, in extending what students are capable of producing and as a result of their investigations, and by giving teachers the chance to once again be learners.

According to Deebom and Zite (2016), proper and effective use of information and communication technology tools in Lagos State secondary schools will undoubtedly increase teachers' motivation and engagement, make it easier for students to acquire the fundamental knowledge and skills they need to succeed, and improve teachers' training. ICT has been increasingly important to schools of all levels and the overall education system during the past few years.

3.5. Factors Restricting the Use of ICT in Nigerian Secondary Schools

Factors restricting the use of ICT in Nigerian secondary schools:

- (i) Inadequate Budgeting for ICT Education: Nigeria has a small budgetary allocation for ICT education. The provision of ICT infrastructure in Nigerian schools is being hampered by inadequacies. One of the reasons for the inadequate use of ICT in the educational system is the lack of financing for ICT education.
- (ii) Inadequate ICT infrastructure in secondary schools: School administrators lack the resources to implement adequate ICT infrastructure for the needs of their teachers and

pupils. Scanners, computers, and photocopying machines are easily accessible and are used frequently in both the classroom and the office, according to a study by [Abdul & Obakhume \(2012\)](#) on the students' general opinions about the availability and usage of ICT facilities in their schools.

- (iii) **Unstable Power Supply:** Another issue hindering the proper management of ICT facilities in Nigerian secondary schools is the inconsistent power supply. Because of the inadequate power supply, many schools do not employ ICT equipment.
- (iv) **High Cost of ICT facilities:** The high cost of ICT facilities is another barrier hindering successful ICT use in Nigerian secondary schools. ICT resources are quite expensive to use for both teaching and self-directed study.
- (v) **Poor Implementation of Government policies on ICT:** Nigerians are lucky to have a wide range of effective educational policies in every field of education; the problem is with their actual execution. The Nigerian government faces difficulties in fully implementing educational programs that have been created and intended to progress education in the country.
- (vi) **Poor Network service and Coverage:** Slow network speeds, weak Wi-Fi signals, and damaged cabling are just some of the most common network connection issues that ICT departments need to troubleshoot.
- (vii) **Poor ICT Literacy:** Open up large numbers of computer labs that will help to lift the ICT literacy levels nationwide, just as in the developed nations, and mastery of functional skills.

3.6. Achieving Information and Communication Technology Usability in Nigeria 's Secondary Schools

The government should increase funding for ICT education, offer professional development opportunities for educators, provide adequate ICT facilities, ensure a steady supply of power, and implement all of the ICT educational policies, which are further explained as follows:

- (i) **Increase the Funding of ICT Education:** To enable significant improvement in the fields of education, the government should expand financing for ICT education in Nigeria.
- (ii) **Training:** The government should set up training and retraining programs for teachers and school administrators in secondary schools to ensure efficient administration of ICT resources in Nigerian secondary schools.
- (iii) **The Nigerian government should launch a comprehensive statewide computer literacy training program, especially for teachers and students at all levels.**
- (iv) **Provision of ICT facilities:** The government and its agencies should ensure that there are enough ICT resources available for the secondary school courses being taught and learned.
- (v) **Subsidy the Cost of ICT facilities:** The government should subsidize the cost of ICT products.
- (vi) **Implement ICT Policies:** The government should put into practice all ICT policies for secondary schools and ensure that ICT facilities are properly supervised.

4. CONCLUSION

The difficulties facing the ICT facilities in Nigerian secondary schools were covered in this article. The challenges preventing the effective administration of ICT in Nigerian secondary schools were listed in the article as insufficient funding for ICT education, inadequate ICT facilities in secondary schools, unstable power supply, expensive ICT facilities, poor

implementation of government policies on ICT, poor network service and coverage, and poor ICT literacy. The article listed several obstacles preventing the effective administration of ICT in Nigerian secondary schools, including inadequate funding for ICT education, inadequate ICT facilities in secondary schools, unstable power supplies, high costs for ICT facilities, poor implementation of government policies on ICT, poor network service and coverage, and poor ICT literacy.

5. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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