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Usability and Utilization of ICT Among Educational Administrators in Secondary Students in Public School

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ABSTRACTS

This study examines the usability and utilization of ICT difficulty among educational administrators in secondary students in public schools, Kwara state, Nigeria. Despite the roles of ICT can play in education, secondary schools in Nigeria are yet to comprehensively adapt them for teaching and learning. Efforts geared towards the integration of ICTs into the secondary school system have not had much impact. The paper identified inadequate funding of ICT education, inadequate ICT facilities in secondary schools, unstable power supply, High Cost of ICT facilities, poor implementation of Government policies on ICT, poor network service and coverage, and poor ICT literacy as the challenges preventing effective administration of ICT in the public secondary schools in Kwara State. The paper thereby suggests the following: government should increase the funding of ICT education, provide capacity development for teachers and school administrators, provide adequate ICT facilities, ensure a constant supply of power and implement all the ICT educational policies. Recommendations were then made to the government.

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1. INTRODUCTION

Adomi and Kpangban (2010) perceived that there are developments in the Nigerian education sector that indicate some level of information communication technology (ICT) application in secondary schools in Nigeria. They draw the introduction of computer education in secondary schools to 1988 when the Nigerian government endorsed a policy on computer education. The Federal Government of Nigeria in the National Policy on education (2004) identifies the noticeable role of ICTs in the modern world and has unified ICTs into education in Nigeria. To detain this goal, the document states that government will offer basic infrastructure and training at the primary school. At the junior secondary school, computer education is made a pre-vocational optional and a vocational optional at the senior secondary school. The Federal Ministry of Education propelled an ICT-driven project known as School-Net, which was projected to afford all schools in Nigeria with computers and communication techniques. According to Abdul-Salaam (2007), the School-Net program conveyed by MTN was fully operational computer laboratories with 21 personal computers, VSAT interconnectivity, and hand-on training in 24 secondary schools across Kaduna, Lagos, Enugu, Kwara, Rivers, and the Federal Capital Territory Abuja. In all, over 49,524 students and 2,412 teachers were trained on the usefulness of ICT facilities.

ICT as tools within the school setting include its usage for school administration and management (Singh & Muniandi, 2012), teaching and learning of ICT-related skills for enhancing the presentation of classroom work (Kavitha & Anitha, 2018), teaching/learning interesting tasks, teaching/learning intellectual, thinking and problem-solving skills, stimulating creativity and resourcefulness, the study by teachers and students and as communication tools by teachers and students. ICT application is unavoidable in all human endeavors, especially in the area of education. Yusuf (2005) perceived that the area of education has been exaggerated by ICTs, which require unquestionably affected teaching, learning, and study. ICT is of such importance to the future improvement and profitable well-being of a country that ventures into the equipment, teacher education, and support services necessary for the effective delivery of an ICT-based curriculum should rank high in any set of government priorities. To incorporate and usage of ICT in the education system, teachers need to adapt and mend their existing teaching and learning practices, according to the newest developments in the education system, from a conventional style and teacher subjugated way of teaching, to a more interactive method and learner-centered with the assistance of ICT (Buabeng-Andoh, 2012). Deebom and Zite (2016) further strengthened that secondary school teachers will become learning facilitators, collaborators, coaches, mentors, knowledge navigators, and co-learners and not only dispensers of knowledge.

The educational development policies were aimed at incorporating the practice of ICT tools in the Nigerian school system. To incorporate the usage of ICT in the education system, teachers need to adapt and develop their existing teaching and learning practices, according to the newest styles in the education system, from a conventional style and teacher-dominated way of teaching, to a more interactive method and learner-centered with the aid of ICT (Buabeng-Andoh, 2012).

Operational definition of terms can be explained in the following:

- (i) Senior secondary school: This is the second phase of secondary education. It is broad with a core curriculum designed to broaden students' knowledge. This is the stage where students pick subjects of their choice and begin to prepare for their intended.
- (ii) ICT: Information Communication Technology is a common term referring to the technology's usage like; collecting, storing, editing, and communicating information in

various formats. ICT means the usage of computer-based technology and the Internet to make information and communication services available to a wide range of operators. ICT is the tool for storing and processing information in digital form while communication technology helps us to transfer and disseminate digital information.

- (iii) Usability: Usability is a term that refers to the ease of usage in which people can employ a particular tool or other human-made objects to achieve a particular goal. The concept of usability also includes learnability, retaining the ability, and handler satisfaction. Usability relates to the effectiveness, efficiency, and satisfaction with which operators achieve goals using computer systems. A usability is an advantageous tool in the adoption of a user-centered design within an organization.
- (iv) Utilization: Utilization is a methodical approach to the process and use of resources to aid in the learning process. Utilization refers to the actual use of an Information System. Utilization requires consideration of a range of activities; Matching learners with materials to be used, preparing learners for use of materials and activities, providing guidance when using materials and engaging in activities, Assessing the results, and Incorporating the procedure of new information.
- (v) Educational Administration: The basic roles of Educational Administration include policymaking and program planning, procurement and development of personnel, curriculum development, and program of instruction, as well as student personnel and administration. The administration is very germane to the realization of the school's objectives – indeed, the success of the school system depends largely on the administration of the school is handled.

2. METHODS

This study is a literature review. We collect, analyze, and summarize data gained from literature.

3. RESULTS AND DISCUSSION

3.1. Concept of Information Communication Technology

Information Communication Technology (ICT) administration refers to the use of ICT resources to realize educational objectives. ICT administration is the act of applying ICT resources effectively and efficiently to actualize the aims and objectives of educational institutions. The ICT administration aims to ensure that infrastructural facilities are optimally used to realize the set objectives of education. ICT as electronic media, devices, and the usefulness of application in the classroom to aid effective teaching and learning processes. These devices provided by ICT which appeal to all the senses and learning constitute teaching and learning materials.

3.2. Concept of Schools Administration

The administration is the ability to mobilize human and material resources toward the achievement of organizational goals. 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 organize educational programs for acquainting students with the art of democratic living and giving them excellent training in democratic citizenship
- (v) To mobilize the community

- (vi) To organize co-curricular activities effectively for developing the talents of students and work efficiency of educational teachers
- (vii) To prepare students for taking their places in various vocations and avenues of life
- (viii) To train the students in developing a scientific attitude and objective outlook among them toward all aspects and activities of life
- (ix) To ensure the qualitative improvement of education

3.3. Benefits of Information Communication Technology to the Public Secondary Schools

The demand for computer and ICT literacy is always raised as employees understood that keeping abreast of the new technology is the best option for securing their jobs as computer knowledge provides them with maximum job security. The teaching and learning of these skills is now the talk of the day among professionals. ICT applications in schools proved advantageous in empowering the learning system in Nigerian public schools and giving the students a better education. Also improving education is crucial to the formation of effective human capital in every nation.

3.4. Level of Application of ICT in the Public Secondary Schools

The utilization of ICT facilities in the Nigerian educational system is low, especially in public secondary schools. The poor availability level of ICT resources in public secondary schools also means accessibility will be stalled for instructional expansion purposes. Many secondary schools in Nigeria have not fully been incorporated into the ICT world due to many issues and challenges. A study has it that the utilization of information communication technology in Nigerian secondary schools among the students is low. The students still learn without making use of ICT facilities in their schools and their classes. It was observed that teachers teaching in public secondary schools have not been using ICT repetitively to deliver their teaching. The usability of ICT among public secondary school teachers is below average. There are many issues responsible for the low utilization of ICT by the teachers in Nigeria and these issues include low computer literacy, inadequate ICT infrastructural facilities, unstable power supply, and high cost of ICT amenities, it was also revealed that there is low ICT utilization among secondary school administrators in public secondary schools.

Many school administrators have not been using ICT facilities to aid their administrative activities as important as ICT is to aid effective school administration. Many reasons have been identified for the poor utilization of ICT by school administrators in Nigeria including poor computer knowledge, inadequate provision of ICT facilities, and poor internet connection. A study has likewise established a low level of ICT mindfulness in a majority of Nigerian post-primary institutions. [Deebom & Zite \(2016\)](#) did a study that investigated the effectiveness of Information Communication Technology (ICT) in teaching and learning in Public Senior Secondary Schools in Kwara State.

3.5. Government Exertion and Interference toward ICT Usage in Secondary Schools

There are many educational policies such as the ICT policy. The Nigerian government to develop the ICT in all the Nigerian educational systems added ICT policy to the National Education policies for education. The policy states that the federal government should incorporate ICT into the educational curriculum in Nigerian schools. [Ajisafe \(2014\)](#) submitted that the policy manuscript states that the government will interfere in both training and equipment from the basics to upper secondary levels as both unavoidable pre-vocational to the elective course. In an attempt to provide adequate ICT facilities to secondary schools in Nigeria, the Federal Government ordered a Mobile Internet Unit (MIU) through the Nigerian

National Information Technology Development Agency (NITDA). The MIU is a customized vehicle that has been changed into a portable mobile station and digital web hub. It comprises ten workstation computers, all organized and associated with the web. The MIU is additionally outfitted with printers, scanners, and some other multimedia amenities. Internet service is given using VSAT a 1.2 m satellite bowl fixed at the roof of the transport van which was furnished with a little power source to guarantee a customary supply of electric power. The MIU distributes the web service across different institutions.

3.6. Factors Responsible for Low Application of ICT in Public Secondary Schools

Factors responsible for the low Application of ICT in Nigerian secondary schools include the following:

- (i) **Inadequate Funding for ICT Education:** The budgetary allocation for ICT education is low in Nigeria. The inadequacy is affecting the provision of ICT infrastructural facilities in Nigerian schools. The entire education is poor and cannot achieve any meaningful projects. The poor funding of ICT education is one of the factors responsible for the poor utilization of ICT in the educational system.
- (ii) **Inadequate ICT facilities in Secondary schools:** School administrators do not have adequate ICT facilities to deploy for the use of the teachers and students in their schools. On the students' general opinions on the availability and usage of ICT facilities in their schools showed that scanners, computers, and photocopying machines are readily available and are being used considerably both in classes and offices and at the same time students are allowed access to the computer rooms or labs. On the other hand, the usage of digital devices, fax machines, and CBT during exams is very rare with the highest mean value of 2.03 and the SD of 0.78. The usage of smart boards and internet connection is reported to be absent completely in virtually all of the public secondary schools with the highest mean value of 1.45 and the SD of 0.60 respectively. In the consequence of his study that computer resources were not promptly accessible by the students from the institutions covered by his research. In addition, the study demonstrates that the vast majority of Nigerian public secondary schools are not associated with the web. Those with PCs don't have the important instructive programming required by their students in general cases. Although efforts have been made to ensure the accessibility and practical usage of ICT facilities in public secondary schools, still, the level of compliance is low as most schools both private and public do not have ICT training courses.
- (iii) **Unstable Power Supply:** The unstable power supply is another factor preventing the effective administration of ICT facilities in Nigerian public secondary schools. Many schools do not use ICT facilities today because of the poor power supply. The viable usage of ICT in teaching relies heavily upon the accessibility of these gadgets to the instructors and the teacher's competencies in using them (Ajayi, 2008).
- (iv) **High Cost of ICT facilities:** Another factor preventing the effective usage of ICT in Nigerian public secondary schools is the high cost of ICT facilities. ICT facilities for delivering lessons and for personal learning are very expensive. Teachers and school administrators are sceptical about the challenges facing the incorporation of ICTs in the teaching-learning process.
- (v) **Poor Implementation of Government policies on ICT:** Nigeria is blessed with many sound educational policies in all aspects of education but the problem is the implementation. The Nigerian government finds it difficult to fully implement educational policies designed and formulated for the development of education in the

country. The ICT policies in Nigerian public schools have not gone beyond the piloting stage (Adomi & Kpangban, 2010). ICT is now at the center of educational reform all over the world but not all countries are currently able to fully incorporate ICT into their education system. Amuchie *et al.* (2015) visited several government-owned institutions in his research domain and indeed some schools in other areas on teaching practice supervision his encounters show that there is no significant sign that this proud government policy has been implemented even in a state that claims education is their biggest industry.

- (vi) **Poor Network service and Coverage:** In Nigeria, there are problems with internet service provision. The administration of ICT infrastructural facilities in a secondary school in Nigeria is also been frustrated due to poor network services. Ajisafe (2014) who did a study in colleges of education in Nigeria identified some constraints to the effective utilization of ICT in classroom instructional delivery and the constraints include the shortage of qualified staff, disruption and network failure, and high cost of acquisition of ICT facilities.
- (vii) **Poor ICT Literacy:** The administration of ICT resources in the Nigerian secondary is poor because some teachers and school administrators are not computer literate. The utilization of these resources requires different techniques that incorporate a systematic feedback framework, PC-based operation/system, video and audio conferencing, LAN, www, and Computer-Assisted Coaching (CAI). Teachers demonstrate a low level of competence with a maximum Mean value of 1.78 in using projectors, digital video/audio devices, Microsoft PowerPoint, the usage of tape recorders for oral teaching, and using smart/whiteboard.

3.7. Propose Possible Solutions for the Challenges Facing ICT Utilization in Public Secondary Schools in Kwara State

The paper thereby suggests that the government should increase the funding of ICT education, provide capacity development for teachers and school administrators, provide adequate ICT facilities with an adequate training program, ensure a constant supply of power and implement all the ICT educational policies, elaborated as follows: Increase the Funding of ICT Education: The government should increase the funding of ICT education in-order to enable a substantial development in the areas of education.

- (i) **Increase the Funding of ICT Education:** The government should increase the funding of ICT education to enable substantial development in the areas of education.
- (ii) **Training:** To ensure effective administration of ICT resources in Nigerian secondary schools, the government should organize training and retraining programs for teachers and school administrators in secondary schools. The government of Nigeria should embark on a massive computer literacy training program nationwide, particularly for teachers and learners at all levels. This should be accomplished through in-service training for teachers, workshops, seminars, and conferences.
- (iii) **Provision of ICT facilities:** The objective of national policy on education on ICT will be realized when the government provides adequate ICT infrastructural facilities. Deebom & Zite (2016) recommended that the government and its agencies should ensure that adequate ICT resources are put in place for the teaching and learning of secondary school subjects.
- (iv) **Subsidy of the Cost of ICT facilities:** The government should subsidize the cost of ICT facilities for teachers and school administrators to enable them to acquire their own for personal use. **Constant Supply of Power:** The government should ensure that secondary

schools have access to an adequate supply of power to enhance the administration of ICT resources.

- (v) Implement ICT Policies: The government should implement all the ICT policies for secondary schools and ensure effective supervision of ICT facilities.

4. CONCLUSION

Technology allows greater communication, resource sharing, and improved practice so that the vision is owned by all and dedicated to helping every individual in the system improve learning for students. It is a time of great possibility and progress for the usage of technology to support learning. The poor implementation of ICT education policy in Nigerian public secondary schools is responsible for the low utilization of ICT in the school system. It is ought to be emphasized that the viable utilization of these different strategies for ICT in instructing and learning depends to a great extent on the accessibility of these resources and the skilled instructors. To solve the identified challenges, if the proposed recommendation can be implemented into the public secondary school's policy by executes, administrators and teachers; the objectives will be realized.

Recommendations can be found in the following:

- (i) Developing discernment by facilitating the acquisition of basic skills in learner engagement.
- (ii) The government of Nigeria should embark on a massive computer literacy training program nationwide, particularly for the teachers and learners at all levels of education.
- (iii) The cost of ICT tools like laptops should be made affordable to teachers and students
- (iv) The renewal of learning methods and active collaboration of students and the simultaneous acquisition of technological knowledge.
- (v) To promote the shift to a learner-centered environment.
- (vi) Training the teachers on the incorporation of ICT in teaching.

5. AUTHORS' NOTE

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

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