Inadequacy of Information Communication Technology(S) in Nigerian Public Primary Schools

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Abstract:
Primary school Education is a foundation education and it is considered as the pillar of education that enables the social, economic and technological advancement of any given nation. It greatly contributes to building a modern society to realize a goal despite the challenges identified in this paper. It also empowers the national economy, improving the standard of living of the citizens of a country. In Nigeria and all her environs, the basic building blocks necessary for the overall development of the educational systems is deficient. ICT stands to address these challenges and provide an enabling environment that is suitable for effective and qualitative educational systems (Katuka, Bulus, Abali & Ngubdo, 2016). It is unfortunate that much public primary schools in Nigeria are faced with the problems of inadequate information communication technology (s). This paper discussed the causes of inadequate informational communication technology (s) in the public primary schools in Nigeria. The researchers employed the used of secondary data and primary data to provide empirical supports for the various points raised in the paper. The secondary data used for this paper were sourced from both print and online publication.
The paper concludes inadequate funding, poor planning, increment in population, corruption, poor maintenance culture, poor implementation of ICT policies and lack of data. To address these problems, the paper suggested the following: That the government should increase the funding of public primary school education, implement of ICT policies, track all ICT facilities, fight all forms of corruption, generate data timely and employ more planners to aid planning of public primary school education.

**Introduction**

Primary Education is the education given to children aged 6-12 years (NPE, 2013). Primary school education is an organized education designed for children aged from 6-12. Primary school education is the education that prepares the children for post-primary school education. Primary school education that qualifies the learners for junior secondary school education. The objective of primary school education in Nigeria according to National policy on education (2013) are to: inculcate permanent literacy, numeracy, and the ability to communicate effectively; lay a sound basis for scientific, critical, and reflective thinking; promote patriotism, fairness, understanding, and national unity; instill social, moral norms and values in the child; develop in the child the ability to adapt to the changing environment; and provide opportunities for the child to develop life manipulative skills that will enable the child to function effectively in the society within the limits of the child’s capability (NPE, 2013).

The realization of primary school education hinges on effective planning, administration and the availability of right quantity and quality human and materials resources. The materials resources required for implementation of primary school education include financial resources, infrastructural resources, information communication technology resources etc. The information communication technology resources have be described as one of the essential resources needed to apply for the realization of the objective of education programme. The adoption of ICT in the educational administration and management is to help in the transformation of educational sector. ICT is applicable in all forms of education and it makes educational services delivery fast and easy. Primary school Education is considered as the bedrock that enables the national development of any given nation. Katuka, Bulus, Abali & Ngubdo, (2016), submits that it greatly contributes to building a modern society to realize a goal despite the challenges identified in this paper. It also empowers the national economy, improving the standard of living of the citizens of a country. In Nigeria and all her environs, the basic building blocks necessary for the overall development of the educational systems is deficient. ICT stands to address these challenges and provide an enabling environment that is suitable for effective and qualitative educational systems. Public primary in Nigeria are faced with the problems of shortage of information communication technology (s). As important as ICT to the development of education especially the primary school education, it is unfortunate that many public primary schools are faced with shortage of ICT facilities. Ogunode & Dahir (2021), discussed the challenges preventing public primary school students from using information communication and technology for learning in their respective schools and inadequate ICT facilities was identified as a major problem. Monsuru, (2016) did a research that analyzed the impact of Information and Communication Technology on primary education, Severally, challenges were identify which include, inadequate computers and laptops, inadequate training of teachers, lack of infrastructure to support the computer lab, inadequate investment in educational technology system, unemployment of skilled ICT teachers. Abdul and Musa (2018) also identified shortage of ICT facilities as factors hindering effective teaching of science education in public primary schools. This paper discusses the causes of shortage of Information and Communication Technology (ICT) in public primary schools in Nigeria.
Concept of Information Communication Technology

Deebom & Zite (2016), views Information and Communication Technology (ICT) as electronic media, devices, and applications used in the classroom to aid effective teaching and learning processes. All such materials, media, and devices provided by ICT which appeal to all the senses that constitute teaching and learning. The materials help teachers communicate effectively to the students so that learning is facilitated. Chrisita and Shoko (2010), defined information and communication technology (ICT) in a library context to mean the application of various technologies such as a computer, retro-graphics, audio-visuals, and other electronic devices for storage, reproduction, and dissemination of information in a library environment. The place of Information Communication Technology (ICT) in the school administration cannot be underestimated. Information Communication Technologies (ICTs) are essential for the realization of the educational institution’s objective and programme.

Katuka, Bulus, Abali & Ngubdo, (2016) cited Olakulehin, (2007) and Olokoba, Abdullahi, & Omosidi, (2014) in their research papers stressed that the introduction, integration and application of Information Technology (IT), computers and ICT infrastructure into the education system is categorized into two as follows; (1) ICT as an Educational teaching-aid and (2) ICT adoption in Education. ICT as an Educational teaching-aid deals with the gradual improvement of information and communication technology purposely as a teaching-aid that is widely used to teach all the school subjects being taught in schools. Alternatively, ICT adoption in Education has to do with the act of accepting with approval all the ICT infrastructure and technologies that are essential in the overall teaching and learning processes in schools.

Information and Communication Technologies have been integrated into all aspects of education. Information and Communication Technology is used for school administration. The school administrators use ICT for typing of documents, storing of students data, and documentation of students, students’ registration, allocation of students’ matric numbers and allocation of students to class. At the administrative level, Information and Communication Technology is use to teacher documentation, allocation to class and teacher administration Ogunode, 2020; Ogunode & Jegede (2021).

Informational Communication technology (s) is also use for teaching implementation. The teachers use Information Communication Technologies to present their lessons, prepares their lesson note and lesson plan. Teachers uses Informational communication technologies to type exam questions, test question and for e-exam, e-test and for e-marking. Teachers use Informational communication technologies to give e-assignment, e-teaching and for carrying out research. Informational communication technologies make teachers teaching fast, easy, convenient and comfortable. Katuka, Bulus, Abali & Ngubdo, (2016) cited (Olokoba,, Abdullahi, & Omosidi, (2014) who submits that there is an enough evidence to support the fact that, when applied appropriately under a conducive learning environment at the right time, ICT tends to be a very essential tool that supports teaching and learning in the public secondary schools across Adamawa State. Katuka, Bulus, Abali & Ngubdo (2016) observes that teleconferencing classrooms enable both students and teachers to communicate simultaneously without any hindrance. With the global application of ICT, learning and teaching in secondary schools no longer depend largely on printed materials. Many educational resources like e-books and video tutorials on almost all school subjects are abundant on the Internet. Recent Studies has shown that ICT helps in changing teaching environment into a student-centered one.
For students learning programme, Information and Communication Technologies is used by students to register their subjects online, submit assignments, write test and exams, and check their result. Informational communication technologies is used by students for carrying out research online and to type their project work group work and to improve personal study. Katuka, Bulus, Abali & Ngubdo (2016) cited Olokoba, Abdullahi, & Omosidi, 2014) who constitute new knowledge that students gain by accessing, and utilizing information that are related to their fields of study. As a result of learning through ICT, students are better equipped to perform very good in their studies by critically using the knowledge obtainable from the information and communication technology (ICT) (Katuka, Bulus, Abali & Ngubdo 2016; Abur & Torruam, 2013).

Generally, Ogunode & Nasir (2021) observes that the Information and Communication Technology is applied to all the human resource experts in the educational institutions such as students, teachers, non-teaching staff, and other service providers in the educational institution. Information and Communication Technologies is playing three major functions. ICT is applicable for student administration, staff administration, and school administration. Students function include: ICT is used for students’ admissions; computers use for student registration/enrolment; plan time table/class schedule for students; computers use for student attendance in classes; ICT is used to communicate student academic details to their parents/guardians through e-media; Usage of e-media for notifications regarding hostel accommodation; and use of e-media for notifications regarding transportation. For the students, ICT helps them carry out research, check their results, submit their assignments, save their notes and carry out some simple calculations. The students also use ICT to write tests, examinations and learn online.

Causes of Shortage of Information Communication Technologies in School.

There are many factors responsible for inadequate ICT facilities in the Nigerian public primary schools. Some of these factors include; inadequate funding, poor planning, increment in population, corruption, poor maintenances culture, poor implementation of ICT policies and lack of data.

Inadequate Funding

The poor funding of education especially ICT programme at the public primary schools is responsible for the shortage of informational communication technology (s) in the public primary schools in Nigeria. Ogunode & Nasir (2021) submits that inadequate funding of ICT programs in the Nigerian public primary schools is one of the major challenges to effective utilization and integration of ICT into the student learning programs. The allocation for the administration and management of public primary schools in Nigeria is inadequate. The education of Nigeria has not been encouraging by the various three tiers of government. The annual allocation for the administration of education is below the recommendation of UNESCO 26% for developing countries like Nigeria. Therefore, Nigeria is below the UNESCO recommendation education allocation for the past six years. Punch (2021) reported that in 2016, the first budget prepared by Buhari’s regime after taking over from former President Goodluck Jonathan in May 2015, the Federal Government allocated N369.6bn which amounted to 6.7 percent of the national budget of N6.06tn to education, while in 2017, N550.5bn; 7.38 percent of the N7.29tn budget was allocated to the sector. In 2018, N605.8bn, out of N9.12tn budget, representing 7.04 percent was allocated to education; in 2019, it was N 620.5bn, representing 7.05 percent of the N 8.92tn budget. In 2020, N671.07bn of N10.32tn which amounted to 6.7 percent was allocated to the sector; while in 2021, the sector got N742.5bn of the N13.6tn budget, representing 5.6 percent. There are many reasons for the poor funding of education in Nigeria and these reasons include
the insecurity problem, fall in revenue generation, lack of political will, and corruption. The poor funding of public primary schools is responsible for poor usage of ICT by students for learning in their respective schools.

egege & Abashi (2019) observes that funding is the key to the successful implementation of ICT programs in the educational institution. The budgetary allocation for the implementation of computer education is inadequate in the basic schools and this is affecting the utilization of ICT facilities in the basics schools. To run or operate a computer system needs a lot of financial resources. School administrators of basic schools are not provided with adequate funds to manage the various ICF infrastructural under their cares.

**Poor Planning**

Poor planning of primary school education and that of ICT programme at the public primary school is responsible for inadequate informational communication technology (s) in the public primary schools across the federation. The primary school education faces many planning problems. These problems include: inadequate planning fund, shortage of professional planners with specialization in primary school planning, shortage of data, corruption; political instability, poor capacity development of planners, policies instability, inadequate planning tools and political influence.

**Increment in Population**

Increment of the population and enrolment of students in the public primary school across the country is responsible for shortage informational communication technology (s) in the Nigerian public primary schools. Ogunode (2020), submitted that administrators of basic schools across the country are worried by the high enrolment of pupils into the basic schools causing inadequate infrastructural facilities and teaching of large classes due to inadequate space. The National policy on education reported from their major finding that 100% of the teachers agreed that there is high enrolment with inadequate infrastructure. According to the school records the teacher student ratio is 1:100, this shows that there is high population with inadequate classrooms. The student-teacher ratio of 10:1 is out of context in the school setting, indicating that this is unachievable.

**Corruption**

The high rate of corruption in the administration of public primary school is another factor responsible for the inadequate informational communication technology (s) in the public primary schools in Nigeria. Funds allocated for the development of ICT programme are mismanaged and looted by official within the ministries and agencies of government. The problem of corruption in the administration of universal basic education programme in Nigeria is a very big challenge facing the development of the programme. Ogunode, Ahmed, Gregory & Abubakar (2020), reports that institutional corruption is the problem preventing effective administration of education in Nigeria because funds allocated for provision of infrastructural facilities and services in the management and implementation of educational programme are been diverted by officers or political office holder within the institutions. The common forms of corrupting in the Nigerian educational institutions are fund diversion. Corruption on fund diversion has been reported in all the forms of education in Nigeria. Ogunode & Nasir (2021) observes that the high rate of corruption in the administration of public schools in Nigeria is another big problem responsible for poor utilization of ICT by students by learning in their schools. Funds released for such capital programs are sometimes diverted into private
pockets and mismanaged. Some ICT facilities installed in school are sometimes removed by the various school heads and converted to family use at their houses.

**Poor Maintenances Culture**

Poor maintenance culture of school administrators, teachers and students is another major problem responsible for inadequate informational communication technology (s) in the public primary schools across the country. ICT facilities need proper maintenance to last. It is unfortunate that many handlers of ICT facilities in the public primary schools do not handle the facilities very well. The attitude of academic and non-academic staff and students in handling the school ICT facilities is poor. Many students use the ICT facilities anyone. Many of these ICT facilities are damaged and spoilt by official using them because they are not properly handled. Ogunode, et al. (2021) opines that another factor responsible for the poor application of ICT for carrying out responsibilities by the non-academic staff in the Nigerian universities is the negative attitude of staff towards the ICT facilities in the various offices. The ICT facilities are misused and not properly taking care of by the staff resulting in quick damage or worn out. Some non-academic staff does not have good maintenance culture and this is affecting the effectiveness and efficiency of the ICT facilities.

**Poor Implementation of ICT Policies**

Another problem responsible for shortage of informational communication technology (s) in the public primary schools in Nigeria is poor implementation of ICT policies. Ogunode & Nasir (2021) acknowledged that in order to ensure full integration and usability of ICT in Nigerian public primary schools, the government designed ICT policies and programs for all educational institutions. This policy stated that government shall provide ICT infrastructural facilities in all educational institutions. The poor implementation of these ICT policies in the public primary schools across the country is another factor responsible for poor usage of ICT for learning by the Nigerian public primary schools students. A study by Eberendu (2014) reveal that the policy on ICT and computer Education have not been implemented completely in all public secondary schools in Nigeria till date because of some challenges that this paper aims at analyzing them for a good decision towards an optimized measure that will promote the total integration and application of ICT in the public and government owned secondary schools in Adamawa state and in Nigeria at large.

**Lack of Data**

Lack of current data on public primary schools education in Nigeria is another factor responsible for inadequate informational communication technology (s) in the public primary schools in Nigeria. Isaiah & Ogunode (2021) opines that inadequate data is another big problem facing the planning of primary school education in Nigeria. British (2014) observed that access to reliable and complete information on education in Nigeria has for a long time proved difficult. The development of a national database for education statistics has been slow and various data generating agencies (including the Federal Ministry of Education, Universal Basic Education Commission, National Population Commission and National Bureau of Statistics) often used different sample designs, methods of data collection, analysis and reporting, different modes of disaggregation and definitions of indicators. The absence of rudimentary data at school and local level in many areas is often viewed as a crisis, inhibiting the development of effective education planning, monitoring, programming and policy-making. Educational data for planning education in Nigeria are statistics of schools (number, size, location, available facilities and equipment), staff and teacher statistics (number, sex, age,
teaching subject, qualification, position or grade), pupil statistics (number, sex, age, level and grade), finance statistics (income, capital expenditure, recurrent expenditure), (Akinwumiju, 1995; Raji, 2016), stock statistics (enrolment by age and level), flow statistics (promotion rate, repetition rate, drop-out rate, transition rate, admission rate) has as its basic source, school records like the admission/withdrawal register, attendance register, log book, salary/financial records, inspection record, report book, duty roaster etc, although it is usually compiled by education authorities like the Ministry of Education for planning. The process of educational planning in Nigeria is also hampered by the critical problem of inadequate statistical data.

**Problems of Inadequacies in Provision of ICT in Schools.**

There are many effects of inadequate Information and Communication Technologies in the public primary schools in Nigeria. The following are the effects:

1. Inadequate informational communication technology (s) in the public primary schools will slow down the school administration in terms of lack of teaching and learning resources, which may have resulted from population explosion in our schools. Resources which include both human (teachers and supporting staff) and materials (which include fund, ICT infrastructure, accommodation, instructional materials, etc.) may not be available to cater for the pupils over-bloated population in schools.

2. Inadequate informational communication technology (s) in the public primary schools will slow down implementation of school curriculum. There is actually shortage of teachers compared to the increasing pupil’s population in schools. Some of the teachers in our schools lack the knowledge and skills of ICT related tools which can be used for teaching and learning in schools.

3. The qualities of teachers are adversely affected. The National Policy on Education (2004) pointed out that no Educational System may rise above the quality of its teachers. Most teachers are not current and dynamic in-service training. (i.e., most teachers are not computer literate and cannot cope with the trend of ICT advancement.

4. Inadequate informational communication technology (s) in the public primary schools will reduce the rate at which students used ICT to support their learning in the classrooms. Inadequacies of funds manifest itself in the lack of facilities and equipment in most schools. The overloaded numbers of subject in primary and JSS School Curriculum, though the subjects are taught alongside with those subjects that are planned towards encouraging skill acquisition and learning by doing. Even at that, the pupils are overloaded with subject’s tasks and activities.

The scenario will reduce the pupils from using ICT to support their learning in the classroom.

**Conclusion**

Primary school Education is a foundation education and it is considered as the pillar of education that enables the social, economic and technological advancement of any given nation. It greatly contributes to building a modern society to realize a goal despite the challenges identified in this paper. It also empowers the national economy, improving the standard of living of the citizens of a country. In Nigeria and all her environs, the basic building blocks necessary for the overall development of the educational systems is deficient. ICT stands to address these challenges and provide an enabling environment that is suitable for effective and qualitative educational systems (Katuka, Bulus, Abali &
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Way Forward
1. To solve the problems of inadequate informational communication technology (s) in the public primary schools in Nigeria, this paper hereby recommends the following:
2. The government should increase the funding of public primary school education in Nigeria. This will help the development of ICT programme.
3. The government should implement all ICT policies in the public primary schools in Nigeria. This will help to provide conducive environment for the use of ICT for school administration
4. The government should track all ICT facilities supplied to public primary schools to prevent diversion of them for private use.
5. The government should fight all forms of corruption in the administration primary school education in the area of procurement.
6. The government should ensure current data on public primary schools are generated timely for easy planning of primary schools across the country.
7. More professional planners should be employed to aid effective planning of public primary schools in Nigeria.

References
Educational Research and Development Council.


