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## **Teaching and Learning with Technology: Effectiveness of usage of Information and Communication Technology (ICT) Facilities in Public Primary Schools in Ondo State, Nigeria**

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**Abstract:** *The use of Information and Communication Technology (ICT) in schools is a worldwide requirements meant to replace traditional teaching methods with a technology- based teaching and learning tools and facilities which will assist teachers in their day to day activities of teaching, keeping of records among others. This study aims to analyze the importance of ICT usage to support teaching and learning process in the classroom and also to ascertain the Effectiveness of ICT usage for pupils learning. It also find out the challenges of usage of ICT facilities in public primary Schools. The findings from the study revealed that computer and internet facilities affected the Educational system better than before. Usage of ICT facilities in public primary Schools will improve the teaching and learning process. The following challenges were revealed from the study: lack of technical support/ Skills, problem of electricity, network issues inadequate ICT facilities in schools among others. It was therefore recommended that the government should give utmost priority to training of teachers in ICT usage. ICT specialist should be recruited and posted to each public primary School to provide technical support to other members of staff, Electricity should be improved upon or solar panels to be provided to schools. Teachers and pupils should be provided with ICT facilities such as educational tablet to improve their ICT usage for teaching and learning.*

**KEYWORDS:** information and communication technology; teaching, learning, effectiveness, ICT facilities, primary education.

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### **INTRODUCTION**

Our way of life has undergone many changes as a result of advancement in technology especially the areas of computers. Computers are an integral part of our lifestyles today and are found at offices, homes, schools, colleges, hotels, shops, banks and so on. This advancement in technology

Publication of the European Centre for Research Training and Development-UK has made it easier for us in all ramifications, Teaching and Learning inclusive. In this 21st century, the word technology is an important issue in many fields of study including Education. This is as a result of the knowledge transfer that came up from technology in developed countries. The usage of technology this days has gone through innovations, changes and transformed our societies, it has also changed the way people think, live and performed their duties.

The inclusion of Information and Communication Technology (ICT) in schools refers to the use of computer based communication that incorporate into daily classroom instructional process ( Ghavifekr, Afshari& Amla salleh, 2012). In preparing students for the current digital era, teachers are observed to be the key player in usage of ICT in schools. This is because of the ability of ICT of ICT facilities in providing dynamic and proactive teaching- learning environment.

The inclusion of Information and Communication Technology usage in education means technology based teaching and learning process that closely relates to the utilization of learning technologies in schools, this seems to be important because pupils will learn better within a technology based environment as the pupils will perform a lot of hands on activities which makes learning participatory and permanent.

It is observed that almost all subjects in the primary School curriculum can be effectively taught and learned through technology based tools and equipment ranging from Mathematics, English language, Basic science and technology, Arts, Home -economics, Agricultural Science. Etc. Moreso, the use of Information and Communication Technology provides the help and support for both teachers and pupils where it involves teaching and learning with the help of the computers which serve the purpose of instructional materials.

Primary Education as being defined in the National Policy on Education as the foundation upon which all other level of Education is built. One of the objective of primary Education is to inculcate in children permanent literacy and numeracy and the ability to interact and communicate effectively. (FRN, 2004). According to Obidike (2014) a sound primary Education is a pre requisite not only to good secondary education and higher education but to lifelong learning. However the objective of primary Education above can largely be achieved with the inclusion of Information and Communication Technology (ICT) in the public primary School curriculum and the teachers who are expected to deliver effectively must be well trained and re- trained in the act of ICT usage for effective teaching and learning.

The success of any educational organization in achieving its goals and objectives depends on the efficiency and Effectiveness of its administrator and teachers. However, for the teachers to be effective and efficient in the usage of ICT facilities in schools for teaching and learning, the availability of the facilities and the resources with which it will be used must be well considered. Computers and technology based tools does not act as a replacing tools for quality teachers but they are considered as a complimentary tools needed for better teaching and learning in schools.

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The need for Information and Communication Technology ICT inclusion in Primary Education is important because with the aid of technology, teaching and learning is not only happening in the school environment, but can also happen in physical distance. According to Young (2003), ICT integration is not a one-step learning process, but it is a continual process of learning that provides proactive teaching-learning environment.

The Education section at utilization ICT, created new and existing opportunities both for the school and the students; thereby making teaching and learning to be more effective and qualitative (Adeyemi, 2014). Oloko, ( 2015) in his work on availability and utilization of e-learning technology for the effective administration of public senior secondary schools I. Rivers state opined that information and communication Technology is the combination of computer and telecommunication equipment used mainly for the processing, gathering, analyzing as well as storing of information. Adeosun, (2014) reported that the objectives of National policy on computer education of 1998 is to encourage staff (teachers) to develop close rapport with computer and appreciate its potential for solving teaching and learning challenges and inculcate the use of ICTs in their day to day smooth administration of the school system.

The usage of ICT facilities has become so important to the school system that one cannot imagine how life is without it in the 19th century. Adebayo (2015), ICT enables teachers to prepare lesson notes, improved on their instructional materials, carry out research on the subject assigned to them and do day to day administration of the school system. Also, wikipedia (2014), e- learning is essentially the computer and network enabled for transfer of skills and knowledge, it is an instrument delivered via an electronic media.

Moreover, Information and Communication Technology ICT can be used in various means where it helps both teachers and pupils to learn about their respective subject areas. It appears that a technology based teaching and learning gives various interesting ways which includes educational games, educational videos, music, stimulations, music, brainstorming, guided discovery/research using World Wide Web (www) which will make the Teaching and learning process more effective and efficient. According to Anowor, (2014) concurred that the concept of electronic learning comprises;

1. The use of technology to enable people to learn anytime and anywhere
2. The use of all form of electronically- supported learning and teaching devices
3. The use of ICT in developing skills as well as concept- based knowledge
4. The use of instructional media in form of texts, images, animation, video and audio devices.

However, it has been observed that most of the public primary Schools in Ondo state do not have ICT facilities and where there is, it is grossly inadequate to the pupils' enrollment therefore it is mostly not in use. The problem of electricity and insecurity also pose a great threat to the usage of ICT facilities in public primary Schools. While some teachers are ICT literates, it is observed that

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most of the primary School teachers are ICT illiterate as some cannot even operate an Android phone. These factors among others seems to be problems associated with the usage of ICT facilities in public primary Schools in Ondo state, Nigeria. It is against this backdrop that the researcher wants to investigate the Effectiveness, challenges and possible solutions to the problems of ICT usage for teaching and learning in public primary Schools in Ondo state.

**Importance of ICT facilities usage in primary schools.**

In this era of technology advancement the usage of ICT facilities by teachers and pupils to get more information is of great importance. Nmaru(2011) revealed that most of the respondents lack the skills required for utilizing ICT facilities to explore e-resources for their information needs. Information is an important tools needed for educational, political, economic and social development among others. It is observed that ICT facilities add to information users skills required to explore the available resources around the world through internet. According to Ajala(2010), in Nmaru ( 2011), opined that the internet and it's various information resources over the past few decades have this become and all important technological tool in the production, marketing and use of Information worldwide.

The access to worldwide information is made possible through ICT facilities. According to Ukachi (2009) the accessibility to ICT resources is made possible through the host computers or across computers. This means that the users can find information from remote computers or terminal interactively through online information system. Therefore information in virtually all subject in the primary School curriculum can be accessed in large quantities and different variety of online sources which can only be accessed with ICT facilities.

The usage of ICT facilities in public primary Schools seems to be of great importance as it makes storage and retrieval of information easier unlike before. A lot of people had issues finding their primary school leaving certificate or any of their attendance records in the school due to theft, vandalism of the school, termite infestation, and wind breakage among others. This problem could be solved by the usage of ICT facilities if provided and we'll utilized. The usage of ICT facilities in primary Education appears to improve the quality and quantity of Education as it makes the pupils to have access to quality information which aids their learning. It causes better innovative, creative and cognitive thing, higher productivity, efficiency and educational outcomes (Adeosun, 2010). ICT facilities enhances the learning of the pupils, helps the pupils to learn new skills, promote social mobility, helps the citizens to compete in a worldwide economy and this has a multiplier effect across the education system (UNESCO, 2014).

However, Siddiquah and Salim (2017). In their work on The ICT facilities, skills usage and the problems faced by the students of higher education revealed that the use of ICT support students learning, most of the students are great at simple tasks like MS word, MS power point, searching, file attachment and computer games but are less skilled In other skills such as digital library, discussion forums etc. It is also observed by the researcher that both teachers and pupils spend

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more time on computer and internet for recreational or relaxation purposes such as watching videos, Tiktok, Facebook etc. that academic purposes.

## **CHALLENGES OF ICT FACILITIES USAGE IN PUBLIC PRIMARY SCHOOLS**

Many researchers have revealed that a lot of challenges have appeared to discourage the efforts of ICT users. Abisoye (2010) pointed out that both librarians and other information users should possess the necessary skills in the operation of ICT facilities to accelerate easy access to information e resources.

The researcher observed the following problems faced by teachers and pupils while using ICT facilities in public primary Schools are

1. Lack of technical support: this means that a lot of primary School teachers have little or no skill in the usage of ICT facilities and most of those who have the skills use it mostly for recreational and social activities like watching videos, Tiktok, facebook etc than academic activities . Since most schools do not have ICT specialist, it makes it difficult to provide technical support to the teachers and pupils on ICT usage for teaching and learning.
2. Lack of access to the internet: it is observed that most of the public primary Schools are located in the rural and hard to reach areas which have no/ poor internet connections. This has made it difficult for teachers to teach with the ICT facilities even when it is available
3. Availability and utilization of ICT facilities: it is observed that most of the public primary Schools do not have ICT facilities and where there is, the number is very insignificant compared to the enrollment of the pupils which makes it difficult to use ICT facilities for teaching and learning. For instance, in a school where we have 50 pupils in a class and the total computers in such school is 12. The utilization of ICT facilities in such school may not be effective. This was supported by UNESCO (2014) that if sufficient numbers of computer are available, each learner may have access to computer for more time.
4. Lack of Electricity: it is also observed that most of the public primary Schools does not have electricity, though some are provided with generators to power the ICT gadgets given to them but with the hike in the price of fuel, most of the schools may not be able to afford it thereby reducing the usage of ICT facilities in schools for effective teaching and learning. According to UNESCO (2014), it is difficult to implement ICT in education if power supply is disturbed in National Infrastructure. Fluctuation in Electricity causes damage to expensive ICT high- tech equipment especially under extreme weather conditions (Aduwa- Ogiegbaen & Iyamu 2005).
5. Security issues: the problem of insecurity has been a major problems facing public primary Schools. Theft and vandalism has been the order of the day. This is one of the challenges of ICT usage because when the available resources are stolen or destroyed. It is very difficult for them to be replaced thereby affecting teachers Effectiveness by using ICT facilities.

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Umaru (2011) also identify lack of skills required for utilizing ICT facilities, power supply, cost of maintenance, network problems as challenges posed by ICT facilities to students of Tertiary institution in Bauchi state, Nigeria.

## CONCLUSION

The study investigated the Teaching and learning with Technology: Effectiveness of ICT usage in public primary Schools in Ondo state, Nigeria. It was revealed that teaching and learning with Technology based tools and facilities assists teachers in their day to day activities of teaching and keeping of records. Some challenges were identify such as lack of required skills, technical support, and problem of electricity and network issues. Insecurity in schools leading to theft and vandalism of ICT facilities among others

## RECOMMENDATIONS

Based on the findings and conclusion of this study it was therefore recommended that

1. The government should give training of teachers in ICT usage utmost priority
2. ICT specialist should be recruited and posted to each public primary School to give technical support to the teachers and pupils.
3. The Electricity issue should be improved upon or solar panels installed in all public primary Schools to aid Effectiveness of ICT usage
4. Teachers and pupils should be provided with ICT gadgets such as educational tablet to improve ICT usage and learning skills
5. Security of the schools should be an utmost Concern to all stakeholders to solve the problem of theft and vandalism of government properties.

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