Computer as An Essential Tool For Teaching and Learning In the Modern World: Case Study of Selected Secondary School within the Maiduguri Metropolitan Council, Borno State

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Abstract

The use of information and communication Technology (ICT) in everyday life is particularly more pronounced in teaching and learning situation. However, it is not without serious challenges to use computer in teaching and learning. Inspire of the need to use ICT in teaching and learning in modern world, the situation in Borno state is highly challenging. This study is designed to assess computer as an essential tool for teaching and learning in selected secondary schools within metropolis such as Shehu Garbai Government Secondary school, Namu Model secondary school, Ruby Springfield College Maiduguri and Lamisula Government Secondary school Maiduguri in Borno State which sample were selected for the research . The researcher adopted survey research method with the use of questionnaire. Based on the findings, it was revealed that majority of the respondents who are 114 respondents representing (57%) are females and most of them in JSS 3 and 46 respondents males representing (23%) are aware and have knowledge of the computer because e-examination was introduced to them in their curriculum in 2013/2014 and consideration were on them, knowledge and awareness on computer in the modern world is factual and majority of the tools used in learning is Wikipedia and Google and some recommendations were made; Government should provide all schools with alternative source of power to make all services available to the students and to enhance quick and easy usage of ICT facilities, Government should create seminar or program to improve teachers' knowledge and skill in ICT and other software, encourage the need of high level learning skills to act, respond, learn and adjust to ever-changing circumstances as the world is increasingly growing complex success and prosperity will be linked to people's ability to think, act, adapt and communicate creatively.

Keyword: Computer, ICT, Core Subject, Teaching, Learning

Introduction

Computers are no longer just mathematical tools but essential resources, with different operations that can be handled with more efficiency. Different activities such as information generation, processing, analyzing storage and communication for sustainable development could be executed easily with the computer. In digital world, students need to learn tools that are essential to their everyday life and workplace

productivity to achieve the modern world skills and computer is therefore used as one of the essential elements in teaching and learning process where some application packages (software) are used by both teachers and students to make learning easy. Computer as a tool helps in motivating both teachers and students in developing their mental and oral vision in educational aspect of learning; the researcher has observed that this is not effectively taken advantage of in Maiduguri Metropolitan Council however, these is lack in Maiduguri Metropolitan Council. Though computer has impacted on different sectors of the Nigerian economy, unlike in Maiduguri Metropolitan Council, it is an understatement to say that schools in Maiduguri Metropolitan Council are lack behind in that aspect. Information communication Technology (ICT) has contributed immensely in the modern world in both teaching and learning among schools but it still has some certain lingering problems which is hindering its process.

Human ability to explore, invent and utilize the computer is grossly inadequate in most schools in Maiduguri metropolitan, the facilities are not in good use as a result of lack of electricity to man the computer and there are few qualified teachers interested in teaching computer in secondary schools. Educative materials for secondary schools and poor telecommunication facilities which also render the integration of instructional technology in the delivery of quality education difficult in the modern world teaching and learning of computer.

The research is intended to solve the problem of stone age that has been hindering the accessibility of the computer as the essential tool in teaching and learning among schools in Nigeria.

Issues and challenges Associated with the Use of Computer

Despite the keenness of some schools of higher learning to establish effective computer education programs, they are confronted with enormous problems that may impede the proper implementation of these programs. The most significant of this is poor computer penetration and usage among schools in Nigerian higher education practitioners. In almost all Nigeria settings, basic computer infrastructures are inadequate; lack of electricity to power the computer materials and poor telecommunication facilities are also insufficient, above all, the lack of access to much needed infrastructure is as a result of insufficient funds (Ololube, Ubogu and Egbezor, 2007). Several areas in Nigeria still have fluctuation in their supply of electricity which makes the implementation of computer in education most difficult. Additionally most schools don't have access to basic instructional technology facilities, which also makes the integration of instructional technology in the delivery of quality education difficult. Poor economic conditions and their effects on middle level manpower stand as a major barrier to the implementation of computer in the various schools stated. Even an average middle income earner cannot afford basic technological communication gadgets. Computer related telecommunication facilities might not be overly

useful for most students and staffs learning as computers are still very much a luxury in institution, offices and homes. This has made the integration of necessary online resources (e-mail, World Wide Web) into education most difficult (Ifinedo and Ololube 2007).

Criticism of Computer in the modern world

Adamali (2006) stated the obsolescence factor of computers and the ongoing cost of up grading both hardware and software. Some critics indicate a belief that many hardware and software companies purposely design products to become quickly obsolete and thus require updates that educators must buy. It is their belief that educational computer is too much in its infancy and not yet reliable enough for use by most students.

Some critics such as Kirkpatrick and Cuban (1998) indicate that technology equipment requires extensive support structures that requires distinct, to take money away from basic expenditures for other and better uses in the classroom. They believe this money should be invested in the arts, science laboratories, shops and anything else that involves more hands on ways of learning. Computer literary, some believe, has highly overblown its importance and that people who need to use technology will learn by using task application that involve "real" work.

No doubt, technology will always have critics. Some believe that technology reduces hands on experience and student engagement in active participation. Others believe technology reduces important human contact. In the final analysis, one can conclude that identified uses of computer reduces important different critiques depending on one's personal values and perspectives of what is good and bad in education. The single most important factor producing criticism of computer use in instruction is to have teachers who are competent and knowledgeable about appropriate and effective use of technology to improve students' learning.

According to Attama and Owolabi (2008) stated that the computer, internet, electronic mail (E-mail) and World Wide Web (www) are the primary ICT resources for sustainable development in both teaching and learning in Nigerian schools.

It has been commonly accepted and proven that computer is the engine of the modern world as it has contributed immensely to the economics, religions, cultural, legal and social life of nations, particularly that of developing countries (Ukodie 2009).

In addition, we know more today than ever about how students learn through the everyday use of computer. Researchers and educators in recent times have made great strides in mapping the remarkable territory of the human mind. We therefore, have scientific insights that can inform educators about the cognitive process of learning and effective teaching strategies for achievement. We must incorporate this understanding into classroom teaching and learning on a broad scale. It then means that literacy in the modern world evolves round reading, writing and computing skills. As Toffler (2005) points out, "the illiterate of the modern world will not be those who cannot

read and write, but those who cannot learn, unlearn and relearn".

Objectives of the Study

The main objective of the study is to;

i. Determine the extent to which the use of computer improves teaching at secondary school in Borno State.

ii. Determine the extent to which the use of computer facilitates better learning at secondary school level in Borno state.

iii. Determine the extent to which inadequate electric power supply affect, the use of computer as essential tool for teaching and learning.

iv. Determine the extent to which inadequate qualified teachers and technicians affects the use of computer as tool for teaching and learning at secondary school level in Borno State.

v. Determine the extent to which lack or conducive and well-equipped computer laboratory affects the use of computer as tool for teaching and learning at secondary school level in Borno State.

Research Question

i. To what extent does the use of computer improves teaching at secondary school level in Borno state?

ii. To what extent does the use of computer facilitate better learning at secondary school level in Borno state?

iii. To what extent does inadequate electric power supply affect the use of computer as an essential tool for teaching and learning?

iv. To what extent does inadequate qualified teachers and technicians affects the use of computer as tool for teaching and learning at secondary school level in Borno State?

v. To what extent does lack of conducive and well equipped computer laboratory affects the use of computer as tool for teaching and learning at secondary school level in Borno State?

Significance of the Study

The importance of the study is to highlight the tools used in the modern world in teaching and learning, and the impact this has in the schools within the Maiduguri metropolitan council (MMC). The work is meant to contribute to the academic knowledge on both teachers and students and to be used as a tool in achieving the Federal Government Millennium goal of vision 2020. It is also an important tool in visualizing the use of modern technology tools such as email, twitter, Wikipedia and Google in selected secondary schools.

Delimitation of the Study

This study is delimited to find out the essential tools in computer in the modern world among four (4) selected secondary schools within Maiduguri Metropolitan Council. These schools are Shehu Garbai Government Secondary school, Namu Model secondary school, Ruby Springfield College Maiduguri and Lamisula Government Secondary school Maiduguri.

Methodology

The method adopted for this study is survey research method with the use of questionnaire.

The selection of this method is due to its relevance with the study. According to Berger (2000) survey is a research method that the researchers use to get information about certain groups of people of interest to them. Also Severin and Tankard (2001) state that survey research is the study of a portion or sample of a specific population.

The Study Population

In order to have accurate and reliable information for this research, four (4) secondary schools were selected in Maiduguri metropolitan council. Also in each selected secondary school fifty (50) students both sex (es) were selected using stratified random sampling techniques. A total of 200 respondents were randomly selected in Ruby Springfield School Maiduguri, Namu Model School Maiduguri, Shehu Garbai Government secondary school Maiduguri and Lamisula Government secondary school Maiduguri. This study facilitate the collection of information, the researchers designed questionnaires which had Yes/No answers for respondents. The items on the questionnaire were reflected to the purpose of the study. There are three (3) sections. Section A contained information on demographic data, section B contained information on knowledge and section C contained information on awareness of respondents about computer as an essential tool in the modern world. It was made up of 25 questions and distributed to the selected samples of the selected schools within the Maiduguri metropolitan council. The questionnaires are arranged based on the objective of the study. The number of responses to each item on the questionnaire were tabulated and converted to

percentage. Each table is explained based on the percentage each item represented with respect to the total accepted questionnaires. The data collected will be analyzed in the next chapter. For the purpose of this analysis simple percentage (%) method of analysis was adopted so as to have meaningful information from the data collected.

Data Analysis

A total of 200 questionnaires were administrated to 200 students of the four selected schools within the Maiduguri Metropolitan council (MMC) and 200 questionnaires were filled and returned. The data gathered from the computed and filled questionnaires were arranged in tabular form to permit further statistical computation and analysis.

Table 4.1.1   Distribution of Respondents Based on level of Education

Educational level	Frequency	Percentage (%)
JSS 1	42	21
JSS 2	40	20
JSS 3	46	23
SS 1	30	15
SS 2	22	11
SS 3	20	10
Total	200	100

From the table above, it shows two hundred (200) respondents representing (23%) of the total respondents and it follow by (15%) of the total respondents while the least (10%). This reveals that JSS 3 have the highest number of respondents because e-examination was introduced to their

curriculum in 2013/2014 and considerations were on them.

Table 4.1.2   Respondents Knowledge on Computer

Knowledge	Frequency	Percentage (%)
Yes	180	90
No	20	10
Total	200	100

From the above table, it reveals that 180 respondents representing (90%) of the total students have knowledge on computer laboratory while 20 students representing (10%) of the total indicate that they do not have adequate knowledge on the computer laboratory. This signifies that most of the modern world tools for teaching and learning of computer were studied in the laboratory where students acquired basic knowledge like typing, browsing and solving assignment through the internet.

Table 4.1.3   Distribution of Respondents Based on Knowledge to the Tool, Teachers ample scheme to improve skills on Computer

Tools Used	Frequency	Percentage (%)
Email	46	23
Twitter	34	17
Wikipedia	50	25
Google	70	35
Total	200	100

Distribution of respondents based on knowledge on tools, teachers' ample scheme to improve skills on computer. From the table above, it reveals that 70 students out of 200 students representing (35%) of the respondents use Google, 50 respondents representing (25%) use Wikipedia, 46 respondents representing (23%) send their correspondence through Email while the least 34 respondents representing (17%) use ICT through twitter. This means majority of the respondent, representing 90% of the teachers'. This shows that modern world tools in teaching and learning of computer is knowledgeable and only few individuals are not aware due to lack of access to computer.

Findings

The following findings were observed from tables analyzed above:

i.   Majority of the selected schools within Maiduguri metropolitan council are aware of the existence of computer in the modern world.

ii.   The studies also found out that majority of the respondents are between the ages of 11–14years.

iii. From the analyzed data, it was revealed that majority of the respondents who are 114 respondents representing (57%) are females and most of them in JSS 3 and 46 respondents males representing (23%) are aware and have knowledge of the computer because e-examination was introduced to them in their curriculum in 2013/2014 and consideration were on them.

iv.   This study finds out that their knowledge and awareness on computer in the modern

world is factual and majority of the tools used in learning is Wikipedia and Google.

Discussion of Findings

This research was to determine the computer as an essential tool for the modern world in teaching and learning in selected secondary schools within the Maiduguri metropolitan council.

Findings in this study revealed the distribution of respondents based on educational level that JSS 3 students of dominance of respondents 46 out of 200 respondents which signified 23% of the total respondent have the highest members, because e-examination was introduced to them in their school curriculum.

From table 4.1.2 revealed that 180 respondents out of 200 students representing 90% of the total students have adequate knowledge on computer laboratory. That implied that most of the modern world tools for teaching and learning of computer were studied in laboratory where students acquired basic knowledge like typing, browsing and solving assignments through the internet.

From table 4.1.3 70 students respondent out of 200 respondents, which indicate 35% of the respondents uses Google, 25% uses Wikipedia, 23% uses email for their correspond once 17% uses twitter. Therefore it reveals that majority of student are conversant about teachers ample scheme to improve their skill on computer. These shows that teaching and learning of computer is knowledgeable and only few individuals are not aware due to lack of access to computers.

Conclusion

Perhaps the most important conclusion from this discussion deals with the credibility associated with computer is the engine of the modern world and beyond; as it will chart the economic, religious, cultural, legal and social life of nations, particularly that of developing countries (Ukodie; 2004). Hence, according to Nkereuwem (1996), the importance of computer for sustainable development, has long been recognized by developing countries. ICT has impacted on different sector of the Nigerian economy, especially in higher level of educational system today. The application of computer has emerged as the most radical development of the modern world. It has facilitated speedy information on transmission, high level decision making, reduces cost in resources/organizational management, as well as open vast opportunities for information sharing among individuals, companies and governmental institutions. It is a truism that computer is very indispensable to Nigeria's sustainable development drive. Today, computer has been successfully integrated in the process of state administration, leading to view concept of e-government. The potential benefits of computer to sustainable development in Nigeria have been accepted as an imperative paradigm. These research paper will help modern world tools more effective in teaching and learning as core subjects if introduce to both secondary and tertiary institutions.

Recommendations

Based on the findings of the study some recommendations were made;

1. Teaching and learning tools, materials such as networking and other technologies, plus audio, video and other ICT facilities should be introduced fully in the primary sections.

2. Government should provide all schools with source of power to make all services available to the students and to enhance quick and easy usage of ICT facilities.

3. Software package (user friendly) should be provided to the students as source of information sharing in all secondary schools. Government should ensure that both skills and flexibility to get high level skills and abilities such as critical thinking, problem solving, team work and decision making skills.

4. Government should create seminar or program to improve teacher's knowledge and skill in ICT and other software, encourage the need of high level learning skills to act, respond, learn and adjust to ever-changing circumstances as the world is increasingly growing complex success and prosperity will be linked to people's ability to think, act, adapt and communicate creatively.

5. Government should connect the importance of modern world tools as one of the core subject in all aspect of educational system.

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