Utilizations' of ICT Resources among Tertiary Institutions in Sokoto State, Nigeria

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Abstract: This paper investigated ICT resources utilization among students of tertiary institutions for sustainable development in Sokoto metropolis. Survey research designed was used in this study, simple random sampling procedure was used in selecting the sample size of 300 students from sscoe, polytechnics and state university The instrument employed in this study was "ICT utilization Checklist" adapted from the work of Abubakar (2016). The checklists design for the study was validated by expert in the department of education. The reliability of the instruments was determined by the use of test re-test method and reliability index of 0.8 was obtained. Data collected were analyzed using simple frequencies count and percentages. The finding of the study show that majority of the institutions have ICT facilities. But the performance of ICT training to student is negligible. It was recommended that proper training and constant power supply should be provided in order to enhance ICT utilization among students and manifested the learning among students of tertiary institutions. Audio-visual aids and computers should be provided to the tertiary institutions for effective teaching of the ICTs oriented subjects. The available ICT tools should be effectively utilized by both lecturers and students. Training and retraining of the lecturers in ICTs should be of paramount importance to stakeholders in education. Both lecturers and student should effectively utilize the ICT tools. There is need for training and retraining of ICT personnel's at every sector of learning for effective learning outcome. Provision of ICT tools such as Audio-visual aids in educational institutions should be adopted for effective teachings.

Keywords: Information Communication Technology (ICT), & Resources utilization

I. INTRODUCTION

December 1984. The general objectives of the physics teaching stated in the curriculum document (FME, 2009) are:

i.   To provide basic literacy in physics for functional living in society,
ii. To acquire basic concepts and principles of physics as a preparation for further studies,
iii. To acquire essential skills and attitude as preparation for the technological application of physics.
iv. To stimulate and enhance creativity.

To achieve the above stated objectives of the tertiary Education physics curriculum, there is need for the integration of ICT into the Higher school physics curriculum. Effective teaching and learning of science including that of physics can easily be carried out in today's modern world using information and communication technology (ICT) facilities. For example the activity based strategies of teaching emphasized in the senior secondary school (SSS) physics curriculum can easily be done using (ICT) resources. In the activity based strategies of teaching physics, the teacher can provide the students with the general principle, and the students on their own part can make use of modem technology resources like the computers and the internet to find solutions to the problems given.

Effective learning of science according to Nwosu (2003) occurs when learners develop the ability to purposefully access information from a variety of sources, analyzed and evaluate the information and then integrate into the construct of a personal knowledge base from which to make intelligent decisions. All these can be done easily with the aid of ICT resources (Owolabi and Dansu, 2006).

According to Nwokocha and Amadike, (2005) academic performance of students is the yardstick (a standard) for testing the educational quality of a nation. Hence, it is expedient to maintain a high performance in internal and mostly external examinations. For some years back, research reports/findings have shown students' under achievement in secondary schools physics in public examinations (Akanbi, 2009 & Gambari. 2010).

ICT is an umbrella term that includes any communication device, encompassing radio, television, cell phones, computer and network, hardware, satellite systems and so on, as well as the various services such as video conferencing and distance learning. Information and communication technologies (ICT) are often associated with the most sophisticated and expensive computer based technologies but ICTs also encompass the mere conventional technologies such as radio, television and telephone technology. ICTs are basically information handling tools, with varied set of good applications and services that are used to produce, store, process, distribute and exchange information. It includes the old ICTs of radio, television, telephone and the new ICTs of computer and wireless technology and internet. These different tools are now able to wᵣork together and combine to form our networked world - a

massive infrastructure of interconnected telephone services, standardized computing hardware, the infinite radio and television, which reaches into every corner. ICTs not only refer to the latest computer and internet based technologies, but also to simple audio-visual aids such as transparency and slide, tape and cassette and radio, video, cassette and television and films.

Luambano and Nawe, (2004) found that the major barriers to efficient Internet use by students include slowness of the server and payment for the access time. Luambo and Nawe (2004) also observed that the slow Internet connections attributable to small bandwidth is a major factor hindering Internet access and use in Africa. Aguolu and Aguolu (2002) therefore identified five major possible types of inaccessibility which include conceptual, linguistic, critical, bibliographic, and physical inaccessibility. However, availability of information does not imply that such information is readily accessible for utilization by users who need them. Underthese circumstances, it could be necessary to examine the ease of accessibility and utilization ofICT tools among undergraduate science education students'.

Statement of the Problem

There have been public outcries over the persistently poor understanding and under achievement secondary school students in public examinations especially in physics. Investigations into the circumstances that are responsible for this under achievement of students in physics revealed among others, inadequate learning resources, lack of electricity, lack of conducive learning environment, inadequate ICT facilities, unqualified teachers in ICT, etc. (Akanbi, *2009;*Omosewo, 2009 *&* Yusuf. 2005). The direct *link between* ICT use and *students'* academic achievement in physics are been focus of extensive literature during the least two decade and from the reviewed literature, no correlational study had been done in recent time relating ICT resources utilization to sustainaole development among senior school students' in Sokoto Metropolis. It is therefore, against this background, that this study seeks to investigate ICT resources utilization among senior secondary school students' towards sustainable development in Sokoto metropolis.

Objectives of the Study

1- To determine ICT resources availability in tertiary institutions in Sokoto State.
2- To examine the utilization of ICT resources in teaching and learning in higher institutions
3- To determine the influence of ICT resources utilizations on student academic performance.

Research Questions

1. Does the ICT resources available in tertiary institutions, in Sokoto state?
2. Does the ICT resources utilized in teaching and learning in tertiary Institutions

3. What are the influences of ICT resources on students' academic performance?

II. METHODOLOGY

Research Design

The researchers used descriptive research design, which was adopted in this study, which will enables researchers to ascertain the extent to which variations in one variable are associated with variations in another variable.

Population of the Study

The population of the study covers all the level 3 students' offering Computer Science 2019/2020 academic session.

Sample and Sampling Techniques

Simple random sampling procedure was used in selecting (300) three hundred students' in the tertiary institutions in Sokoto State.

Instrument for Data Collection

The instrument employed in this study was "ICT Utilization Checklists" adapted from Abubakar (2016). It is a 20 item "digital literacy and ICT utilization checklists" designed to elicit responses on the influence of ICT resources on student academic performance in tertiary institutions in sokoto state.

Validity of the Instruments

The face and contents validity of checklists design for the study was censured by four (6) ICT expert. The reliability of the instruments was determined by the use of test-retest method. The questionnaire was availed to 20 sampled individual where are not part of the study, SPSS software where used through coronbatch alpha. The reliability index of 0.3 was obtained.

Method of Data Collection

In collecting data needed for the study, the checklists items were administered on the respondents. The checklists was divided into sections A and B source for names, age, sex, educational level of the parents of the respondents and so on. Section B comprises the list of items contains in the checklists to which the respondents have a react to.

Method of Data Analysis

The data collected was analyses through the use of simple frequency counts and percentages.

III. RESULT

Research Question1: To what extent are ICT resources available in Tertiary Institutions in Sokoto metropolis?

Table 1: Level of availability of ICT resources

Options	Responses	Percentage
Available	201	67%
Not available	99	33%
Total	**300**	**100**

Field study 2020

Table 1 show that 201 (67%) of the respondents are of the opinion that ICT resources are available in their schools while only 97(33%) of the respondents are of the opinion that ICT resources are not available in their schools.

Research Question 2: To what extent are ICT resources utilized in teaching and learning of Computer

Table 2: Level of ICT resources utilization

Options	Responses	Percentage
Utilized	193	64.3
Not utilized	107	35.7
Total	**300**	**100**

Field study 2020

Table 2 show that, 193 (64.3%) of the respondents was of the view that the available ICT resources were been utilized. While 107 (35.7%) of the respondents were of the view that the available ICT resources were not put to used.

Research Question 3: What are the influences of ICT resources on students' academic achievement in computer?

Table 3: Influence of I. C .T resources on students' achievement

Options	Responses	Percentage
Yes	129	64.50
No	71	35.50
Total	**300**	**100**

Field study 2020

Table 3 show that 129 (64.5%) answered Yes, while 71 respondents representing 71(35.5%) answered No i.e to say 64.5% of the population answered the highest question.

IV. CONCLUSION

ICT resources have a great influence on student and their scholastic achievement. Therefore it's important to utilized and manage ICT tools available in every tertiary institutions in sokoto state, for the academic achievement of the student.

V. RECOMMENDATIONS

1. Audio-visual aids and computers should be provided to the tertiary institutions for effective teaching of the ICTs oriented subjects.
2. The available ICT tools should be effectively utilized by both lecturers and students.
3. Training and retraining of the lecturers in ICTs should be of paramount importance to stakeholders in education.
4. Both lecturers and student should effectively utilize the ICT tools.
5. There is need for training and retraining of ICT personnel's at every sector of learning for effective learning outcome.
6. Provision of ICT tools such as Audio-visual aids in educational institutions should be adopted for effective teachings.

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