

## **ASSESSMENT OF AVAILABILITY, ACCESSIBILITY AND UTILIZATION OF INFORMATION AND COMMUNICATION TECHNOLOGY RESOURCES IN CONTENT DELIVERY AMONG LECTURERS IN FEDERAL COLLEGES OF EDUCATION IN NIGERIA**

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### **Abstract**

*This paper aimed at assessing the availability, accessibility and utilization of Information and Communication Technology (ICT) resources in content delivery among lecturers of FCEs in Nigeria. Three research questions were drawn to guide the study. A Survey research design was adopted in conducting the study. The population of the study comprises of all the lecturers in Federal Colleges of Education in Nigeria. They are five thousand and seventy one (5,071) in number. A sample size of eight hundred and forty three (843) lecturers was used for the study. They were selected using cluster, simple random and proportional sampling techniques. A modified questionnaire tagged Teachers ICT usage survey from the ICT Survey Indicator for teachers and staff developed by both UNESCO (2004) and the New Zealand Ministry of Education (MINEDU) (1999) was used for data collection. Frequency count was used to answer research questions. The findings of this study revealed that ICT resources are not available in Federal Colleges of Education in Nigeria. It was also revealed that ICT resources which were supposed to be used in content delivery in FCE were not accessible. This study recommends, among others, that the Government, NCCE and the managements of FCE should join hands to ensure that computer laboratories are available in FCE in Nigeria with adequate functional computer hardware and software and functional internet facilities that will enhance the standard of content delivery.*

### **Introduction**

Information Communication Technology is a crucial part of the education system. In 21st century we need creative thinkers and innovators who can push the frontier of development in all nations. Consequently, educators are required to modify their teaching strategies to meet the challenges in educational environment that is fast growing and changing. ICT and its application have brought drastic transformation in the teaching and learning process. Its role in colleges of education is recurring and non-negotiable. In this age of globalization and competition there is need to make ITC available and accessible for optimum utilization and also to shift our educational system to world standard and best practice. ICT has enabled us to monitor and evaluate what is learnt, how ICT is learnt and when and where learning takes place. It has provided e-learning an alternative teaching and learning methodology. This technology being added to the traditional teachers centered model and provides students with the opportunity of using internet to develop their ICT skills.

Recent developments in ICT have drastically affected educational procedure for improved quality of education offered to students. ICT resources provide an alternative teaching and learning for both teachers and students (Nzewi, 2009; Umoren, 2006). It is in the pursuance of the need to access international best practices that the Federal Government reviewed the National Policy on Education of 1998 to the current one (NPE, 2013) in order to accommodate the introduction of ICT into the educational system in keeping with the dynamics of social change and its demand on education. Colleges of Education prepare teachers that provide the manpower requirement at both the primary and junior secondary school levels of education in Nigeria. It is at college of education that students should have meaningful encounter with technology in the classroom. If solid ICT foundation is laid at this level of education, students will be able to put to use ICT skills

acquired when they eventually leave school and are gainfully employed to teach at the primary and secondary schools.

### **Statement of the Problem**

A cursory look at the tertiary institutions in Nigeria will probably show that many lecturers in the system still rely much on the traditional lecture method of teaching rather than embracing the use of ICT. The stage of enlightenment in which ICT could be used in education is still low. Many lecturers do not access and utilize ICT in teaching. Okebukola (1997) observed that some vital ICT resources are completely unavailable in most tertiary institutions in Nigeria. Beside, many lecturers have been unable to find effective ways to use technology in their content delivery or any other aspect of their teaching. The use of ICT resources in content delivery is still a mirage; hence the need for this study to ascertain the availability of ICT resources and level of accessible to lecturers in Federal Colleges of Education in Nigeria.

### **Objectives of the Study**

The objectives of the study are to:

- i) Identify the types of ICT resources available to lecturers in content delivery in Federal Colleges of Education in Nigeria.
- ii) Ascertain the forms of ICT resources accessible to lecturers in content delivery in Federal Colleges of Education in Nigeria.
- iii) Examine the lecturers' perceived usefulness of ICT resources in content delivery in Federal Colleges of Education in Nigeria.

### **Research Questions**

The study would seek answers to the following research questions:

- i) Which types of the ICT resources are available to lecturers in content delivery in Federal Colleges of Education in Nigeria?
- ii) Which forms of ICT resources do lecturers have access to and are being used in content delivery in Federal Colleges of Education in Nigeria?
- iii) How lecturers do perceived the usefulness of ICT resources in content delivery in Federal Colleges of Education in Nigeria?

### **Research Design**

This study adopted survey research design. Survey is used in studies that have individuals as units of analysis (Babbie, 2001). This is also what Nworgu (1993) described as allowing a group of people or items to be studied by collecting and analyzing data from only a few people or items to be considered as representative of the entire group.

The population of the study comprises of all the lecturers in Federal Colleges of Education in Nigeria. They are five thousand and seventy one (5,071). A sample size of eight hundred and forty three (843) lecturers was used for the study; using cluster, simple random and proportional sampling techniques. However, out of 843 questionnaires administered, only eight hundred and ten (810) were returned, thirty copies were invalid,

while seven hundred and eighty (780) were used for the analysis. A modified questionnaire tagged Teachers ICT usage survey by the ICT Survey Indicator for teachers and staff developed by both UNESCO (2004) and the New Zealand Ministry of Education (MINEDU) (1999) was used for data collection. The validation of the instrument was established by two specialists in the field of educational technology and one from measurement and evaluation. The instrument was valid and was subjected to Cronbach's Alpha Reliability Coefficient test. A reliability co-efficient of 0.96 was obtained. Data collected were analyzed using frequency counts to answer research questions 1-6 and descriptive statistics was used to answer research questions 7 and 8 respectively. Independent t-test statistics was also used to answer research hypothesis 1, while one way ANOVA was used to answer hypothesis 2, and were tested at  $p < 0.05$  level of significance using statistical package for social science..

### Analysis and Results

The results of the analysis are shown below:

**Research question 1:** Which types of the ICT resources are available to lecturers in content delivery in Federal Colleges of Education in Nigeria?

**Table 1: Available ICT resources used in content delivery**

Rating items	Available	Fairly Available	Not Available	Total
Computer hardware	284	298	440	780
Computer software	54	60	666	780
Integrated services digital network	31	44	705	780
Fiber optics connection	31	44	705	780
Smart board	214	263	303	780
Learning management system	9	28	743	780
Servers/Hubs	9	28	743	780
Data projector	98	131	569	780
Digital camera	88	74	618	780
T V/ Radio	176	248	356	780

The table above showed that the number of lecturers who indicated that ICT resources are fairly available and not available are more than those who indicated that ICT resources are available on all items. This means that majority of lecturers in FCE are of the view that ICT resources are not available in their respective colleges. This might be due to the non provision of the ICT resources by the school management or the government.

**Research question 2:** Which forms of ICT resources do lecturers have access to and used in content delivery in Federal Colleges of Education in Nigeria?

**Table 2: Lecturers' Accessible to ICT Resources Used in Content Delivery**

Rating items	Accessible	Fairly Accessible	Not Accessible	Total
Computer hardware	284	298	440	780
Computer software	54	60	666	780
Fax machine	28	32	720	780
Word processing	158	260	362	780

Smart board	140	236	404	780
Scanning machine	85	120	575	780
Internet browsing	58	62	660	780
Data projector	98	131	569	780
Digital camera	88	74	618	780
T V/ Radio	176	248	356	780

Table 2 showed that the lecturers who indicated that ICT resources are fairly accessible and those indicated not accessible are more in number than those lecturers who indicated that ICT resources are accessible on the questionnaire. This result shows that majority of lecturers in FCE do not have access to ICT resources in content delivery. This might be because their schools are not connected to the internet.

**Research question 3:** How lecturers do perceived the usefulness of ICT resources in content delivery in Federal Colleges of Education in Nigeria?

**Table 3: Lecturers' Perceived Usefulness of ICT Resources in Content Delivery**

<b>Rating items</b>	<b>Useful</b>	<b>Fairly useful</b>	<b>Not useful</b>	<b>Total</b>
ICT helps in making teaching-learning more interesting.	524	163	94	780
ICT helps in distance learning programme.	504	175	106	780
ICT enhances quality of work of the lecturers.	511	140	106	780
It makes lecturers to be up-date in their various disciplines.	498	210	72	780
ICT help reduces examination malpractice in administration.	480	189	111	780
ICT enhances efficiency of work.	530	183	67	780
It improves quality of teaching.	528	177	75	780
It enhances the management of financial records.	488	180	112	780
ICT reduces lecturers' workload.	540	130	110	780
ICT enhances collaboration among lecturers in getting instructional content of courses globally.	450	120	210	780

Table 3 showed that the lecturers that perceived the use of ICTs in content delivery positively on all the items are more in number than their counterpart. The results indicate that majority of the lecturers who took part in the study perceived the use of ICTs as very useful in content delivery.

## **Discussion**

The Lecturers' response on the available ICT resources used in content delivery, the result of this study reveals that ICT resources are not available in FCE in Nigeria. This is reflected in table 1 as a result of non availability of some basic ICT resources such as computer hardware, computer software, Learning management system, Integrated

services digital network that are not available in the colleges. This finding agrees with the finding of Wisdom and Terumber (2012) which revealed that ICT resources were not available in College of Education (COE) Katsina-Ala for teacher educators' instructional development; Teacher educators in COE Katsina-Ala could not access ICT resources for instructional development purposes. This may be due to the non provision of the ICT resources by the school management or the Government.

Table 2 above reveals that lecturers do not access ICT resources in content delivery in FCE. This might be because their schools are not connected to the internet. This also confirmed the finding of Olufunde, Oyetola and Kehinde (2010) on access and utilization of ICT among lecturers and students in South-west Nigerian public universities that 89% of the respondents claimed to have never or rarely had access to ICT facilities.

The finding of this study with regard to lecturers perceived usefulness of ICT resources in content delivery. The study revealed that lecturers who perceived the use of ICTs in content delivery positively are more in number than those who perceived it negatively. The results indicate that majority of the lecturers who took part in the study perceived the use of ICTs as very useful in their teaching. This finding did not contradict the finding of Yoloye (1990) which revealed that lecturers at the University of Ibadan have positive perception and attitude towards computer and, in fact, would like to be trained to use it. Similarly, this finding is in consonance with that of Yusuf, (1998) which revealed that most teachers in Nigerian Secondary Schools have a positive attitude towards using computer in education.

### **Conclusion**

In view of the findings of this study, it is concluded that some good number of ICT resources used in content delivery by lecturers are completely unavailable in Federal Colleges of Education in Nigeria. This study found that lectures had no access to basic ICT resources in content delivery. It was also confirmed that lecturers perceived the benefits of the use of ICTs as very useful in their teaching. This finding might not be unconnected with the fact that the lecturers know the importance inherent in the use of ICT in the teaching/learning. This study has far reaching implications for teaching and learning at the tertiary level of education in Nigeria. This is because the benefit of ICT use in education sector plays an important role, especially in the process of empowering the technology into the educational activities. It is also pertinent to mention any lecturer who is still affectionate of the old method of chalk and talk will be lag behind in the world of ICT.

### **Recommendations**

The following recommendations have been offered:

1. There is a need for the Government, National Commission for Colleges of Education (NCCE) and other Education stakeholders to respond positively and provide ICT infrastructures in all the FCE across the country so as to encourage lecturers to use them in content delivery.
  2. The government should ensure that a stable power supply is provided in the colleges of education and the country at large.
  3. Emphasis should be given to the pedagogy of the use of ICTs for teaching/learning activities.
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4. The government should increase funding for the educational sector with emphasis on ICT that will help improve the level of ICT facilities in the colleges.

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