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Extent of utilization of Ict potentials by academic staff of tertiary institutions in Enugu State.

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ABSTRACT

This study was designed to determine the information and communication technology (ICT) potentials utilized by tertiary institutions' teaching staff in Enugu State. The study adopted a descriptive survey research design. The population for the study consisted of 5,970 academic staff from 12 tertiary institutions in Enugu State. 544 respondents constituted the sample size for the study. A structured questionnaire of 20 items was used for data collection. The instrument was validated by three research experts. The reliability index for the instrument was computed using Cronbach Alpha method and found to be of 0.82. Mean and standard deviation were used to answer the research questions while the hypotheses was tested using ANOVA at 0.05 level of significance. The findings showed that Academic staff of tertiary institutions' do not utilize ICT potentials for effective teaching and learning. There is no significant difference in the mean ratings of universities, polytechnics and colleges of education teaching staff on the ICT potentials utilized by them in Enugu State. Based on the findings, it was recommended that federal and state governments should improve budgetary allocations to tertiary institutions to enable them meet their teaching and research needs. Teaching staff should be sponsored to attend workshops, seminar and conferences to keep them abreast with global ICT potentials they need to possess.

1. Introduction

Education can be defined as the process of facilitating learning or the acquisitions of knowledge, skills, values, beliefs and habits. It is believed that education makes an individual civilized, refined, cultured and educated. To attain a civilized and socialized society, education is the only means (Gahalla, 2012). Its goal is to make an individual useful to himself / herself and society. Every society attaches importance to education because it is a panacea against all evils. It is the key to the solution of various problems in life. Education is commonly and formally divided into stages: primary or elementary school, secondary school and tertiary institutions. Tertiary education is recognized as one of the stages of education. It is considered to be non compulsory educational level that takes place after secondary education. Successful completion of tertiary education programmes of study generally results in awarding diploma or degree certificate. Tertiary institution is important to national economies as it helps to find faster ways to achieve durable and sustainable development (Agoola, 2011). In Nigeria, tertiary institutions can be private, state owned or federal owned. Tertiary institutions

are being managed by the federal and state governments as well as individuals/organizations depending on the ownership. The institutions that are being managed by the federal and state governments are termed as public institutions which are spread across the country while those that are managed by individuals or organization are termed private institutions. Their teaching and non teaching staff need adequate Information and Communication Technology (ICT) skills to increase their daily activities. Information and Communication Technology (ICT) helps to improve one's knowledge towards scientific research and other vital innovative development.

Information and communication technology (ICT) means an umbrella term that includes any communication device or application encompassing radio, television, cellular phone, computers and network, hardware and software, satellite systems and so on, as well as various services and application (Kinengyere, 2013).Information and Communication Technology (ICT) potentials refer t o various ways for promotion of development whether such knowledge was derived from the centuries old endowment of indigenous practices or from the latest cutting edge technologies. Today, the technologies of the information and communication revolution are those at the cutting edge and the application offer momentous opportunities for development. ICT also means a term for information technology (IT) which stresses the role of unified communication and the integration of telecommunication (telephone lines and wireless signals, computers as well as necessary enterprise software, middleware, storage and similar devices) that bring the world to one's door step. Today, ICT has been successfully integrated in the process of state administration and has been accepted as an imperative paradigm which offer innumerable benefits in enriching the quality and quantity of learning in tertiary institutions in Nigeria (Fawowe, 2012).

ICT have the potentials of not only ensuring effectiveness and efficiency in teaching and learning but equally have the potentials of easing the administrative duties. ICT have increasingly become an invaluable asset in education (Owolabi and Agoola, 2011). Their role in information handling, storing, retrieval and dissemination is at the root of any meaningful academic enterprise all over the world. ICT have transformed research and teaching in academic institutions (tertiary institutions) by providing academic staff (human resources) a range of opportunities for accessing accurate, relevant and timely information as well as providing medium for communication of findings to wider audience, thus enhancing academic productivity and performances (Owolabi and Agoola, 2011).

1.1 Statement of the problem

The place of Information and Communication Technology in research, teaching and learning in the 21st century cannot be overemphasized. Since technologies are driving the development of nations, many countries have integrated technologies in various sectors of their economy. This has helped to improve productivity, creativity, growth and development.

The advent of ICT has brought about a new dimension in education. The technology has proved effective in enhancing and facilitating teaching and learning, and as a result, has been adopted by various institutions. Countries which desire improvement in their education system have deemed it necessary to incorporate ICT as a necessary facility in their educational institutions .Nigeria has also joined 21st century trend, so as not to be left behind in the jet age. Part of the efforts by government and other stake holders towards integrating ICT in tertiary institutions in Nigeria, is the provision of ICT facilities, as well as facilitating manpower training for effective use of the technology. As result, tertiary institutions cannot be considered for approval and accreditation if they are not equipped with relevant ICT facilities and even manpower. However, given a huge investment in the area of ICT in the tertiary institutions, it is important to investigate if teaching staff, who are suppose to be among the beneficiaries of the innovation, possess and utilize the skills/potentials needed to make the best use of the facilities. The problem of the study is therefore presented in a question form: what is the extent of utilization of ICT potentials by tertiary institutions' teaching staff in Enugu state?

1.2 Research Question

What are the extents of utilization of ICT potentials by Academic staff of tertiary Institutions' teaching Staff in Enugu State?

1.3Hypothesis

H_{oi}. There is no significant difference in the mean ratings of academic staff of universities, polytechnics and colleges of education on the ICT potentials utilized by academic staff of tertiary institutions in Enugu State.

2.0 Method

The study adopted the descriptive survey design. The study was carried out in tertiary institutions in Enugu State. The population for the study comprised of 5,940 academic staff from both private and public tertiary institutions' in Enugu State. The sample of the study consisted of 544 respondents in 6 tertiary institutions in Enugu State. (SOURCE: NUC 2017, and NBTE 2017).

A structured questionnaire made up of 20 items was used for data collection. The instrument was subjected to face validation by three experts, two from maths and computer education and one from measurement and evaluation, all from Enugu State University of Science and Technology (ESUT), Enugu. The reliability coefficient of the instrument was found to be 0.82 using Cronbach Alpha reliability method. The questionnaire was divided into two sections. Section A contained items on the bio-data of the respondents while section B was made up of items based on the research question. The response format adopted was a four point scale of Very Great Extent (VGE), Great Extent (GE), Low Extent (LE), and Very Low Extent (VLE) with weighted value of 4, 3, 2 and 1 points respectively. Three research assistants helped the researcher to administer the questionnaire to the respondents. All the 544 copies of the questionnaires were duly completed, retrieved and used for

the study. The return rate was 100%. In this study, the research questions were answered using mean and standard deviation. A mean score of 2.50 and above was considered as Great Extent utilization of ICT potentials while mean score below 2.50 was considered Low Extent utilization of ICT potentials. The hypothesis was tested using ANOVA at 0.05 level of significance.

3. Results

The following are the results of the data analysis.

Research Question 1: To what extent do academic staff of universities, polytechnics and colleges of education teaching staff utilize the ICT potentials required for teaching and learning in tertiary institutions in Enugu State?

The results for research question 1 are shown in Table 1

Table 1: Means scores and standard deviation of the respondents on the extent universities, polytechnics and colleges of education academic staff utilize the ICT potentials required for teaching and learning in tertiary institutions.

Table 1 Extent of utilization of ICT Potentials by Academic Staff of Tertiary Institutions Teaching Staff in Enugu State.

n=544

S/N	Academic Staff Utilize ICT Potentials To:	VGE 4	GE 3	LE 2	VLE 1	X	SD	DECISION
1.	Use internet and log into visual library	122	123	139	160	2.38	1.12	Low extent
2.	Use examination scoring machine	111	130	142	161	2.35	1.10	low extent
3.	Prepare slides and use power points	93	108	118	225	2.12	1.13	Low extent
4.	Use institutional website (www)	133	136	137	138	2.48	1.11	Low extent
5.	Use functional email address	125	134	142	143	2.44	1.11	Low extent
6.	Use electronic class roll	122	139	140	143	2.44	1.10	Low extent
7.	Use printer	125	128	134	157	2.40	1.13	Low extent
8.	Use close circuit television (CCTV)	126	127	131	160	2.40	1.13	Low extent
9.	Use overhead projector	95	105	108	236	2.10	1.14	Low extent
10.	Use satellite dish for global information	125	135	139	145	2.44	1.11	Low extent
11.	Use scanner	126	128	145	145	2.43	1.11	Low extent
12.	Use video tape player	96	138	146	164	2.30	1.08	Low extent
13.	Use television set	127	128	140	149	2.42	1.12	Low extent
14.	Use computer connected to internet	126	134	140	144	2.44	1.11	Low extent
15.	Use departmental email address	131	136	148	149	2.38	1.09	Low extent
16.	Use reprographic resource for example photo-copying machine	126	133	139	146	2.43	1.11	Low extent
17.	Use internally produced educational software	119	136	137	152	2.40	1.11	Low extent
18.	Use departmental computer laboratories	122	126	138	158	2.38	1.12	Low extent
19.	Use cyber café	124	132	136	152	2.41	1.12	Low extent
20.	Use computer networking (Local Area Network/ Wide Area Network	114	129	136	165	2.35	1.12	Low extent
	Grand Mean and Standard Deviation					2.37	1.11	Low Extent

The results from Table 1 above showed the ICT potentials utilized by tertiary institutions' academic staff in Enugu State. From the table, the mean ratings of all the items from 1-20 were less than the cut-off point of 2.50. This implies that the respondents disagreed with the items.

3.1 Hypothesis

There is no significant difference in the mean rating of ICT potentials utilized by academic staff of universities, polytechnics and colleges of education academic staff on the ICT potentials utilized by them.

Table 2: Results of Analysis of variance on the mean ratings of academic staff of universities, polytechnics and colleges of education academic staff on the utilized ICT potentials by them

	Sum of Square	DF	Mean Square	F	Sig	Decision
Between Groups	.879	2	.440	7.181	.00	Reject
Within Groups	33.120	541	.061			
Total	33.999	543				

The result in table 2 above showed that F value for the difference in mean ratings of universities, polytechnics and colleges of education academic staff on the ICT potentials utilized by them in Enugu State. This is significant at 0.00 level of significance which is less than 0.05 set for the study. The null hypothesis is therefore, rejected. This means that there was significant difference in the mean ratings of universities, polytechnics and colleges of education academic staff on the ICT potentials utilized by them in Enugu State.

4.0 Discussion

Results of data analysis in table 1 showed that the ICT potentials utilized by academic staff of tertiary institutions in Enugu State are all low. These potentials are considered inadequate for academic staff of tertiary institutions, especially considering the nature of their job (Gahalla, 2012). The finding agrees with the submission of Fawowe (2012) who noted that tertiary institutions staff in Nigeria are yet to attain a high level of ICT integration. Hence academic staff are ill-equipped with relevant ICT potentials. The finding however, revealed that academic staff fall short of the potentials listed by Davison, (2014) as the minimum standard expected of academic staff in tertiary institutions. Considering the important role of ICT in national development, it can be asserted that academic staff of tertiary institutions in Enugu State do not utilize adequate ICT potentials needed in the 21st century to compete and collaborate with their contemporaries in developed nations. There is, therefore, the need for government to put measures in place to address this trend.

5. Conclusion

The results revealed that Academic staff of tertiary institutions in Enugu state do not utilize the relevant ICT potentials needed for teaching and learning.

Recommendations

Based on the findings of the study, the following recommendations were made:

Federal and state governments should improve budgetary allocations to tertiary institutions to enable them meet the teaching and research needs.

Academic staff of tertiary institutions should, on regular basis be sponsored by the institutions to attend conferences, workshops and seminars to keep them abreast with global trends in teaching and research.

Relevant stakeholders such as Ted Fund, donor agencies and alumni should be tasked on the need to provide functional ICT infrastructure in tertiary institutions.

Academic staff of tertiary institutions should strive to acquaint themselves of the opportunities to be ICT compliant to be with other staff in developed nations. This they can achieve by buying personal computers, enrolling in ICT lessons, etc.

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