

EXTENT OF POSSESSION 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 possessed 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 possess 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 possessed 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.*

Index Terms— Information and Communication Technology, Academic Staff, Tertiary Institutions and potentials.

Introduction

Education can be defined as the process of facilitating learning or the acquisition 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 programme 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

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durable and sustainable development (Agoola, 2007). 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.

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, 2007). Information and Communication Technology (ICT) potentials refer to 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).

Purpose of the Study

The purpose of the study was to ascertain the information and communication technology potentials possessed by academic staff of tertiary institutions in Enugu State. Specifically, the study was aimed at finding out the extent universities, polytechnics and colleges of education possess the ICT potentials required for teaching and learning in tertiary institutions' in Enugu State.

Research Question

One research question was formulated to guide the study

1. What are the ICT potentials possessed by tertiary institutions' teaching staff in Enugu State?

Hypothesis

One null hypothesis was formulated to guide the study. It was tested at 0.05 level of significance.

H_{0i} . There is no significant difference in the mean ratings of ICT potentials possessed by academic staff of universities, polytechnics and colleges of education academic staff on the ICT potentials possessed by them.

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 science 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 possession of ICT

potentials while mean score below 2.50 was considered Low Extent possession of ICT potentials. The hypothesis was tested using ANOVA at 0.05 level of significance.

Results

The following are the results of the data analysis.

Research Question 1: To what level of extent do academic staff of universities, polytechnics and colleges of education teaching staff possess 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 possess the ICT potentials required for teaching and learning in tertiary institutions.

Extent Of Possession Of ICT Potentials By Academic Staff Of Tertiary Institutions Teaching Staff In Enugu State.

n=544

S/N	Academic Staff Possess ICT Potentials To:	VGE 4	GE 3	LE 2	VLE 1	\bar{X}	SD	DECISION
1.	Use internet and log into visual library	120	139	142	143	2.43	1.10	Low extent
2.	Use examination scoring machine	124	126	130	164	2.38	1.14	Low extent
3.	Prepare slides and use power points	87	94	102	261	2.01	1.13	Low extent
4.	Use institutional website (www)	126	128	140	150	2.42	1.12	Low extent
5.	Use functional email address	70	89	94	291	1.89	1.10	Low extent
6.	Use electronic class roll	122	133	140	149	2.42	1.11	Low extent
7.	Use printer	110	133	133	168	2.34	1.12	Low extent
8.	Use close circuit television (CCTV)	119	136	143	146	2.42	1.10	Low extent
9.	Use overhead projector	118	129	146	151	2.40	1.11	Low extent
10.	Use satellite dish for global information	128	131	138	147	2.44	1.12	Low extent
11.	Use scanner	112	117	141	174	2.31	1.13	Low extent
12.	Use video tape player	104	108	121	211	2.19	1.15	Low extent
13.	Use television set	74	85	92	293	1.89	1.11	Low extent
14.	Use computer connected to internet	103	117	142	182	2.26	1.11	Low extent
15.	Use departmental email address	113	134	144	153	2.38	1.10	Low extent
16.	Use reprographic resource eg photocopying machine	121	134	143	146	2.42	1.11	Low extent
17.	Use internally produced educational software	125	135	135	149	2.43	1.12	Low extent
18.	Use departmental computer laboratories	110	137	138	159	2.36	1.11	Low extent
19.	Use cyber café	120	123	133	168	2.36	1.14	Low extent
20.	Use computer networking (Local Area Network/Wide Area Network)	119	120	140	165	2.35	1.13	Low extent
	Grand Mean and Standard Deviation					2.31	1.12	Low Extent

The results from Table 1 above showed the ICT potentials possessed 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.

Hypothesis

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

Discussion

Results of data analysis in table 1 showed that the ICT potentials possessed by academic staff in 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, (2008) 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 possess 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.

Conclusion

The results revealed that the ICT potentials possessed by academic staff of tertiary institutions in Enugu are inadequate, considering the global standards. This points to the fact that academic staff are not well equipped with the relevant potentials needed by tertiary institutions.

Recommendations

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

1. Federal and state governments should improve budgetary allocations to tertiary institutions to enable them meet their teaching and research needs.
2. 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.
3. Relevant stakeholders such as TeTFund, donor agencies and alumni should be tasked on the need to provide functional ICT infrastructure in tertiary institutions.

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

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