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POSSIBLE WAYS FOR ENHANCING THE UTILIZATION OF ICTs BY EDUCATORS OF TERTIARY INSTITUTIONS IN ENUGU STATE, NIGERIA

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Abstract

This study examined the possible ways to enhance the utilization of Information and Communication Technology (ICT) by educators of tertiary institutions in Enugu State. The study adopted a descriptive survey research design, and the population consisted of 5,970 educators from both private and public tertiary institutions in Enugu State. A structured questionnaire on possible ways to enhance use of ICTs by educators was administered to 544 respondents selected from Six (6) different tertiary institutions in Enugu State. The collected data was later analyzed using Mean and standard deviation, while the hypothesis was tested using ANOVA at 0.05 level of significance. The findings show that most of the participants agreed that the provision of relevant infrastructures and facilities such as steady electricity, good internet connection, functional computer systems and laboratories, increased investment in ICT, staff development programme, increased ICT awareness among educators and formulation of robust policies that support the use of ICT would go a long way to enhance the use of ICTs by educators of tertiary institutions in Enugu State. We concluded that the use of ICTs by educators has become more important than ever before due to the emerging trends in education, hence the need for relevant authorities to provide the supportive infrastructures to encourage and empower educators to integrate ICTs and other emerging educational technologies in the teaching and learning process.

Keywords: ICT, Edutech, Academic Staff, Tertiary Institution, Enugu State.

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 individuals useful to themselves and the society. 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, 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.

Education is now moving towards technology-based learning which allows the adoption and integration of different learning technologies in the teaching learning process (Onyema, 2019b). Information and Communication Technology (ICT) is 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; Onyema, 2019). Information and Communication Technology (ICT) potentials refer to various opportunities offered by use or integration of technologies in the teaching and learning process (Onyema, 2019). ICT is also term for Information Communication and Technology (ICT) 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. The increasing use of ICTs in education has modified teachers' content and delivery as well as communication patterns with students (Onyema and Deborah, 2019).

ICT have increasingly become an invaluable asset in education (Owolabi & 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 enhancing academic productivity and performances (Owolabi & Agoola, 2011). The demand for technology in different aspect of labour market and professions have increased the need for all educational institutions to adopt relevant technologies to improve the staff and students' digital literacy skills to be able to compete favourably in the world of work (Onyema et al, 2019). Ellis and Loveless (2013) opined that higher education pedagogy can neither be isolated from academic achievement nor from the teaching process and innovation. The study affirms that the potential role of information and communication technology in higher education cannot be overlooked. Chan et al. (2013) in another study, made a similar observation and assigned great significance to the critical function of ICT in democratizing the university education and meeting new and dynamic demands of graduate students.

However, in spite of the potential benefits of ICT, many studies have identified various challenges that often hinder the utilization of ICT gadgets by educators in tertiary institutions in Nigeria. For instance, a study by Onyema et al (2020) which examined the impact of emerging technologies on the job performance of educators in selected tertiary institutions in Nigeria, showed that poor infrastructures such as: poor electricity supply, network issues, unavailability and accessibility issues, often inhibit tertiary institution educators from integrating emerging technologies in the teaching and learning process. While Anene et al (2014) also found that the use of ICTs in Nigerian education system is limited by poor technical infrastructure, financial restrictions, lack of computer literacy and Internet connectivity problems. Considering the emerging potentials of ICTs in higher education, there is a need to examine the possible ways that could enhance the use and integration of ICTs by educators in tertiary institutions in order to remove the obstacles that

hinder educators from maximizing the opportunities offered by educational technologies. There seem to be a dearth in literature regarding this, particularly in Enugu State. Thus, the present study attempted to fill that gap as it examined ways to enhance the utilization of ICTs by educators in tertiary institutions in Enugu State, Nigeria.

Purpose of the Study

The purpose of this study was to examine the possible ways to enhance the utilization of ICTs by educators of tertiary institutions in Enugu State. Specifically, the study was aimed at finding out possible ways that could be used to enhance the use of ICTs by University, Polytechnics and Colleges of Education educators in Enugu State, Nigeria.

Research Question

What are the possible ways that can be used to enhance the utilization of ICTs by educators of tertiary institutions in Enugu State?

Hypothesis

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

Ho₁. There is no significant difference in the mean scores of educators of universities, polytechnics and colleges of education on the possible ways to enhance use of ICTs.

Method

The study adopted the descriptive survey design. The population of the study consists of 5,970 educators from both private and public

tertiary institutions in Enugu State. While the sample consists of 544 respondents selected from Six (6) different tertiary institutions in Enugu State. The sample was selected using purposive sampling technique. A total of 544 structured questionnaires made up of 13 items were administered to respondents that consist of educators from the selected tertiary institutions. The response format adopted was a four point likert scale - Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD) with weighted value of 4, 3, 2 and 1 points respectively. The instrument was subjected to face validation by three experts in measurement and evaluation 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. All the 544 copies of the questionnaires were duly completed, retrieved and used for the study. Thereafter, collected data were presented using mean and standard deviation. A mean score of 2.50 and above was considered as Agree while mean score below 2.50 was considered Disagree. While 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: What are the possible ways that can be used to enhance the utilization of ICTs by educators of tertiary institutions in Enugu State?

Table 1: Possible ways for enhancing the utilization of ICTs by educators of Tertiary Institutions in Enugu State. n=544

S/N	Items	SA 4	A 3	D 2	SD 1	\bar{X}	SD	DECISION
1.	Provision of constant electricity supply in schools.	205	113	106	120	2.74	1.18	Agree
2.	Recruitment of skilled competent ICT teaching staff	191	121	108	124	2.70	1.17	Agree
3.	Periodic training of educators on ICT	210	106	119	109	2.77	1.16	Agree
4.	Partnership with private sector on provision of ICT gadgets and experts.	214	108	106	116	2.77	1.18	Agree
5.	Provision of supportive infrastructure resources like good internet connection and increased awareness of ICT potentials.	185	131	124	104	2.73	1.12	Agree
6.	Replacement of obsolete/outdated ICT facilities	201	111	108	124	2.72	1.18	Agree
7.	Provision of more computers and functional computer laboratories/ICT units	212	109	108	124	2.72	1.18	Agree
8.	Sponsorship of staff development programmes.	194	114	113	123	2.70	1.17	Agree
9.	Improvement of ICT project implementation strategy	196	139	103	106	2.78	1.13	Agree
10.	More budget and investment in ICT infrastructure	189	122	118	115	2.71	1.15	Agree
11.	Improved ICT maintenance culture in schools	188	126	108	122	2.70	1.16	Agree
12.	Interest in ICT application / use on the part of educators	182	127	121	114	2.69	1.14	Agree
13.	Holistic approach towards the development of ICT in education plans and policies.	183	124	108	129	2.66	1.17	Agree
Grand Mean and Standard Deviation						2.72	1.16	Agree

The results from Table 1 above showed the possible ways for enhancing the utilization of ICTs by educators of tertiary institutions in Enugu State. From table 1, the mean ratings of all the items from 1-13 were more than the cut-off point of 2.50. This implies that the respondents Agreed with the items. This result is consistent with the earlier recommendations of some previous studies (Isuku, 2018; Onyema, 2019; Anene et al, 2014; Fawowe, 2012) which

advocated the need for provision of relevant infrastructures like electricity, good internet connections, trainings and ICT gadgets to support the integration of technology in the teaching and learning process.

Hypothesis

There is no significant difference in the mean scores of educators of universities, polytechnics and colleges of education on the possible ways to enhance use of ICTs.

Table 2: Results of Analysis of Variance of the Mean Scores of Educators of Universities, Polytechnics and Colleges of Education on the possible ways to enhance use of ICTs.

	Sum of Square	DF	Mean Square	F	Sig	Decision
Between Groups	5.965	2	2.983	9.73	.00	Reject Ho
Within Groups	165.930	541	.307			
Total	171.895	543				

The result in table 2 above showed the F value for the difference in mean ratings of educators of universities, polytechnics and colleges of education on the possible ways to enhance use of ICTs. This is significant at 0.00 level of significance which is less than 0.05 set for the study. This means that there was significant difference in the mean ratings of educators of universities, polytechnics and colleges of education on the possible ways to enhance use of ICTs.

Discussion

The findings show that most of the participants agreed that the provision of relevant infrastructures and facilities such as steady electricity, good internet connection, computer systems, or laboratories, training of staff, increased ICT awareness among educators and formulation of robust policies that support the use of ICT would go a long way to enhance the use of ICTs by educators of tertiary institutions in Enugu State Nigeria. Educators who participated in the study acknowledged the importance of ICT application in their daily activities and the need for provision of supportive infrastructures to enhance their capabilities and chances to utilize ICTs in their work. The finding agrees with the submission of Fawowe (2012) who noted that most tertiary institutions in Nigeria are ill-equipped with relevant ICT infrastructures to support the integration of ICTs by educators. It also supports the position of Olutola and Olatoye (2015), that the use of ICTs in Nigerian education system is limited by poor technical

infrastructure, lack of computer literacy and internet connectivity problems, but educators can be encouraged to use ICTs by addressing the hindrances. If the necessary digital infrastructures and trainings are provided for educators, it would go a long way to empower them to have 21st century competencies to teach the new generation of learners and to prepare students for the future. Therefore, relevant authorities should put measures in place to enhance the use of educational technologies in line with the emerging trend in education.

Conclusion and Future Work

The study highlights the possible ways for enhancing the utilization of ICTs by educators of tertiary institutions in Enugu State. It reemphasizes the growing importance of technology-based education and the need for educators to be empowered to integrate emerging technologies in the teaching and learning process. The goal of integration of ICTs in education can only be achieved if the supportive infrastructures and trainings are provided as proven in this study. The various ICTs should be made available and accessible to educators to enable them maximize its potentials in the teaching and learning process. Thus, the government and other stakeholders in the education sector has to do more to fund and equip educational institutions to enhance their abilities to adopt and use emerging educational technologies in their teaching and learning process. Future work would focus on ways to promote use of ICT in schools in rural areas.

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