



EXTENT OF UTILIZATION OF ICT IN TEACHING AND LEARNING IN UNIVERSITIES IN ENUGU STATE

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Abstract: *The study ascertained the utilization of ICT in teaching and learning in universities in Enugu State. Descriptive survey research design was adopted for carrying out this study. The population of this study comprised all the students and lecturers in universities domiciled in Enugu State. This includes two public and three functional private universities in Enugu State. Multi-stage sampling was used to select 240 respondents that consist of 160 students and 80 lecturers. A researcher developed instrument titled ICT Utilization Questionnaire (ICTUQ) was used for data collection. Structured questionnaires. Data were arranged and analyzed according to research question and the hypothesis that guided the study. The findings of the study were that: Hard drives are not utilized in storing students' data, overhead projectors are not used for presentation/delivery of lectures, computers are not used to assess students' response/performance, utilization are correspondingly low. Based on these findings, the conclusion is that there is still room for universities to take advantage of the various opportunities ICT facilities can offer as instructional aid. The major educational implication is that it is inevitable for the students to be exposed and proficient with ICT resources in order to have the required skills, otherwise they cannot compete favorably with their counterparts across the globe. While the major recommendation is that provision of ICT facilities at the University campuses should be prioritized so that they are properly equipped for functional teaching and learning of their courses.*

Keywords: ICT, Utilization, Teaching And Learning In Universities

INTRODUCTION

One of the objectives of university education is to contribute to national progress through high level relevant manpower development. Recognizing the role of ICT in achieving these objectives, educational institution should be ICT based structure their educational programs to minimize the technology gap between classroom and the world of work. Since learning experience is the interaction between the learner and the external environment in the development to which he can find meaning to, the streamlining process requires effective integration of ICT into existing context in providing learners with knowledge of specific subject areas, in order to promote transfer of learning and to enhance professional productivity after school.

Information and Communication Technology facilities is the combination of items of equipment (hardware)

and computer programmes (software) that allow us to access, retrieve, store, organize, manipulate and present information by electronic means which can robustly support teaching, learning and range of activities in educational administration. Application of these devices converts information, text messages, sound and motion to common electronic form. According to Nwangwu, Obi and Ogwu (2012), Information and Communication Technology is a set of activities which is facilitated by electronic means such as processing, transmission and display of information. Chuma (2018) opined that ICT has considerably altered peoples' way of life in the 21st Century. Among the major areas this change is mostly felt are in the teaching and learning process. Aralu and Adetimirin (2014) thus defined ICT as an innovative approach for delivering computer mediated, well-designed, learner-centered and interactive learning environments to anyone, anyplace, anytime by utilizing

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the internet technologies concerned with instructional design principles. While Anaza and Olorunmonu (2015) noted that with the use of ICT, teachers can take students beyond the traditional classroom limits to ensure their adequate participation in the teaching and learning process and create virtual environment to experiment and explore.

In line with the above thought, adopting ICT in Nigerian universities therefore entails the process of using ICT in arranging logically human and material resources and performances available for education, for transmission of skills, knowledge, vocation and culture through efficient teaching, learning and research. ICT has also brought about changes in approaches to teaching, especially at the under-graduate level, with standardised courses often delivered online, allowing for different use of classroom time with more small seminars and interactive discussions, and greater time spent with students on their individual projects (Tremblay, Lalancette & Roseveare, 2012).

This trend is unlikely to abate with the further growth in total enrolments of students in the nearest future. Hence, there is the need for pedagogical approaches that are responsive to the emergence of new technological approaches. Furthermore, one of the most imperative structural changes in recent times for higher education systems that will be significant and closely integrated with the labour market needs of a modern economy is the adoption of ICT in the teaching and learning process. This is inevitable so that they could also be able to respond to increasingly diverse needs of the labour market and to accommodate the growing diversity of individual students' motivations, expectations and career plans.

The utilization of ICT as pedagogical facilities imports usable and demonstrable skills to the learner for productive curriculum.

The National Universities Commission over the years established a virtual learning website and most Nigerian tertiary institutions are already having computer studies as part of their academic programmes, but according to Zubairu (2014), its impact is yet to be seen and most of

them are still theoretical in nature to impact meaningfully on the society. In fact, ICT seem to have more impact on administrative services such as admissions, registration, fee payment and purchasing than on the fundamentals of classroom teaching and learning. In consequence, despite the prevalent nature of ICT in virtually every aspect of human endeavours, they may not have been extensively integrated into the teaching and learning process in schools. Factors such as lack of funds, computers, internet and network facilities have been blamed for these grossly inadequacy in our tertiary institutions (Ajani, 2016).

Unfortunately, Nigeria universities seem to be grappling with the problem of inadequate ICT infrastructure. According to Philip, Oluwagbemi and Oluwaranti (2010), tertiary institutions in Nigeria lack adequate infrastructure to effectively tap into the opportunities offered by the cyberspace. Onasanya Shehu, Oduware and Shettu (2010) further assert that most tertiary institutions lecturers in Nigeria lack adequate pedagogical knowledge for effective utilization of ICT resources for teaching while facilities are not even enough for staff and students' use in most Nigeria universities yet internet facilities are non-existent in many campuses. Moreover, where they are available, they are plagued by one problems or another, including low access speed, insufficient computers for users, poor power supply etc (Egoeze, Misra & Akman, 2014).

Statement of Problem

Information and Communication Technologies (ICTs) offer innumerable potential in enhancing the quality and quantity of teaching and learning in tertiary institutions. It has been observed that effective utilization of ICT transform the way education is delivered and promotes new opportunities, therefore, enhancing scholarship and competencies. This can only be attained when facilitators and students are exposed to their use in the course of teaching and learning.

The problem of this study therefore is that there is need for an empirical finding on the utilization of these ICT



facilities in universities in Enugu State that can inform policy action by stakeholders.

Purpose of the Study

The main purpose of this study is to find out the extent of utilization of ICT in teaching and learning in universities in Enugu State. Specifically, the study sought to:

1. Find out the extent of utilization of ICT facilities in teaching and learning in universities in Enugu State.

Research Questions

The following research questions guided the study.

1. To what extent are ICT facilities being used for teaching and learning of universities student in Enugu State?

Hypotheses

The following null hypotheses were tested at 0.05 level of significance

Ho₁: There is no significant difference in the mean responses of students and lecturers on the utilization of ICT facilities for teaching and learning of universities students in Enugu State.

RESEARCH METHOD

Research Question one: To what extent are ICT for teaching and learning in universities in Enugu State utilized?

Table 1: Mean ratings and standard deviations on the extent ICT facilities are utilized in teaching and learning in universities in Enugu

S/N	In the course of teaching/teachers, facilitators:	X	SD	Decision
1	Store students data in Drive	2.20	1.7	Not Utilized
2	Use overhead projector for presentation /delivery lectures	2.25	1.6	Not Utilized
3	Use computer to assess students response/performance	1.85	1.8	Not Utilized
4	Use internet to search for material for teaching	2.88	1.7	Utilized
5	Use Microphone and Loudspeaker in large class	1.80	1.4	Not Utilized
6	Use computer to demonstrate mastery of subject matter	2.16	1.5	Not Utilized
7	Use smart board application in teaching	1.72	1.9	Not Utilized
8	Use emails to get feedback from Students	1.96	1.6	Not Utilized
9	Use search engine to download current information	2.64	1.5	Utilized
10	Use multimedia for class management and Control	1.64	1.6	Not Utilized
11	Use of University website for course materials/information and online access to the university	2.98	2.1	Utilized

The researcher adopted descriptive survey design; this study was carried out in universities in Enugu State. The population of this study comprised all the students and lecturers in universities domiciled in Enugu State. The sample for this study is 240 respondents. This consists of 160 students and 80 lecturers. Stratified proportionate sampling technique was first used to draw one public and one private university from the population. Purposive sampling was subsequently used to select 4 science and 4 arts based departments each from the two universities that made the sample. At the departmental level, quota sampling technique was used to select 10 lecturers and 20 students from each department. The sampling for this study was thus in multi-stage. The instrument for data collection was questionnaire developed by the researcher; the instrument was validated by three experts. Cronbach alpha was used to compute the internal consistency of the instrument, the reliability index was .81 the researcher uses research assistant for data collection. Mean and standard deviation was used to answer the research questions while t test was used to answer the research hypotheses.



Table 1 above presents the mean ratings of the opinions of the respondents with regard to what extent are available ICT facilities for teaching and learning in universities in Enugu State utilised. The result from the above table shows that the respondents to a great extent disagreed that the ICT facilities in the Universities in Enugu State are utilized for teaching and learning with the mean score which is less than 2.5 set for the study. Again, the respondents, to a low extent agreed that website, search engine and internet are utilized in the Universities in Enugu with mean scores which are

above 2.5 set for the study. Therefore, the result from the table shows that, to a great extent, the most needed and available ICT materials are not utilized for teaching and learning in the Universities in Enugu State.

Hypotheses Testing

Ho₁: There is no significant difference in the mean responses of students and lecturers on the utilization of ICT facilities for teaching and learning in universities in Enugu State.

Table 2. Summary of t-test on the responses of students and lecturers on the utilization of ICT facilities for teaching and learning in universities in Enugu State.

Respondents	N	X	SD	DF	t-cal	α	t-crit	Decision
Students	160	2.1	1.7	238	-1.39	0.05	1.96	Significant
Lecturers	80	2.2	1.7					

Table 2, shows that the t-calculated of -1.39 is less than the t-critical value of 1.96 at 238 degree of freedom at 0.05 level of significance. Since the t-calculated value is less than the t-critical value, the null hypothesis is rejected. This implies, that there is no significant difference in the mean responses of students and lecturers on the utilization of ICT facilities for teaching and learning in universities in Enugu State. The null hypothesis was rejected while the alternate hypothesis was not rejected.

Findings.

1. The ICT materials in the Universities in Enugu State are to a great extent not utilized for teaching and learning, and there is no significant difference in the mean rating of both students and Lecturers on the extent to which ICT facilities are Utilised in the Universities in Enugu State.

2. The use of ICT in teaching and learning can be improved if given the needed attention from the educational stakeholder in the Universities in Enugu State and there is no significant different in the mean rating of both students and lecturers.

Utilization of available ICT in teaching and learning in universities in Enugu State

Findings of this present study show that at the university campuses in Enugu state, internet is used to search for material for teaching, search engines are used to download current information, students and lecturers use University website for course materials/information and online access to the university. These findings support those made by Fabunmi (2012) those students frequently use internet centers as places of accessibility to get information through ICT teaching and learning. This has become imperative because ICT culture has come to stay globally in all higher institutions where the University management uses the internet to disseminate vital information.

A general look at the findings on the level of utilization of other vital ICT facilities is however not promising. This is because findings of this study indicate that Hard drives are not utilized in storing students' data, overhead projectors are not used for presentation/delivery of lectures, computers are not used to assess students' response/performance, use of Microphone and Loudspeaker in large classes are minimal while computers are not used to demonstrate



mastery of subject matter by lecturers. The study also observed that smart board applications are not utilized in teaching, emails are not used to get feedback from students and multimedia technology are not being utilized for class management and control. These findings are similar to those made by Ajani (2016) which indicates that teachers are lagging behind in the use of ICT and that there are inadequate ICT facilities in Colleges of Education. The findings of Okolocha and Nwadiani (2015) on the utilization of ICT resources in teaching among Business Educators in tertiary institutions in south Nigeria also revealed that the few ICT resources are rarely utilized in teaching.

A null hypothesis was also tested on the utilization of ICT facilities in teaching and learning in Universities in Enugu state. It was accepted when the t-calculated of -1.39 is found to be less than the t-critical value of 1.96. The study therefore concludes that there is no significant difference in the mean responses of students and lecturers on the utilization of ICT facilities for teaching and learning in universities in Enugu State.

Conclusions

This study assessed the availability and utilization of ICT in teaching and learning in Universities in Enugu State. The following conclusions are made on the basis of the findings of the study:

1. In view of the above findings of this study, it is concluded that a good number of ICT resources used in content delivery by lecturers are not effectively utilized since they are not available, though lecturers perceived the usefulness of ICTs as very useful in their teaching.
2. Government funding is key in provision of adequate new technologies for teaching and learning in Universities in Enugu State.

Recommendations from the findings of the Study

Bearing in mind the findings of this study, the following recommendations are made towards improving the availability and utilization of ICT in Universities in Enugu State

1. Government should enforce recruiting only lecturers who have demonstrable competencies in using

new technologies in teaching and learning in Institutions of higher learning.

2. There should be a functional internet that will cater for the need of both lecturers and students.
3. The government should ensure that a stable power supply is provided in the country. This will go a long way in making ICT or e-learning practicable and interesting.
4. Emphasis should be given to the pedagogy behind the utilization of ICTs for teaching/learning activities.

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