

Usage of ICT for Smart Learning Programme in IMO State University

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Abstract— This paper examined ICT usage of ICT for smart learning programme in Imo State University. The investigation was a survey. The population comprised five hundred and twenty (520) lecturers in Imo State University of which 250 lecturers were selected for the study using a stratified sampling technique. Out of 250 questionnaires administered to the lecturers, 200 questionnaires were successfully completed and returned giving the response rate of 80%. Data were analysed using descriptive statistics such as percentages, and frequency distributions. The findings showed that external devices have the highest level of utilization with a mean of 3.75, statistical packages show the highest non utilization amongst the ICT facilities by lecturers, the extent utilization mobile phone devices have a mean of 3.99 and 100% utilization by the lecturers of Imo State University, the extent of Computer and internet utilization show high usage by lecturers. The study thus recommended There is need for regular workshops aimed at increasing lecturers' level of utilization of these facilities in teaching in other to ensure optimal use by the lecturers in their teaching activities.

Index Terms— Information Communication Technology, Smart learning, facility Utilization.

I. INTRODUCTION

The introduction of diverse ICT facilities has resulted in significant changes in the worldwide educational system. This progress has resulted in significant investment in various types of ICT infrastructure for teaching and learning. The provision of these facilities in higher education has been shown to improve teaching and learning (Hamilton-Ekeke&Mbachu, 2015); to facilitate self-paced learning (Shahmir, Hamidi, & Bagherzadeh, 2011); and to reduce time and space obstacles for learning (Oyovwe-Tinuoye&Adogbeji, 2013; Krishnaveni&Meenakumari, 2010). Furthermore, studies have demonstrated that these features improve both student learning and instructor instruction (Apagu&Wakili, 2015; Stephen, 2013).

ICT is being employed in a variety of educational settings to improve the quality of teaching and learning. The usefulness of ICT to academic personnel at a higher education institution has also been documented (Hamilton-Ekeke&Mbachu, 2015).

Furthermore, research have demonstrated that integrating ICT into education provides many types of multimedia channels that give a diversity of techniques and expertise (Nusir, Alsmadi, Al-Kabi&Sharadgah, 2013). The use of ICT in education has also been proven to be beneficial in terms of

guiding students' self-learning, critical evaluation of students' performance, and promotion of high-quality communication skills (Barakabitze, 2014).

In 2001, the Federal Government of Nigeria adopted an ICT strategy in light of the benefits of ICT. This policy resulted in the foundation of the National Information Technology Development Agency (NITDA). NITDA's goals include ensuring that ICT resources are easily available to facilitate efficient national development and integrating ICT into the mainstream of education and training (NITDA, 2017).

II. STATEMENT OF PROBLEM

The use of ICT in learning processes in most universities are yet to be fully adopted by students and lecturers of these institution. Student in higher institutions still find it challenging in application of ICT skill in writing their exams and gathering information that will efficiently aid their programme of study. This challenge may be as a result of lack internet services as in the case of provision of WIFI services by this institution.

However, investigations on lecturers' use of ICT facilities for instructional purposes have shown contradictory results. Some have demonstrated a poor degree of ICT usage in the classroom (Olelewe&Okwor, 2017; Archibong, Ogbiji&Aniaobi-Idem, 2010; Nwachukwu &Asom, 2015). Others have pointed out that the usage rate is high (Enakrire&Ocholla, 2017; Emeasoba&Ezenwafor, 2015). This appears to show that research on the extent of ICT usage in teaching are ambiguous and vary from institution to university.

Studies have demonstrated that ICT facilities for teaching purposes are available in universities (Nannim&Yushau, 2019; Agboola, Okorie, Omotoso, Bamigboye, & Bello, 2018; Olelewe&Okwor, 2017), it is normal to expect professors to use these facilities in their classes. In this context, the researchers analyze the amount and extent to which teachers in Imo State University Owerri, Nigeria, use ICT facilities for instructional reasons. The study also looked at the impact of gender, age, degree, and years of teaching experience on lecturers' use of ICT in the classroom.

III. OBJECTIVE OF THE STUDY

The main objective of this study is to investigate on the use of ICT for smart learning programme in Imo State University. Specifically, the study tends to;

1. Ascertain the Levels of Utilization of ICT Facilities for Teaching Purposes in Imo State University.
2. Determine the Extent of utilization of ICT facilities

for teaching purposes in Imo State University.

IV. RESEARCH QUESTIONS

This paper is guided by the following research question;

1. To what extent has the Levels of Utilization of ICT Facilities enhance Teaching Purposes in Imo State University?
2. What is the extent of utilization of ICT facilities for teaching purposes in Imo State University?

V. RESEARCH HYPOTHESES

H₀: There is no significant relationship between level of utilization of ICT facilities for teaching purposes.

H₀: There is no significant relationship between the extent of utilization of ICT facilities for teaching purposes in Imo State University

VI. SCOPE OF THE STUDY

The content scope of this study is to investigate on usage of ICT for smart learning programme in Imo State University. The study captures ICT learning tools for education enhancement purposes.

VII. CONCEPTUAL REVIEW

A. A CONCEPT OF LECTURERS AND UNDERGRADUATE ICT FACILITY UTILIZATION

Universities are seen as where knowledge is generated, gathered, and transferred. To make learning in a university to be functional and effective, there must be lecturers and students especially undergraduates. Undergraduate students are students in tertiary institutions seeking after their first-degree programmes in different fields Adeoye & Adeoye(as cited in Colette, 2021). These students according to Jamogha, Jamogha, and Godwin (2020) constitute a greater percentage of students in universities. For undergraduate students to learn effectively and efficiently, they must be provided with various information resources through their university libraries to supplement their classroom learning. Today, these students can only have access to the provided information resources through the use of ICT facilities. Hence, for the undergraduate students to access these information resources to satisfy their varying and changing information needs, they must possess some requisite ICT skills to do so. This is why Madu, Vand, and Chagwa (2018) posited that it is obvious that the use of available ICT facilities/tools is preceded by user's skills which empowers them to exploit ICT and fulfil their data needs.

B. CONCEPT OF ICT LITERACY SKILLS

Nowadays, for undergraduate students to get information to support their learning and research activities, they should have the requisite ability which is alluded to as an ICT literacy skill. ICT literacy proficiencies have been variously defined by many scholars. Anyim (2018) as cited in Colette, 2021, defined ICT literacy skill as the ability to use digital

technology, communication tools, and/or networks to define, access, manage, integrate, evaluate, create, and communicate information ethically and legally to function in a knowledge society. Quadri(in Ukaegbu&Wegwu, 2019) as cited in Colette, 2021, described ICT skills as the abilities for the collection, effective processing, storing, transmitting, and dissemination of information that enables the utilization of computers and related advances to meet individual, scholarly, and work market objectives. ICT education abilities are important as the new literacy is required for effectively using ICT to accomplish functions in an information age (Ugwuanyi, 2011). The author further expressed that the ability of users and librarians alike to use the Internet depends on the degree of proficiency, training, and the advances concerned. Similarly, Israel and Edesiri (2013) opined that ICT skill is an essential requirement for one to operate in the knowledge society of the 21st Century. Mike (2014) emphasized that outfitting undergraduates with various abilities in the university will make them naturally dependent, pertinent, and practical individuals from the general public whether employed by the government or independently employed. For this paper, the basic literacy skills that undergraduate students need to acquire while in school and which will enable them to fit into the market force on graduation such as computer, Internet, information, and media literacies skills will be dealt upon below:

C. INTERNET LITERACY SKILL

The skill that one has or needs to use the Internet is known as "Internet Literacy Skill". Obasuyi and Otabor (2012), depicted the Internet proficiency ability of university undergraduates as an overall proportion of their ability to utilize the Internet for instructive and learning purposes. Lou, Shih, Liu, Guo, and Tseng (2010) posited that Internet education is a piece of data proficiency including essential computer proficiency. The authors further posited that Internet proficiency isn't just about site examination. It incorporates the abilities it takes to peruse, disperse and assess online sources to mingle, arrange, and work together with individuals. To have Internet proficiency abilities, tertiary schools' undergraduates and lecturers ought to perform the accompanying assignments under Internet abilities: (a). capability to use the WWW (b). sending e-mail message (c). using the WWW to find specific information (d). taking part in an online discussion group and chatting (e). sending an attachment with an e-mail message. (f). downloading a file from the Internet or WWW (h). saving an image or graphic from WWW pages (i). creating a WWW page. The results of the Obasuyi and Otabor (2012) survey showed that most undergraduates could access and utilize the majority of the Internet abilities needed besides making website pages.

D. INFORMATION LITERACY SKILLS

According to Baro and Keboh (2012), the rapid advancement in Information and Communication Technologies (ICTs) has prompted the rise of data proficiency abilities throughout the planet as fundamental expertise for the 21st century. As a result, many authors have described the term "information literacy" in so many ways.

Krubu, Idhalama, and Omigie (2017), described data proficiency as the capacity to perceive a data need, proficiently access data assets, and assess data in a closing attempt to the information gap. It is a bunch of abilities required in the 21st C work-place, all the more so as “the uncertain quality and expanding quantity of information pose large challenges for society” ACRL:4 (as cited in Krubu, Idhalama&Omigie, 2017). This arrangement of abilities called data proficiency expertise is required by students in all fields of human undertaking. Data proficiency abilities are key pieces of the alumni ascribes and abilities set needed by the work-place in Nigeria (Krubu, 2015). It is a pivotal ability in the technically filled 21st century. It is perceived in the world and in Nigeria as a driving instrument for progress and improvement in this period of data expansion. Undergraduates are confronted with different and abundant data decisions in their educational programmes. This is because data is accessible in unfiltered designs, bringing up issues about its genuineness, legitimacy, and dependable quality (Baro, 2011). Accordingly, undergraduates are required to master and obtain data proficiency abilities while in the academy. The American Library Association (ALA) as referred to in (Anafo&Filson, 2014), depicted a data-educated individual as one who can (a) decide the degree of data required (b). access the required data viably and productively (c) assess data and its sources basically; (d). join chosen data into one's information base; (e) use data viably to achieve a particular reason (f) comprehend the financial, legitimate, and social issues encompassing the utilization of data; (g) access and use data morally and lawfully. Nwankwo, Obiadazie, and Ofordile (2019) in their study found that undergraduate library clients of the two universities sampled have data education proficiencies. This is because they have the information on when data is required, how to find data, assess data and use data. Kunakornsakul and Pinit (2012) discovered that the data proficiency level of undergraduates at the University of Technology was low. In Nigeria, studies by (Adetimirin, 2012; Ukpebor and Emojorho, 2012; Krubu, 2015) showed that the data education levels of Nigerian students are insufficient, even though a few undergraduates have obtained a specific degree of data proficiency including technological abilities.

E. SOURCES OF ACQUISITION OF ICT SKILLS

It was observed in the literature that undergraduate students acquire skills for ICT usage through various sources,

Table 1. The Frequency Distribution and Means of Lecturers’ Level of Utilization of ICT Facilities for Teaching Purposes.

Items	Usage	Non usage	Cannot use	Mean
Microsoft word	58 (29%)	56 (28%)	86 (43%)	2.97
Microsoft Excel	21(10.5)	54(27%)	125(63%)	3.01
Microsoft PowerPoint	31(16)	24(12%)	145(73%)	2.87
External Devices	127(64%)	29(15%)	44(22%)	3.75
Statistical Packages	26(13%)	102(51%)	77(39%)	2.05

SOURCE: FIELD SURVEY, 2021

Table 1 show the lecturers level of use of ICT facilities for teaching purposes, the result show that external devices has the highest level of utilization with a mean of 3.75, statistical

means, and ways. In Isreal and Edesiri’s (2014) study, most of the students 158 (66.4%) gained ICT abilities through the incorporation of ICT into their course of study at the university. Siddiquah and Salim (2017), showed that most of the undergraduates (53.6%) likewise concentrated on a few courses identified with a computer in their degree-program at the university. Isreal (2018), showed that the majority 189 (94.5%) of the participants acquired computer literacy skills through guidance from colleagues and friends. The least method of acquiring computer literacy was through courses offered by the university as indicated by 121 (60.5%) of the participants. Bhatti and Qureshi (2016) showed that the dominant part of the respondents learned computer literacy skills through guidance from colleagues and friends and also through trial and error. Bank, Jena, and Sethy’s (2015) study showed that about 63 (52.5%) students access the internet from a cybercafe.

VIII. METHODOLOGY

The methodology adopted for this study is the quantitative method, specifically the descriptive survey design. The population of this study is 520 lecturers of Imo State University, Owerri. A sample of 250 lecturers were selected for the study using a stratified sampling technique. Out of 250 questionnaires administered to the lecturers, 200 questionnaires were successfully completed and returned giving the response rate of 80%. The instrument consists of items on the level and extent of utilization of ICT facilities among lecturers. The questionnaire wereformulated to help the researchers in ascertaining the level at which lecturers use ICT teaching facilities in Imo State. The first part of the instrument was adapted from ICT self-audit chart (Johnston-Wilder & Pimm, 2006 in Balarabe, Fadip, 2020).

The instrument was validated and had a reliability index of 0.907. In this study, Level of utilization operationally mean how the teachers utilize their ICT knowledge in teaching. While Extent of utilization in this study means the frequency of use of ICT facilities in teaching.

IX. DATA PRESENTATION AND ANALYSIS

Levels of Utilization of ICT Facilities for Teaching Purposes The level of utilization of ICT facilities for teaching purposes in Imo State University is presented in Table 1. Frequency count, percentage, mean and Standard deviation was computed for each of the items, and remark provided.

packages revealed the highest non utilization amongst the ICT facilities captured in this study, 125 and 145 of the lecturers, representing 63% and 73% of the respondent

cannot make use of Microsoft excel and PowerPoint respectively. The least on the level of utilization of ICT facilities are the usage of statistical packages with a mean of 2.05.

Teaching Purposes The level of effective utilization of ICT facilities for teaching purposes in Imo State University is presented in Table 2. Frequency count, percentage, mean was computed for each of the items, and remark provided.

Levels of effective Utilization of ICT Facilities for

Table 2. The Frequency Distribution, percentage and Means of Lecturers’ Extent of Utilization of ICT Facilities for Teaching Purposes.

Items	Usage	Non usage	Cannot use	Mean
University web site	86 (43%)	56 (29%)	58 (43%)	2.97
Computer	171(86)	5(2.5%)	24(12%)	2.96
Mobile phone devices	200(100)	0	0	3.99
Internet	182(91%)	10(5%)	8(4%)	3.95
Statistical Packages	28(13%)	100(51%)	72(39%)	2.05

SOURCE: FIELD SURVEY, 2021

Table 1 show the lecturers level of use of ICT facilities for teaching purposes, the result show that mobile phone usage has the highest extent of utilization with a mean of 3.99, statistical packages revealed the highest non utilization amongst the ICT facilities captured in this study, 86 and 171 of the lecturers, representing 43% and 86% of the respondent can make use of the university website and computer respectively, 56 and 5 of the lecturers, representing 29% and 2.5% of the respondent do not make use of the university website and computer system, 58 and 24 of the lecturers, representing 43% and 12% of the respondent cannot make use of the university website and computer system .

X. DISCUSSION OF FINDINGS

This paper investigated on usage of ICT for smart learning programme in Imo State University, the study employed quantitative method of data analysis using simple percentages and mean, specifically the descriptive survey design.

With respect to the first hypothesis of the study on the level of utilization of ICT Facilities for Teaching Purpose, it was discovered that external devices have the highest level of utilization with a mean of 3.75. this by implication reveals that majority of the lecturers makes use of external devices to facilitate their teaching processes.

The study also revealed that statistical packages shows the highest non utilization amongst the ICT facilities captured in this study, this may be as result of additional skills required to facilitate the usage of the software programmes.

The second hypothesis revealed the extent of utilization mobile phone devices has a mean of 3.99 and 100% utilization by the lecturers in Imo State university. This implies that majority of the lecturers in Imo State University makes use of their phones for research purposes. The extent of Computer utilization by the lecturers revealed 171 and 86% usage of computer system, 5 respondents representing 2.5% of do not make use of computer system while 24 respondents representing 12% cannot use computer system.

The extent of usage of internet services reviews 91% usage, while 5% and 4% represent the lecturers non usage and cannot use internet. The extent of assessment reviews a mean of 3.95.

XI. CONCLUSION

This study investigated usage of ICT for smart learning programme In Imo State University the level and extent of utilization of ICT facilities by lecturers in Imo State University, Nigeria. The study found that lecturers in IMSU have the capability of using ICT facilities in teaching, however, they have not been using it in their teaching. The extent of use of ICT facilities in teaching by the lecturers was found to be low.

XII. RECOMMENDATIONS

There is need for regular workshops aimed at increasing lecturers’ level of utilization of these facilities in teaching should be organized. The workshop and training programme should also aim at sensitizing lecturers on the importance of using ICT facilities as it promotes students’ learning and enhance their academic achievement. Special interest should be on the newly recruited or less experienced lecturers.

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