

Availability and Utilization of Information and Communication Technology (ICT) Facilities for Effective Teaching and Learning in Universities

Olusesan A. Adelabu¹ and E.O. Adu²

¹*Faculty of Science and Agriculture, ²Faienceculy of Education,
University of Fort Hare, South Africa*
E-mail: ¹<201409080@ufh.ac.za>, ²<eadu@ufh.ac.za>

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ABSTRACT It is apparent that ICT dramatically plays a major role in the education sector, by improving the quality, effectiveness and efficiency of teaching, learning, research and educational management around the world. 100 lecturers from a public and a private university in Oyo State, Nigeria were randomly selected. Administered questionnaire was used for collecting data. Simple percentage and chi-square were adopted as a statistic tools for data analysis. The findings therefore revealed that ICT facilities were not available at the universities. ICT equipment that would improve teaching and learning should be provided by the universities management.

INTRODUCTION

ICT has been pointed out as the bedrock of the state survival and development in speedily changing world. ICT is a canopy word, which includes communiqué tools or application devices or application, which linked them. It is also very important to stress that ICT encompasses various applications for computing and satellite technology (Oviawe et al. 2011).

Both the private and public organizations have invested in the ICT industry in the state. Recently, a huge advancement and expansion has been observed in ICT tools and facilities, in the country. Millions of Nigerians have gained access to GSM, through liberalization policy of the Federal government, many more telecommunication operators and Internet Service Providers have been authorized and licensed, now operating fully nationwide (Adu et al. 2014). The demand for the 21st century knowledge in ICT basically reveals the demand for an educated citizenry and the work force continues to be on the increase, reflecting changes in the society. ICT has gained acceptance in all works of life, for example, business, medicine, politics, military, banking and education (Adu et al. 2013).

ICT has the prospective to cause a great transformation of the professional environment for educators. With the application of network technologies to research and collaborate planning, teachers can be free from the segregating milieus imposed on them in the past teaching

profession. The impact is not limited to teaching and learning only, but also on the medium through which educators acquire knowledge. The advances in technology have influenced two imperative phases of education, which involve the way prospective teachers are trained (pre-service) and how schools design continuing education for their teachers in order to learn on the job either at the physical workplace or at virtual learning (in-service) (Eze et al. 2013). Teachers are considered as members of learning environment, as they learn from each other. Exchange of ideas with one another and providing solution to collective problems are powerful means of learning among teachers. However, the demands of teaching have often disallowed consistent sharing. Luckily, technology can afford some solutions to structural problems, which serve as impediments to sustain collaboration among them (Adu et al. 2013).

Rationale of the Study

The rationale of the study was to determine whether Information and Communication Technologies (ICTs) are:

- Available for effective teaching and learning
- Adequately utilized for effective teaching and learning
- Utilized to enhance materials used in developing lecture notes for effective teaching and learning
- Impactful on effective teaching and learning

Research Questions

- What ICT facilities are available for effective teaching and learning in universities?
- Are ICT facilities adequately utilized in the effective teaching and learning in universities?
- Are ICT facilities adequately utilized to enhance materials used in developing lecture notes for effective teaching and learning?
- What are the impacts of ICT facilities on effective teaching and learning?

Literature Review

The advancement of information technologies makes progressively broader application of hypermedia in teaching and learning possible. As stated by Meleisea (2006), that regardless of the cost of the systems and their use, multimedia education builds on the elementary ideologies individual learning, interactivity and freedom of learning in terms of time and space.

In 2005, UNESCO launched the “Decade for Education for Sustainable Development,” which aims to hasten the implementation of a new vision in education, which is a call for a collaborative process towards re-orientation of educational policies, practices and programs so as to make education play its part better, in practices (UNESCO 2003; Leye 2007).

Teaching and learning has been influenced by ICTs, which have undoubtedly influenced research (Yusuf 2005). A countless deal of research has proven its benefits to the enhancement of quality in education (Al-Ansari 2011). The prospective of ICTs have proven to innovate, motivate, accelerate and engage students, helping them relate school experience to work practices, fashion economic viability for the coming generation of workers. Also, strengthening teaching and facilitating schools change (Yusuf 2005). The impact of technology, especially in education has been reported by Achille (2008).

In recent decades, exponential growth in the usage of information and communication technologies has documented, with prevalent impacts on the society and day-to-day lives. Hence, it is not unexpected to observe increase in interest, responsiveness and investment being channel into the usage of ICT in the field education worldwide. ICT plays crucial roles, which include

enhancement of quality and accessibility of education, learning environment, learning motivation and scholastic performance (Valasidou and Bousio 2011).

METHODOLOGY

Research Design

The study was conducted in Oyo State, which is an inland state in southwestern Nigeria, with its capital at Ibadan. A descriptive type of design using survey method was used for the study, while the population comprised lecturers from a higher institution of learning in Oyo State.

Sample and Sample Technique

Two (2) tertiary institutions were selected for the study, which are University of Ibadan, Ibadan U.I. (A public University) and Lead City University, Ibadan (A private University). Random sampling technique was used to select 100 lecturers from the two (2) tertiary institutions. Out of which, 30 were Professors/Associate Professors, 35 were Senior Lecturers, 20 were Lecturers and 15 were Assistant Lecturers.

Instrument

The study used self-administered questionnaires for collection of data from the respondents.

Data Administration/Analysis

The questionnaires were administered and retrieved personally by the researchers from the teacher educators. All the questionnaires (100) were retrieved. Simple percentage and chi-square were used in analyzing the data.

RESULTS

The results of the study shows that there is enough availability of ICT facilities such as telephone facilities but other ICT facilities desirable for the teaching/learning in universities in Oyo State were not available (Table 1). In addition, the findings also show that the majority of the respondents make use of ICT facilities for presentation during their lectures (Table 2). Furthermore, most of the lecturers pointed out that they make use of Internet in order to obtain relevant information for their lectures (Table 3).

Table 1: Availability of ICT facilities in the universities

S.No.	Item	Available		Not available		Total no. and %	
		Frequency	%	Frequency	%	Frequency	%
1	Computer	10	10	90	0	100	100
2	Online electronic library	-	-	-	-	-	-
3	Internet facilities in the offices	3	3	97	97	100	100
4	Telephone	100	100	-	-	100	100
5	Video recorder	4	4	96	96	100	100
6	Multimedia projector	2	2	98	98	100	100
7	CD MP3	-	-	-	-	-	-
8	Television	5	5	95	95	100	100

Table 2: Use of ICT facilities for teaching

Use of ICT	Frequently	%
Not often	18	18
Often	30	30
Very often	52	52
Total	100	100

Table 3: Materials used in developing lecture notes

Materials	Frequently	%
Previous notes	8	8
Textbooks	18	18
Journals	20	20
Materials from the internet	54	54
Total	100	100

DISCUSSION

The results of this study are in agreement with the study conducted by Ibiam (2006) (Okolocha et al. 2015) who reported that educational institutions of higher learning lack com-

puters and allied ICT facilities for efficient teaching and learning in Nigeria.

In addition, the study also showed that the majority of the respondents made use of ICT facilities in presenting their lectures to the students (Table 4). Eighteen percent of the respon-

Table 4: Chi-square ratings of respondents on their perception on the effects of using ICT facilities to teach

S.No.	Items	χ^2	P
1	Effective utilization of ICT facilities improves students' performance	30.20	P<.05
2	The use of ICT facilities for teaching and learning give better understanding to education students.	50.10	P<.05
3	Effective teaching will improve if all teacher educators have access to Internet facilities in their offices.	38.30	P<.05
4	Teaching is very interesting when performed with any ICT equipment such as laptops and power point projector.	45.70	P<.05
5	The practical approach of ICT in teaching and learning increases students' learning/achievement.	40.80	P<.05
6	ICT gives room for easy access to materials needed by students.	24.60	<.05
7	ICT facilities provide all the materials needed for the students at the right time.	38.30	P<.05
8	Most of the ICT facilities are available in my institution.	38.30	P<.05
9	The materials retrieved from the Internet are adequate enough to impact good knowledge to students.	27.47	P<.05
10	ICT facilities are adequately available in my institution.	50.10	P<.05
11	ICT facilities are not adequately used because no standard ICT centre	44.70	P<.05
12	There are well equipped ICT centers for teaching/learning of teacher education programmes.	21.50	P<.05
13	The availability of ICT facilities will encourage the students to participate well in the programme.	67.80	P<.05
14	Teacher educators often neglect the use of ICT facilities in teaching because students don't understand when using them	38.70	P<.05
15	The institution authority does not cooperate with teacher educators in the supply and use of ICT facilities.	48.10	P<.05

dents do not often use ICT facilities, twenty-nine percent often made use of ICT facilities, while fifty-three percent made use of it frequently.

Fifty-two percent of the respondents used the Internet to build the notes given to their students. Okeh and Opone (2007) reported that the utilization of ICT facilities in the institutions of learning in Nigeria would bring about quality standard of education to the graduates. It assists the graduates to widen their horizon, to be up to date on current issues and innovation going on in the global village. This is buttressed by the findings reported by Onwuagboke et al. (2015), that ICT is not yet a common feature of the classroom environment despite the claim that all teacher educators are now ICT literate. In fact, all the respondents agreed that ICT facilities contribute immensely to improve students' performance, creating new knowledge through the lecture delivered by their lecturers. ICT bringing new innovation in operative impartation of knowledge have been reported extensively (Lansen and Vincent-Lancrin 2005; Lim and Kim 2008).

CONCLUSION

As evidenced from the findings of the study has shown that, for the improvement of teaching and learning among the university lecturers in the institutions of higher learning in Nigeria, this study has therefore shows that that it is very necessary that all the university lecturers, especially the University of Ibadan make use of ICT facilities in order to source for information that could be used to impact knowledge to the students.

RECOMMENDATIONS

- Despite that there is enough availability of ICT facilities such as telephone facilities in the institution, the government and the university management should endeavor to provide other ICT tools, required for the teaching and learning in universities in Oyo State.
- An operative cyber café should be provided for the faculty members (both lecturers and students) so as to ensure easy access.

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