

AVAILABILITY AND UTILIZATION OF INFORMATION AND COMMUNICATION TECHNOLOGY FACILITIES FOR INSTRUCTIONAL DELIVERY IN COLLEGES OF EDUCATION IN KANO STATE

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ABSTRACT

The study focused on the availability and utilization of information and communication technology (ICT) facilities for instructional delivery in colleges of education. The study adopted descriptive research survey design. Population for the study comprised all lecturers of colleges of education in Kano State. The target population for the study comprised all the lecturers in the three Colleges of Education in Kano State totaling 1,194. Random sampling techniques was used to select a total of 286 out of the 940 lecturers from the two colleges of education. Two research questions guided the study. The instrument for the study was researchers designed questionnaire titled “Availability and Lecturers Utilization of Information and Communication Technology (ALUICT)”. Three lecturers from the Departments of Educational Technology and Computer Science, University of Ilorin validated the instrument and its reliability was determined using Cronbach Alpha which yielded 0.79. The Questionnaire comprised two sections: Section A contained available ICT facilities rating scale of Available and Functioning (AF) - 3, Available and Not Functioning (ANF) - 2 Not Available (NA) - 1, while Section B was on Utilization of ICT resources with rating scale of Frequently Utilized (FU) - 3, Seldomly Utilized (SU) - 2 and Not Utilized (NU) – 1. A total of 286 questionnaire were administered by the researchers and one research assistant. A total of 280 were retrieved, out of which 269 were found usable. The data collected was analyzed using frequency counts, percentage and mean score of 2.0 to answer the research questions. The findings revealed that the two colleges of education have almost all of the ICT facilities required by National Commission of Colleges of Education (NCCE) in Nigeria and that lecturers’ do not frequently utilize ICT facilities for instruction. The study therefore recommended that lecturers should endeavor to utilize available ICT facilities for instruction.

Keywords: *Colleges of Education; ICT; Availability ICT facilities; Utilization*

INTRODUCTION

Information and Communication Technology (ICT) has become an indispensable tool in all spheres of life such as business, industry, medical field, government and educational industry globally. Amosa, Ogunlade, Ogunlade and Obielodan (2016) submitted that the use of information and communication technology facilities for instruction is an application of innovative technologies for effective teaching-learning process. Thus, Alassaf (2014) stated that lecturers have positive attitude towards the utilization of ICT facilities for instructional purpose. This is as a result of their availability, awareness towards ICT and their possession of basic ICT skills.

Information and Communication Technology (ICT) is a means of accessing or receiving, storing, transferring, processing and sending ideas, perception or information through computers and other communication facilities (Ojeniyi & Adetimirin, 2013). It is evident that ICT has permeated the entire educational sector and this positive development has transformed the entire method of teaching and learning from the traditional teacher-centered to learner-centered method of teaching and. ICT has contributed positively to enhance effective teaching and learning, sharing of information, creation of more learner centric-learning environments, supporting change and extending existing teaching practices, facilitating self-learning in subject matter among teachers.

Moreover, ICT has equipped teachers with necessary skills to enable them face the challenges of the 21st century. Broadly, ICT refers to any scientific innovation that has the ability to simplify the process of handling a task and also to bring a group of people together (Eseyin, Igoni & Uchendu, 2014). ICT has also yielded a wider flow of information in teaching which has brought drastic changes in the educational needs of the individuals and society at large and which has direct positive impact on the higher demands for more specialization in learning (Peter, Udo & Akpan, 2012).

ICT facilities have tremendously transformed the entire educational system globally. It has significantly changed the approach and technique of teaching and learning in the classroom. This transformation has been extended to higher institutions of learning (Achimugu, Oluwagbemi & Oluwaranti, 2010). Information and Communication Technology (ICT) is the technology required for information processing. In particular it is the hardware, software, telecommunication and other information processing technologies in computer-based information system (Iwu, Onoja, Ijioma & Oguwuike, 2012).

Okwudiri (2012) explained that ICT is a combination of technological devices such as radio, handset, satellites system, computer network, and teleconferencing gadgets that are developed for the purpose of sharing information and communication. This implied that ICT could be seen as an electronic technology used for accessing, processing, gathering, manipulating, presenting and communicating information anywhere regardless of time, location. Within a short period of time different information could be sent and retrieved with the use of ICT and above all at low cost.

Jude and Dankaro (2012) and Diris (2009) studied ‘ICT facilities utilization and accessibility by teacher educators for instructional development in Benue State’ and ‘the availability and utilization of ICTs in colleges of Education Minna, Niger State’ respectively. The findings of their study revealed that ICT facilities were not available in colleges of education for instruction and the studies further indicated that the unavailability of these ICT facilities and other factors such as lack of awareness, motivation and skills among the colleges of education lecturers affected the effective utilization of these facilities.

Onasanya (2014) stressed that teaching and learning should go along with relevant instructional materials which will cater for the higher demand of more quantitative and qualitative knowledge to be learnt by students, and to make learning easier. Ololube (2005) posited that teachers’ quality is indispensable in determining students’ learning outcomes in any country. The integration of ICT resources in teaching and learning beyond doubt is gaining more recognition in educational industry globally; it is therefore pertinent for the lecturers to embrace ICT resources utilization for teaching and learning in their different institutions of learning. Using ICT resources will enhance effective teaching, learning and research.

Zubairu (2014) studied the assessment, availability, accessibility and utilization of ICT resources in content delivery among lecturers in federal colleges of education in Nigeria. The findings of the study showed that ICT resources in content delivery were fairly available; lecturers had no access to ICT resources for content delivery. Lecturers were not proficient in utilizing ICT resources and this hindered the lecturers’ utilization of ICT resources.

It is against this backdrop that the researchers decided to carry out this study to explore the availability and utilization of ICT facilities by lecturers for instruction in Colleges of Education in Kano State.

Purpose of the Study

The main purpose of this study was to explore the availability of Information and Communication Technology (ICT) facilities for instructional delivery in colleges of education in Kano State. Specifically, the study:

- i. examined the available ICT facilities in colleges of education in Kano State; and
- ii. determined the frequency of lecturers’ utilization of ICT facilities in colleges of education in Kano State

Research Questions

In this paper answers were provided for the following research questions:

1. What are the available ICT facilities for instructional delivery in colleges of education in Kano State?

2. How frequent do lecturers utilize ICT facilities in colleges of education in Kano State?

METHODOLOGY

The research design adopted for this study was a descriptive research of survey type. The population for the study comprised all the lecturers in the three Colleges of Education in Kano State totaling 1,194. The three colleges of education comprised two conventional and one technical. In order to have a fair study the technical college of education was not part of the study because it is not a conventional college of education. The two conventional colleges of education were purposively selected and used for the study. A total of 286 out of the 940 lecturers from the two colleges of education were randomly selected as sample for the study. The instruments for this study were researchers-designed questionnaire. The questionnaire was titled “Lecturers and the Utilization of Available Information and Communication Technology Facilities (LFUAICTF)”. The Questionnaire comprised two sections: Section A contained available ICT facilities rating scale of Available and Functioning (AF) - 3, Available and Not Functioning (ANF) - 2 Not Available (NA) - 1, while Section B was on Utilization of ICT resources with rating scale of Frequently Utilized (FU) - 3, Seldomly Utilized (SU) - 2 and Not Utilized (NU) – 1.

The instruments were validated by three lecturers in the Departments of Educational Technology and Computer Science, University of Ilorin. Cronbach Alpha was used to determine the reliability of the instrument which yielded 0.79. A total of 286 questionnaires were administered by the researchers together with two research assistants. 280 were retrieved representing 97.9%, while 269 representing 94.06% of the total number of questionnaires distributed, were found usable for the study. Data collected was analyzed using frequency counts, percentage and a mean set value of 2.0 was derived from the scales $(3+2+1)/3 = 2$ and was used to answer the two research questions that guided the study.

RESULTS

Research Question 1: What are the available ICT facilities in colleges of education in Kano State?

Table 1: Mean of Responses on the Availability of ICT Facilities in Colleges of Education in Kano State

S/No	Available ICT Facilities	A	ANF	NA	Mean
1	Closed Circuit Television (CCTV)	156	40	73	2.3
2	CCTV monitors (television sets with remote control)	116	75	78	2.1
3	Video Camera with Accessories	88	102	79	2.0
4	Video Player/Recorder	75	81	112	1.9
5	Editing/Dubbing Machine	93	69	107	2.0
6	Public Address System with Accessories	119	65	85	2.1
7	Slide Projector with Accessories	98	94	77	2.1
8	Opaque Projector with Accessories	110	75	84	2.1
9	Multimedia Projector	96	61	112	1.9
10	Audio Projectors	116	42	111	2.0
11	Photographic Cameras with Accessories	66	34	169	1.6
12	Duplicating Machines	54	49	166	1.6
13	Photocopying Machines	169	58	42	2.5
14	Whiteboard	188	51	30	2.6
15	Computer System with Printers	211	41	17	2.7
16	Magnetic Chalkboards	241	21	7	2.9
17	Cable Satellite Facilities	145	59	65	2.3
18	Digital Camera	101	38	130	1.9
19	Scanner	179	44	46	2.5
20	I pad/Androids	83	49	137	1.8
Average Mean					2.2

Table 1 shows the mean response of available ICT facilities in colleges of education in Kano State Using a bench mark of 2.0 of a 3-point likert scale, it was revealed through the responses of lecturers that are adequate available ICT facilities for Instructional delivery in colleges of education Kano State. Item 16 got the highest mean of 2.9 which indicates that the Magnetic Chalkboards is available. Item 15 followed suit with a mean score 2.7 which deduced that Computer System with Printers are also available for instructional delivery in Kano Sate colleges of education. The Whiteboard likewise is readily available with item 14 having a mean score of 2.6. In addition, photocopying machines and scanner with item 13 and 19 has a mean score of 2.5 which also indicate that they are available.

Also, a mean score of 2.3 was gotten from item 1 and 17 which also revealed that both closed circuit television (CCTV) and cable satellite are available. CCTV monitors (television sets with remote control) public address system with accessories, slide projector with accessories and opaque projector with accessories whose items are 1,6,7 and 8 respectively has a mean score of 2.1 which similarly indicates that these facilities are available for instructional delivery. Video camera with accessories (item 3), editing/dubbing machine (item 5), audio projectors (item 10) all has a mean score of 2.0 though equal to the bench mark it shows that they are available for instructional delivery However, a low mean score of 1.9 was gotten in item 4,9 and 18 which reveals

that despite the fact that most of the items are available they are not available. Facilities that are not available are; photographic camera with accessories, duplicating machines and ipads/android with mean score of 1.6,1.6 and 1.8 respectively.

Research Question 2: How frequent do lecturers utilize ICT facilities in colleges of education in Kano State?

Table 2: Mean Responses on the Frequency of ICT Facilities Utilization by Colleges of Education Lecturers in Kano State

S/No	Available ICT Facilities	FU	SU	NU	Mean
1	Closed Circuit Television (CCTV)	42	44	183	1.5
2	CCTV monitors (television sets with remote control)	54	61	154	1.6
3	Video Camera with Accessories	54	60	155	1.6
4	Video Player/Recorder	65	53	151	1.7
5	Editing/Dubbing Machine	76	41	152	1.7
6	Public Address System with Accessories	78	94	97	1.9
7	Slide Projector with Accessories	83	79	107	1.9
8	Opaque Projector with Accessories	24	46	199	1.4
9	Multimedia Projector	55	69	145	1.7
10	Audio Projectors	82	65	122	1.9
11	Photographic Cameras with Accessories	66	38	165	1.6
12	Duplicating Machines	66	78	125	1.8
13	Photocopying Machines	155	48	66	2.3
14	Whiteboard	42	53	174	1.5
15	Computer System with Printers	114	47	108	2.0
16	Magnetic Chalkboards	98	65	106	2.0
17	Cable Satellite Facilities	69	80	120	1.8
18	Digital Camera	42	65	162	1.6
19	Scanner	56	59	154	1.8
20	I pad/Androids	71	75	123	1.8
Average Mean					1.8

Table 2, revealed that facilities frequently utilized for instructional delivery are; photocopying machines (item 13, mean 2.3) computer system with printers (item 15, mean 2.0). magnetic chalkboards (item 16, mean 2.0). Majority of the facilities were poorly utilized for instructional delivery such as: closed circuit television(CCTV), CCTV monitors(television sets with remote control),video player/Recorder, editing/dubbing machine, public address system and accessories, slide projector with accessories, opaque projector with accessories, multimedia projectors, audio projectors, photographic cameras with accessories, duplicating machines, whiteboard, cable satellite facilities, digital camera, scanner and Ipad/Android their mean scores ranges between 1.4 and 1.9. This implies that lecturers do not frequently utilize ICT facilities in the sampled colleges of education in Kano State.

DISCUSSIONS

Findings on the availability of ICT facilities in colleges of education in Kano State showed that ICT facilities were available. This finding is supported by the submissions that ICT resources were available in Colleges of Education in Nigeria for effective instructional delivery by lecturers (Enyi &Tah; 2012; Agber & Agwu, 2013). But, does not agree with those of Jude and Dankaro (2012) and Diris (2009), who

reported that ICT resources were not available for instructions in colleges of education in Minna, Niger, Katsina- Ala and Benue state. Lecturers' frequency of utilization of ICT facilities in colleges of education in Kano State as revealed in this study is weak. This finding is in agreement with the findings of Samuel and Abubakar (2006), who reported that utilization of ICT facilities among lecturers is very weak due to inadequate time allocation and skills.

Also, the finding of this study revealed that majority of the facilities were poorly utilized for instructional delivery such as: closed circuit television(CCTV) and CCTV monitors(television sets with remote control). This confirmed the report of Ochuku, Amakaino and Chamberian (2013) which revealed that ICT facilities is not properly utilized and further stated that the utilization is weak as a result of rigid nature of some lecturers to integrate the modern ICT facilities. However, the findings of this study disagree with findings of Ubogu and Evarista (2012) and Alassaf (2014) whose findings revealed that lecturers in colleges of education have a positive attitude towards the effective utilization of ICT facilities.

CONCLUSION

Based on the findings as revealed by the data analyzed, it is concluded that the sampled colleges of education in Kano State have ICT facilities as required by NCCE. However, the usage of the available resources was found to be weak. The implication of this development will be that available ICT facilities are being underutilized.

RECOMMENDATIONS

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

1. The federal government, state government and colleges of education management should ensure that they keep and maintain the available ICT facilities for instructional delivery in the colleges of education in Kano State.
2. Seminars and workshops on benefits of ICT should be organized for the lecturers by colleges of education management, so as to acquaint the lecturers on the integration of ICT in their instructional delivery.
3. Lecturers in colleges of education in Kano state should endeavor to make use of ICT tools in the classroom, doing this will increase will foster effective teaching-learning

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