

## **Assessment of Utilization of Information and Communications Technology (ICT) Facilities in Colleges of Education in North-West Geo-Political Zone, Nigeria.**

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### **Abstract**

This study assessed utilization of Information Communications Technology (ICT) facilities in Colleges of Education, Northwest Geo-political Zone, Nigeria. The study employed a descriptive survey research design. The population of the study comprised all the principal management staff in all the thirteen federal and state Colleges of Education in Northwest zone. A sample size of 13 principal management staff was used for the study. A researcher-developed instrument, titled Institutional ICT Utilization Questionnaire (IICTUQ) was used for the study and was validated by experts in the field of study from the Faculty of Education, Bayero University, Kano while the instruments reliability indices were established using Cronbach's Alpha method to be alpha 0.88 for ICT in financial management; 0.80 for ICT Infrastructural facilities; 0.87 for ICT in instructional supervision. The research questions were answered using mean score and standard deviation. Findings of the study revealed that college management do not utilize ICT effectively in financial management and infrastructural facilities in the institutions. Based on the findings, it was recommended among others that management of colleges of education in Northwest zone should utilize ICT effectively in financial management to improve efficiency. Adequate computers and ICT infrastructural facilities should also be made available by federal and state governments to each college of education in the area of study for use by the college management.

**Keywords:** Assessment, Information Communications Technology, Utilization of ICT Facilities.

### **Introduction**

The utilization and adequacy of Information and Communication Technology infrastructural facilities are important factors to consider if there must be any meaningful benefit in the use of information and communication technology by the management of colleges of education in the North West Geo-Political Zone of Nigeria. The survival of any organization is dependent largely on the quality of management or administrative services involved as it is an integral part of any organization. Management in education is seen as the planning, organizing, staffing, coordinating and directing the affairs of educational institutions towards achieving educational objectives. Onuka, (2009) observed that management is concerned with a set of activities, plans, policies and programmes with a view to achieving set educational goals and is the efficient coordination of all organizational and material resources with or through other people to ensure that the objectives of the organization are achieved. In colleges of education, paramount services according to the Federal Republic of Nigeria (2014) are teaching, research and development, virile staff development programmes, generation and dissemination of knowledge, the administration of management, inter-institutional cooperation and distance education programmes, among others.

The 21<sup>st</sup> century has witnessed tremendous advances in technology, which have led to far reaching development in the administrative and academic system. In the world at large, it is acknowledged that ICT is growing at a rapid pace with emerging technologies continuing to

develop. There is more knowledge explosion and institutions are required to develop greater ICT capability. Hence, integrating ICT and optimizing its potentials are among the major challenges facing the management of tertiary institutions. Valcke (2010) noted that ICT is particularly useful in tertiary institution management to facilitate giving organizational information about courses, registration and follow-up of students' learning activities, staff bio data, subscriptions for examinations, communication about the instructional process, collaborative learning, self-assessment and collaborative research activities. Information communications technology could be used to revolutionize planning of academic activities in the educational delivery process.

Information and Communication Technology (ICT) is an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer, and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning (Mondal & Mete, 2012). When such technologies are used for educational purposes, namely to support and improve the learning of students and to develop learning environments, ICT can be considered as a subfield of Educational Technology. Effective instructional supervision and delivery, requires that information communications technology be integrated in lecture delivery, students' assignment, course examination, students' presentation of seminars, micro teaching and evaluation of students such as in computer based Testing (CBT) and in scoring of answer sheets of large classes. The introduction of Information and Communication Technologies (ICTs) into higher institutions of learning clearly changed the way education is conducted. It paved the way for a new pedagogical approach, where students are expected to play more active role than before (i.e. getting more involved in the learning process, being active participants of knowledge creation and not mere recipients of knowledge) and academic and non-academic staff are expected to embrace its adoption in their activities (Hamilton-Ekeke & Mbachu, 2015). Thus, ICT in higher education are being used for developing course material; delivering content and sharing content; communication between learners, teachers and the outside world; creation and delivery of presentation and lectures; academic research; administrative support, student enrolment etc.

To Lucey (2007), the term refers to the process of the acquisition, processing, storage and disseminating of vocal, pictorial, textual and numeric information. It is daily giving birth to new concepts, new products and new ideas and radically transforming not only our industries and business but also every aspect of our lives, including educational management. Information communications technology is now recognized as a utility, such as water and electricity (Ajayi, 2012). ICT as a generic term refers to the technologies used in collecting, storing, processing, (editing) and passing information in various forms. In a general sense, ICT will include communication satellites, radio, televisions, telephone, video, tape record, microphone, public address system, projectors scoring machines compact disc, floppy disc, personal computers and so on (Sambo 2002).

Information and Communication Technology is the life-wire of any organisation such as colleges of education. It facilitates the management processes of planning, organizing, leading, controlling and coordinating the activities of the institutions. It enables the academic administrators such as the Provosts, Deputy Provost, Deans of School, heads of Department, Directors and Coordinators of programmes, and non - academic administrators such as the Bursar, Registrar, Deputy Registrars Personnel, Admissions and Academic Board matters, Examinations and Records and chairmen of results verification, Time – table and Examination

Committees to do their job more efficiently. Managers need to organize the information they get from outside which is not only the foundation for right action but equally the foundation for handling the challenges of knowledge and worker productivity, and the challenge of managing oneself (Drucker cited in Sapru, 2009).

In the North Western Zone of Nigeria, some colleges of education are owned by Federal or State government while others are owned by individuals. These institutions are differently confronted with numerous challenges in the ICT environment. Indeed, ICT has changed the way we live, work and play (Abiogu, 2007). The value of ICT is endless (Gama, 2008). ICTs not only give the opportunity to have easy access to information from various sources, but also facilitate resource sharing between and among various organizations apart from improving the status of the institution. Gama further stated that, the significance of ICTs in Nigerian colleges of education cannot be overemphasized. However, the application of the ICTs in Nigeria tertiary institutions can be said to be low when compared with what is happening in developed countries of the world. This observation motivated the effort of this researcher to assess the ICT-utilization by the management of Colleges of Education in Northwest Zone of Nigeria in terms of infrastructural facilities, instructional supervision and financial management. Such an assessment will provide an insight into what the management of Colleges of Education has done to favorably position their institutions at a competitive advantage in an ICT knowledge-driven world.

## Literature Review

### ICT Facilities Available in Colleges of Education

According to Garai (2006), ICTs cover internet service provision, telecommunications equipment and services, information technology equipment and services, media and broadcasting, libraries and documentation centres, commercial information providers, network-based information services, and other related information and communication activities. For Imhonopi & Urim (2012), ICTs also encompass technologies that can process different kinds of information (voice, video, audio, text and data) and facilitate different forms of communications among human agents, among humans and information systems, and among information systems. According to Fagbanmi and Ogunjobi (2009), ICT is an umbrella term that includes all technologies encompassing medium for recording information such as Magnetic disk, tape, optical disks (CD/DVD) flash and paper record, technology for the broadcasting, information, radio, television and technology for communicating through voice and sound or image microphone camera, loudspeaker, telephone to cellular phones. It also includes a wide variety of computing hardware, desktop computers, laptops and storage devices.

Broadening this conversation, Imhonopi & Urim (2012) argued that ICTs are modern technologies that facilitate information gathering, processing, transmission and storage and comprise hardware and software components that can be put to heterogeneous use through digitalization connecting individuals and institutions over wide swathes of a geopolitical area. From the definitions array, one could say with the adoption, availability and utilization of the ICTs in tertiary institutions especially the colleges of education, there will be some consciousness of the significant role that ICT can play in teaching, learning, research as well as administrative activities, even though ICT is not fully embraced by most of the higher institutions of learning in our nation Nigeria. Akintunde (2008) added that ICT facilities in colleges of education could give students, lecturers and researchers in developing countries the

opportunity to bridge the knowledge gap between them and their counterpart in developed countries.

However, Gama (2008) listed ICT facilities that are expected to be readily available in colleges of education for a successful teaching, learning, research and administrative activities. They include computers, internet, television, radio, cassette player and a radio set, fixed telephone set and mobile phone, video machine and a video tape, real of real projector, slide projector, photocopying machine, duplicating machine, scanner, opaque projector, Email, etc. However, the various ICT facilities available in colleges of education according to Ofodu (2007) include: computers, overhead projectors, internet, fax machines, CD-ROMS, electronic notice boards, slides, digital multimedia, video/VCD machine, DVD players and so on.

(a) **Computer:** A **computer** is an electronic device that manipulates information or data. It has the ability to **store, retrieve** and **process** data. One can use a computer to type documents, send email, and browse the internet. It can also be used to prepare assignments, handle spreadsheets, accounting, database management, presentations, games and more.

(b) **Overhead Projectors:** An overhead projector is a variant of slide projector that is used to display images to an audience. The overhead projector facilitates an easy low-cost interactive environment for educators. Teaching materials can be pre-printed on plastic sheets, upon which the educator can directly write using a non-permanent, washable color marking pen. This saves time, since the transparency can be preprinted and used repetitively, rather than having materials written manually before each class. The overhead is typically placed at a comfortable writing height for the educator and allows the educator to face the class, facilitating better communication between the students and lecturers. The enlarging features of the projector allow the educator to write in a comfortable small script in a natural writing position rather than writing in an overly large script on a marker board and having to constantly hold his arm out in midair to write on the marker board (Wikipedia, 2012)

(c) **Communication Networks:** Students and lecturers can communicate with their peer and access data banks in different parts of the country and around the world, in order to develop joint projects, exchange information, or request advice. Instead of the expository presentation of a topic, the lecturer may ask a student, or a team of students, to research the topic by exploring the internet for relevant information. Though, not all the information on the internet is reliable, but such is the information we gather in the real world, so that students will have to develop their analytical and critical skills. These skills are not usually developed in the restricted environment of the typical lecture hall, where most information has been filtered for them. (d) **Compact Disc - Read Only Memory (CD-ROMs):** CD-ROMs are popularly used to distribute computer software, including video games and multimedia applications, though any data can be stored (up to the capacity limit of a disc). Some CDs hold both computer data and audio with the latter capable of being played on a CD player, while data (such as software or digital video) is only usable on a computer (Wikipedia, 2012).

(e) **Scanners:** A scanner is an electronic device that captures images from photographic prints, posters, magazine pages, and similar sources for computer editing and display. Scanners come in hand-held, feed-in, and flatbed types and for scanning black-and white only, or color. Very high resolution scanners are used for scanning for higher solution printing, but lower resolution scanners are adequate for capturing images for computer display. Scanners usually come with software, such as Adobe's Photoshop product, that lets you resize and modify a captured image. Scanners usually attach to your personal computer with a Small Computer System Interface (SCSI).

(f) **Digital Cameras:** A digital camera (or digicam) is a camera that takes video or still photographs by recording images on an electronic image sensor. Most cameras today are digital and digital cameras are incorporated into many devices ranging from PDAs and mobile phones (called camera phones) to vehicles.

(g) **Photocopiers:** A photocopier (also known as a copier or copy machine) is a machine that makes paper copies of documents and other visual images quickly and cheaply. Most current photocopiers use a technology called *xerography*, a dry process using heat. (Copiers can also use other technologies such as ink jet, but xerography is standard for office copying.

### **Existing Use and Benefits of ICT Facilities in Colleges of Education**

Today, ICTs - including laptops wirelessly connected to the internet, personal digital assistants, low cost video cameras, and cell phones have become affordable, accessible and integrated in large sections of the society throughout the world. It can restructure organizations, promote collaboration, increase democratic participation of citizens, improve the transparency and responsiveness of governmental agencies, make education and health care more widely available, foster cultural creativity, and enhance the development in social integration (Mondal & Mete, 2012). However, the use of ICTs within academia especially in colleges of education has become a modus vivendi for modern academics and students so much so that there is an inextricable intertwinement between ICTs and academic processes within higher educational institutions in Nigeria. According to Edewor, Imhonopi and Urim (2014), a closer look at the existing use and benefits of ICT tools in higher education in Nigeria reveals the following:

(1) **Computers (Laptops & Desktops):** Higher education in Nigeria across a wide continuum has been enabled by the use of computers, including laptops and desktops. Academics and students now use these ICT tools as a medium to type, process and store their work for later use. Before the advent of mobiles such as iPhones, iPods, iPads and Tablets, 20th century academia depended hugely on laptops and desktops for data generation, conversion and storage. Teaching and research are, therefore, enhanced by these tools.

(2) **PowerPoint:** Gradually, classroom teaching is made possible through PowerPoint presentations which bring more life, interactivity and connectivity to pedagogy. Teaching is no more a stale, blackboard, chalk and talk phenomenon but is now typified by visual as well as audio learning processes which enhance learning results.

(3) **Email:** Many academics and students now rely on emails to sustain interaction and improve communication between and among them. Through emails, these days, assignments are given to students and also submitted to tutors, research such as e-interview can be conducted, academic questions can be asked and tutors can reach out to their students, among others. Emails have become so useful to higher education that it is almost anathema not to have one as an academic or a student.

(4) **Online Peer Review:** Recently, peer review, which is an important process or activity that enhances the quality of research and academic works has been digitalized. For instance, junior researchers can send draft copies of their works electronically to the email addresses of (their) senior colleagues/experienced researchers for review while the latter will download these works on their laptops or mobiles, read and review the work to be sent back the same way, electronically. This process saves both parties the use of papers, is cost-effective, timely and fast. This process is enabled by the internet, which provides global connectivity for such interactions to take place.

(5) **Collaborative Research:** The distance-less and borderless nature of the internet has also helped in empowering collaborative research between and among researchers/academics living and working in far-flung continents. Nowadays, collaborative research works between African



scholars and scholars living outside the continent are made possible. In the same vein, even within the African continent, scholars carry out transnational collaborations involving nationals of different countries within the continent. This brings robustness, freshness, diversity of thoughts, opinions and perspectives to bear on the outcome of such works. By such collaborations also, the international intelligentsia will pay more attention to research works coming from the continent and make use of these materials to further extend the frontiers of the global pool of knowledge.

(6) **Digitalization of School Processes:** As part of the push for a green economy, higher educational institutions in Nigeria willy-nilly are forced to imbibe digitalization as a global best practice. Nowadays, application and admissions into higher institutions in the country are conducted via online processes and these include payments, registration, admission, confirmation of acceptance and publishing of information for stakeholders. Similarly, e-communication channels are gradually replacing face-to face communication processes and these make for speed, ease and time-saving advantages. Digital papers are also replacing physical papers which take up space and create environmental eyesore when they are being disposed. Also, physical libraries are gradually given way to the emergence of e-libraries. Thus, higher education in Nigeria is not left behind in this regard.

(7) **Websites:** Most, if not all, higher educational institutions in Nigeria have a website or multiple websites that contain their corporate information and other details. Through this forum, higher institutions are able to connect with their students and staff, and meet the needs of other stakeholders. Also, websites have become marketing tools for higher institutions including remaining communication channels to explain the programmes and activities of the respective institutions. Higher education in the country now flourishes through websites of post-secondary institutions who continuously invest in their websites to achieve their multiple benefits.

(8) **E-conferencing:** Higher education in the country is gradually focusing on harvesting the benefits of e-conferencing. Through this process, distance learning opportunities can be created or sustained and research teams across wide distances can meet to collaborate or share findings that could enhance the quality of research outcomes. Another popular aspect of this use is e-interview. For instance, a few universities, like Covenant University, have begun to use online interview to engage the services of academics of Nigerian and foreign origins that live outside the shores of the country. Akin to this is e-recruitment and e-HR management.

### **Statement of the problem:**

The utilization of Information and Communication Technology causes fundamental changes in the nature and procedures of management. It was argued that ICT not only helps management to become more efficient and effective, but it also helps them to become competitive. Based on the researcher's interaction with some of the management staff from the colleges of education studied, it was observed that the utilization of ICT infrastructural facilities in planning of academic activities by the management of the institutions, has not made much impact in the institutions for efficient management functions. The use of e-mails, desktop computer, laptop computer, the publication of vital information about the college online and even the application of ICT to personnel management and communication had been painfully inadequate. ICT has been integrated into the management of colleges of education in Nigeria for some time now; however, it is not clear whether its use by the college management in the Northwestern zone has improved as compared to what it was before. The researcher was worried about this perceived development. It is with this consideration in mind that this study was poised to assess the utilization of Information and Communications Technology (ICT) facilities in colleges of education in North-west Geo-political Zone, Nigeria

### **Purpose of the study:**

The study assessed the utilization of ICT facilities in the management of colleges of education in Northwest zone, Nigeria. Specifically, the study sought to:

1. Determine the utilization of ICT in financial management by colleges of education in Northwest Zone, Nigeria.
2. Find out the ICT infrastructural facilities used in planning of academic activities by colleges of education in Northwest Zone, Nigeria.
3. Examine the utilization of ICT in instructional supervision by colleges of education in Northwest Zone, Nigeria.

### **Research Questions**

The following research questions guided the study:

1. In what ways has the management utilized ICT in financial management?
2. What are the ICT infrastructural facilities used in planning of academic activities?
3. In what ways has the management utilized ICT in instructional supervision?

### **Methods**

#### **Research Design**

The study adopted a descriptive survey research design. This study therefore described in a systematic manner the utilization of ICT facilities in the management of colleges of education, northwest. The design was deemed appropriate in order to conduct a field investigation and elicit information from the respondents (principal management staff) on ICT facilities utilization in colleges of education, Northwest, Nigeria.

#### **Population of the Study**

The population of the study comprised 213 principal management staff in the thirteen Colleges of Education in the Northwest Geo-political Zone: all the Provosts/Dep. Provosts, all the academic administrators (Deans of Schools, Directors of Programmes) and all the non-academic administrators (Registrars, College Librarians and College Bursars) in the seven states formed the sample for the study.

#### **Sample and Sampling Technique**

The simple random sampling technique was used to sample one principal management staff from each of the thirteen colleges, which makes the total sample size of 13. Due to the nature of the instrument being an “Institutional Questionnaire”, no sampling technique was needed; only one management staff is eligible to complete the instrument on behalf of the institution. The sample is 13 and the researcher could study the population conveniently. This is in conformity with Nworgu (2015) who asserted that if the researcher’s population is extremely small, no sampling technique is needed.

#### **Instrument**

The instrument used for data collection was an Institutional Questionnaire titled, “Institutional ICT Utilization Questionnaire (IICTUQ)”. The instrument was made up of two sections. Section ‘A’ consisted of items relating to the institution, such as: name of institution, ownership, and designation, while Section ‘B’ has 12 items, grouped under 3 clusters each answering the research questions and patterned after a modified Likert scale format of (Strongly Agree, Agree, Disagree and Strongly Disagree) for respondents to express their agreement or disagreement.

The instrument was face validated by three experts at Bayero University, Kano and the reliability indices were established using Cronbach’s Alpha method to be alpha 0.88 for ICT in financial management; 0.80 for ICT Infrastructural facilities; 0.87 for ICT in instructional supervision obtained from similar subjects outside the target population. Data were analyzed using mean and standard deviation to answer the research questions.

### Procedure for Data Collection

Three research assistants were trained to assist the researcher in the face-to-face administration and collection of data for the study. The research assistants were staff of the colleges of education and so, it was easy for them to meet the principal officers. All the copies of the questionnaires, one from each institution, were retrieved representing 100% return rate.

### Method of Data Analysis

The data collected were analyzed and completed around the research questions using mean and standard deviation. The mean values of the four responses were determined by dividing the summation of the frequency of responses with the summation of the scale used. The decision rule was that any mean that rated above the bench mark of 2.50 was regarded as agree while mean rated below the bench mark (2.50) was regarded as disagree.

### Results

The results are presented on the basis of research questions as follows:

**Research Question One:** In what ways has the management of Colleges of Education in North-west zone utilized ICT in financial management?

**Table 1: Mean analysis of opinions of respondents on ways management of colleges of education in Northwest Zone utilized ICT in Financial Management**

S/N	A: ICT in Financial Management	Mean	STD
1.	College utilizes Remita for payment of all school fees	2.00	1.00
2.	College uses ICT facility for students to make fee payment for hostels electronically.	1.60	0.8
3.	Our college utilizes e-payment for all outstanding contracts	1.98	0.9
4.	Financial contributions from Alumni Association, banks and cooperate bodies were properly utilized by our college for ICT related facilities	1.78	0.7
<b>Grand Mean</b>		1.84	0.8

Results from Table 1 above indicated that all the respondents’ responses from items 1-4 rated below the acceptable mean of 2.50 showing disagreements with the statements. The grand mean of 1.84 likewise showed that the respondents reacted negatively towards the statements pertaining on ways management of colleges of education in Northwest Zone utilized ICT in Financial Management. The results further showed that ICT is not properly utilized in financial management in Northwest Zone, Nigeria.



**Research Question Two:** What are the ICT infrastructural facilities used in planning of academic activities by the management of Colleges of Education, North Western Nigeria?

**Table 2: Mean analysis of the opinions of respondents on ICT Infrastructural Facilities used in planning of academic activities by management of colleges of education, Northwest Zone Nigeria**

S/NO	B. ICT Infrastructural Facilities	Mean	STD
5.	Institution uses a functional E-library	1.60	0.6
6.	ICT lecture rooms housing multimedia projectors are utilized	1.50	0.5
7.	There is use of Desktop computers in offices	3.00	0.6
8.	Facilities for e-conferences are in use	1.98	1.5
9.	Internet and other facilities for academic staff are in use	2.00	0.9
	<b>Grand mean</b>	2.02	1.2

Results from Table 2 indicated that all the respondents from items 5-6 and 8-9, rated below the criterion mean score of 2.50 in disagreement to the statements. Except for item 7 which rated above the acceptable mean showing agreement with the statement. The grand mean of 2.02 likewise showed that the respondents reacted negatively to the statements on ICT Infrastructural Facilities used in planning of academic activities by management of colleges of education, Northwest Zone Nigeria. The results further showed that college management does not utilize ICT infrastructural facilities in the planning of academic activities in the institutions studied.

**Research Question Three:** In what ways has the management utilized ICT in instructional supervision?

**Table 3: Mean analysis of the opinions of respondents on ways management of colleges of education utilized ICT in instructional supervision**

S/NO	ICT Application in Instructional Supervision	Mean	STD
10.	College utilizes digitalization of school processes	2.00	1.0
11.	College utilizes computers for CBT	2.01	1.0
12.	College standardizes the quality of instruction through the use of smart board technology	1.60	0.6
	<b>Grand mean</b>	2.23	1.3

Results from Table 3 above indicated that items 10 and 12, rated below the acceptable mean of 2.50 in disagreement with the statements. Except for item 11 which rated above the criterion mean of 2.50 showing agreement with the statement that college utilizes computers for computer based tests (CBT). The grand mean of 2.23 also showed that the respondents reacted negatively to the statements concerning ways the management of colleges of education utilized ICT in instructional supervision. The results further showed that college management does not utilize ICT in instructional supervision.

### Discussion of Findings

Findings from table 1 in respect of research question one have revealed the mean analysis of opinions of respondents on ways management of colleges of education in Northwest Zone utilized ICT in financial management. The results showed that respondents disagreed with all

the items. In other words, the respondents disagreed that: College utilizes Remita for payment of all school fees (mean=2.00); college uses ICT facility for students to make fee payment for hostels electronically (mean=1.60); our college utilizes e-payment for all outstanding contracts (mean=1.98) and financial contributions from alumni association, banks and cooperate bodies were properly utilized by our college for ICT related facilities (mean=1.78). The grand mean of 1.84 was also below the criterion mean of 2.50. This finding is supported with the findings of Finani (2012) who found out that the utilization and adoption of ICT in most of the less advanced countries is not yet significantly achieved. In the same vein the finding is in agreement with Ifeolu and Asimegbe (2015), who stressed that the low utilization of ICT devices and facilities in financial management are barriers to the effective development of our tertiary institutions. This is a clear indication that colleges of education management Northwest Nigeria do not utilize ICT effectively in financial management.

Table two shows the mean analysis of the opinions of respondents on ICT infrastructural facilities used in planning of academic activities by management of colleges of education, Northwest Zone Nigeria. The findings of the study further revealed that out of the five items on infrastructural facilities presented, college management disagreed to four showing non-utilization. The respondents disagreed that: Institution uses a functional E-library (mean=1.60); ICT lecture rooms housing multimedia projectors are utilized (mean=1.50); facilities for e-conferences are in use (mean=1.98) and internet and other facilities for academic staff are in use in the college (mean=2.00). However, respondents agreed to item seven that: There is use of Desktop computers in offices (mean=3.00). The grand mean of 2.02 also is an indication that ICT infrastructural facilities used in planning of academic activities were not utilized by the management of colleges of education, Northwest Zone Nigeria. This is in agreement with the findings of Odeh (2011), who established non availability and utilization of ICT facilities in colleges of education North central zone. Out of the 31 items in the questionnaire, no ICT item was found to be always utilized. ICT has increasingly played a critical role in all fields of human endeavors. It is being used globally to translate ideas into realizable goals and develop same into concrete achievement.

Table three further revealed the mean analysis of the opinions of respondents on ways management of colleges of education utilized ICT in instructional supervision. In fact, out of the 3 items presented on utilization of ICT in instructional supervision, college management disagreed to all the items indicating non utilization. In other words, the respondents disagreed that: College utilizes digitalization of school processes (mean=2.00); college utilizes computers for CBT (2.01) and college standardizes the quality of instruction through the use of smart board technology (mean=1.60). This finding agrees with Okeh & Opone (2017) who revealed that information is a key resource which permeates teaching, learning, research and publishing. They further stated that the use of ICT can serve several functions in the national educational growth. Today, Information and Communication Technology provides a knowledge-based system that includes knowledge acquisition, knowledge incubation, knowledge amplification and knowledge dissemination.

## **Conclusion**

Based on the result of this study, it was concluded that the management of colleges of education in Northwest Nigeria did not utilize Information and communication technology facilities adequately in the institutions. The world is fast becoming a global village as a result of the development in ICT. The challenge of utilizing ICT infrastructural facilities, use of ICT in

financial management and instructional supervision by management is a very big task. It is obvious that there is poor acquisition and utilization of ICT facilities at the colleges of education studied.

### Recommendations

1. Management of colleges of education Northwest zone should utilize ICT facilities adequately in financial management to improve efficiency.
2. College management should adequately utilize ICT infrastructural facilities used in planning of academic activities.
3. Management of colleges of education in the study area should endeavor to utilize ICT in instructional supervision in order to improve teaching/learning process.
4. College staff should be trained on the utilization of ICT facilities to improve their level of ICT literacy.

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