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EXTENT OF ICT UTILIZATION IN ACHIEVING OBJECTIVES OF TERTIARY INSTITUTIONS IN KOGI STATE, NIGERIA

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Abstract

The study was carried out to determine extent of ICT utilization in achieving objectives of tertiary institutions in Kogi State. The study adopted descriptive survey research design. The study answered three research questions. The population for the study comprised tertiary institutions in Kogi States of Nigeria. Simple random sampling technique was used to select institutions for the study. Structured questionnaire was used to collect data from the respondents. Instrument was validated by three experts. Cronbach alpha reliability test was used to determine the internal consistency of the instrument. Data collected were analyzed using Mean and standard deviation for the research questions. It was found from the study that electronic lecture delivery systems, database facilities and word processing systems were utilized for achieving the objectives of tertiary institutions in Kogi State to a high extent. Some of the electronic lecture delivery systems utilized are laptop computers, desktop computer, cyber café, e-mail facilities, smart boards and projector. There was no significant difference in the mean ratings of lecturers and students on the electronic lecture delivery systems, data processing facilities and word processing in achieving the objectives of tertiary institutions in Kogi State. Based on the findings, it was recommended that ICT facilities identified in this study should be provided for tertiary institutions. It was also recommended that workshops and seminars should be organized for both academic and non-academic staff on effective usage of ICT facilities in tertiary institutions.

Keywords: *Information Communication Technology (ICT), Electronic lecture, Students' database, Word processing, Tertiary Institutions*

Introduction and Background

The world has been transformed into a global village as a result of the innovations in information and communication technology (ICT). Information and communication technology is a terminology that refer to the combination or merging of auto visual and telephone networks into a single device (computer) through a cable or connection framework (Stevenson, 2007). The information and communication technology (ICT) is also referred to a computer-based device that allows its users achieve the processing needs in network communication. The ICT tools, according to Milken Exchange on Education Technology

(1999), is made up of several devices like the computer soft and hard ware, network and other devices used to convert information like text, sounds, images from analog to digital display. Information and Communication Technology (ICT), according to Yusuf (2005), refers to a diverse application of computing, communication, telecommunication, and satellite technology.

Information and communication technology consist of telecommunication, communicated media, a wide range of sound and video processing and transmission and system based control and monitoring functions (Ron, 2002). It is frequently used as an all-encompassing equivalent for Information Technology (IT); however, it is normally a broader term that majors on the role of a unified communication and the integration of computers, telecommunications (wireless signals and telephone), hard and soft ware, storage devices, and audio-visual systems that enables its users to access, create, transmit, store, send, and control data (International Telecommunications Union, 2009). For this study, information and communication technology (ICT) is operationalized to mean the electronic devices and programmes that are used for rendering technology-based information services which promote the core functions of an institution. Organizations including tertiary institutions utilized ICT to achieve their different objectives.

Tertiary institutions refer to schools which offer higher education. Tertiary education is referred to as third stage, third level of education. (Yusuf 2004). Higher education is taken to include undergraduate and postgraduate education. Tertiary institutions are usually made up of several faculties and departments made up of both academic and non-academic staff. These departments and units are vested with certain tasks channelled to the attainment of one institutional objective or the other. For instance, while the admissions' unit oversees the intake of students, exams and records department compile students' results as well as identify those ready for graduation. The administration unit is vested with the day to day running of the school while lecturers are vested with teaching students.

Nigerian tertiary institutions require the services of modern technology to improve on learning and development. The structures that ensures successful e-learning are – administration, constant programme monitoring, course improvement, support career development for academic staff, and assessment results (Lee & Dziuban, 2002). Existing literature illustrates that the Nigerian institution is in dire need to improve e-learning, encourage the inventive utilization of technology, and install technology devices in these universities for ease of learning. To accomplish these objectives, academic instructors are required to be exposed to online/technological training. Teaching method includes the awareness of the diverse learning procedures and how, or to whom, and when to apply these procedures (Bruner, 1999). Sound instructional method supported by solid hypothetical foundations is of key significance in web-based learning (Herie, 2005). While significant writing on online teaching method is generally arranged in learning field, it is not in every case always explained in different facilities in the advanced education segment. E-learning applications should be educated by solid theoretical establishments that connects theoretical learning with practicality, to guarantee educational greatness (Gulati, 2008). In other words, a greater challenge for instructors in higher institutions include learning method, theoretical establishments, and connecting theories with practicality.

Information is an essential tool to any organisation, including tertiary institutions. Most organisations exist exclusively to gather or circulate information. The need for communication within or outside the organisation is essential not just to the organisation's employees and employers, it is also essential in sustaining relationship between the organisation and their supplier/customers. Most widely-recognised organisations utilise the same key information. It is therefore important to ascertain how this information are used by these organisations. All organisations use information and communication technology frameworks with a greater part of it to process, store and transmit information. Many established organisations are unable to function without utilising information and communication systems that support their operations. Information and communication technology has several objectives for most organisations,

particular use rely upon the nature of the organisation; nonetheless, regular uses can include: storing organisation and employee details, securing of client/customer information, building management webpage and mailing records, account recording, remuneration finance schedule, making advertising and promotional materials as well as to draft letters. All these are geared towards meeting organisational goals.

Organisational objectives or goals refer to the purposes and missions of an organisation or any of its units, established through its managerial processes. It is also referred to a long-term plan or philosophy put together by the organisations' administration. Put simply, it incorporates the general objectives, mission and purpose of the organisation established through its administrative units and conveyed to its representatives (the employees). The focus for the operation of an organisation is on its long-term goals/objectives and the general philosophy of the organisation that directs the affairs of the employees' needs derived mainly from the philosophy of its establishment. Simply put, objective means a goal which is intended to be achieved. It can also be referred to as aim, purpose or target. In as much as educational institutions at the nursery, primary, secondary and tertiary levels have many objectives; the most general one appears to be that of reducing or eradicating illiteracy.

In a tertiary institution, the objective might be in the form of enhanced teaching and learning, improved library services, uninterrupted academic programmes among others. Information and communication technology provides several opportunities in education. First, information and communication technology is used as a method for equipping students for workplace effectiveness in the future. In other words, it can be used as a practicing requirement for work in the future. It is in accordance with Lemke (2009) who noted that the present scholars live in a more technological-advanced age, and these students deserves instructors/teachers whose training embraces the best technology offers in learning.

Through educators' utilization of technology, opportunities are given to students in not just acquiring technological knowledge and skills, but to be able to guide and educate subsequent learners in the near future. Information and Communication Technology is needed to prepare future workers and clients with the imperative skill and information to utilize the information and communication technology devices within their workspace (Davis & Tearle, 2009). Institutions of learning can be more efficient or productive when using information and communication technology; it is more effective when teachers are facilitated or supported with various ICT equipment for professional activities (Kirschner & Woperies, 2003). Furthermore, it is of necessity that the information and communication technology can be used to enhance learning and teaching within a university system, a polytechnic or a college of education.

Another objective which information and communication technology can be useful for in tertiary institutions is data processing. Tertiary institutions admit and graduate students every year. This calls for accurate record keeping of the year of entrance, courses offered and grades made, data on academic and non-academic staff among several others (Salawu, 2008). In years past, these records were kept manually but with the advent of Information and Communication Technology, data storage is done electronically. This makes for easy retrieval and assessment.

Universities, colleges, and polytechnics are the main institutions that provide tertiary education. Tertiary education which aims at producing graduates certified fit in character and learning and which generally leads to the receipt of certificates, academic degrees or diplomas, adopt several measures in attaining this objective. College understudies who go through their first years in tertiary institutions faces difficulties as college life is a learning situation where independence study is integral to instruction; and students-teachers relationship is limited. In higher institutions of learning, analytical skills outweigh memorizing capacity. Thus, to attain academic excellence, the student must endeavour to appreciate the available resources by indulging in intense lectures and tutoring – utilising the institution's supportive medium; like PowerPoint presentations and online lectures.

Tertiary institutions the world over are recognised as the fortress/citadel of information, learning and human resources development. Higher learning institution system in Nigeria was established to develop and improve employee's effectiveness as well as bring about good development to the country (Rui and Gupta, 2004). It is a desirable effect that higher institutions of learning create the right kind of labour in adequate amount and quality (Adoniy and Okiy, 2003) that would transform and project the country for development. It is well-known fact that the university's curricula/programme has been plagued with unprofessionalism arising from one-or more internal-related inequalities; however, these programmes/curricula originally were being prepared specifically to respond to the country's need (Okebukola, 1998).

In spite the fact that efforts were made to guarantee the availability of ICTs in the Nigerian institutions of learning, its level of utilisation and practices are still low among students (Goshit, 2006). Goshit however reported that in most government and private institutions of learning in the country has no standardised curriculum for ICT training. Again, students in the African continent report very low proficiency in the utilisation of ICT among the first phase participants of the New Partnership for African Development (NEPAD) e-school initiative. The record showed that about 55% of students in the African continent (Egypt, Algeria, Mali, Mozambique, Republic of Congo, Nigeria, Senegal, Rwanda, Mauritius, Cameroon, South Africa, Burkina Faso, Uganda, Lesotho, and Gabon) reported to have no experience in using computers (Goshit, 2006). Other studies however noted that a typical school environment in the African region makes no provision for ICT opportunity and training, and that about 75% representing teachers have little or no knowledge or experience for ICT applications.

This limited experience of ICT usage by teachers has prompted scholars to research on the possible causes. Kaku (2005) however believes that the absence of sufficient inquiry abilities and of access point in the schools are the major hinderance to the utilization of ICT by teachers. Okwudishu (2005) nonetheless, found that the inaccessibility of some ICT devices in schools hinders educators' utilization of ICTs. The nonattendance of ICT devices in most learning institutions in Nigeria instigates the dependence on cybercafes for accessing the internet for both teachers and students (Adomi, Okiy and Ruteyan, 2003).

Notwithstanding the astuteness of certain higher institutions of learning to figuring out how to build up viable ICT learning programmes, they are faced with colossal issues that block the appropriate execution of these projects. The most critical of these is poor ICT access and utilization among Nigerian advanced education specialists. Nearly in all African nations essential ICT infrastructures are insufficient; because of poor electricity supply to control the ICT devices and helpless state of the telecommunication facilities in the region. Most importantly, this absence of admittance to much required infrastructure is because of insufficient budget for ICT development (Ololube, Ubogu and Egbezor, 2007). A few urban communities and rural territories in Nigeria despite the availability of electricity structure still experience high level of fluctuations in power supply which makes the execution of ICT in training generally troublesome. Most higher institutions in Kogi State lack access to the fundamental facilities for learning technology, which additionally makes the incorporation of instructional technology in the conveyance of quality training troublesome.

The effect of poor economic conditions on labour remains a significant hindrance to the utilisation of ICTs in advanced education. Even an average income earner cannot acquire or pay for the basic ICT devices. Accordingly, computer-related communication facilities would probably be excessively helpful for most students and employees in Nigeria, as the acquiring of computers are very much expensive and a luxury in homes, workplace, and institutions. This has made the combination of fundamental on-line resources (world-wide-web, email, and so forth) into advanced education generally troublesome (Ifinedo and Ololube, 2007). For instance, Gillwald and Esselaar (2005) carried out a comparative analysis of ICT access and usage in Africa. the study surveyed ten countries in Africa and discovered that Botswana has the most elevated fixed line family unit entrance while Uganda drags along the rest, with infiltration under 1%. In

accordance with this, the need for integration of ICT literacy into academic curricula and programme is a serious challenge facing the Nigerian higher education sector. Kogi State has its own share of tertiary institutions entrusted with the task of manpower development. How the tertiary institutions do this is dependent on the philosophy of education on which they are founded. However, the rate of unemployment (paid and self-employment) experienced among the business and computer education graduates of the state creates worry and doubt on the level of ICT skill acquisition in the tertiary institutions in the state.

Statement of Problem

The introduction of information and communication technology can be described as one of the best things that has happen to mankind. Since the influx of technology into the work place, many changes have taken place for the betterment of any organization that adopts and utilizes information and communication technology (ICT). However, despite the above fact stated, these technologies are either lacking or in short supply in some places where the tertiary institutions are integral part in Kogi State. In some cases where there are available, the requisite knowledge to operate or utilize them are not possessed by the staff who are supposed to use them. The consequence of this is low productivity, lack of morale for staff and poor turn over on the side of the institutions. This constitutes the problem for this study. Considering the nature of paper and records works carried out in tertiary institutions, the need to utilize information and communication technology cannot be over emphasized. This is why this study intends to examine the role the above-mentioned factors have played in determining the level of use of ICT in meeting the objectives of tertiary institutions in Kogi State of Nigeria.

Purpose of the study

Generally, this paper sought to determine the utilization of information and communication technology in the achieving the objectives of tertiary institutions in Kogi State. Specifically, the study sought to:

- (1) Determine the extent of utilization of electronic lecture delivery systems by lecturers in tertiary institutions in Kogi State.
- (2) Determine the extent of utilization of ICT for students' database in tertiary institutions in Kogi State.
- (3) Determine the extent of utilization of word processing by tertiary institutions in Kogi State.

Research questions

The research questions that guides this study are:

- (1) To what is the extent are electronic lecture delivery system utilized for achieving the objectives of tertiary institutions?
- (2) To what extent are database facilities utilized by lecturers and students of tertiary institutions?
- (3) To what extent are word processing facilities utilized for achieving objectives of tertiary institutions?

Methodology of the Study

Research Design

The survey research design will be adopted in this work to elicit peoples views and opinions on the topic at hand.

Data Collection and Analysis

Questionnaires were used to collect data from respondents in the selected tertiary institutions in Kogi State. The statistical package for the social sciences (SPSS) will be used the get the mean responses of respondent and the standard deviation.

Population for the Study

The population consists of only academic staff of the selected tertiary institutions in Kogi state.

The institutions include:

1. The Federal University Lokoja
2. Kogi State Polytechnic Lokoja
3. The Federal Polytechnic Idah
4. College of Education Ankpa

Sample and Sampling Technique

The random sampling technique was used to select 20 academic staff each from the institutions under study. This brings the total to 80 academic staff drawn across board. Because of the manageable size of the total population, no sample was taken, rather the entire population was studied.

Literature review

Tertiary institutions are higher levels of academic studies usually above secondary schools' levels in Nigeria. This connotes the combination of schools or institution of higher learning like the Universities, Polytechnics, Colleges of Education and Monotechnic etc. Tertiary institutions include organisations which primarily see to provision of higher education to the generality of people that meet their admission criteria and are thus admitted within its fold. According to Archibong, Oshiomu & Bassey (2010), therefore, tertiary institutions are set up to carryout functions that are essential for the constant development and advancement of the state which are, teaching, research, and community services. Considering this criterial, education should aim at producing graduates that are technologically and ethically modelled to be productive in their arears of specialisation, as well as being responsible citizen to the country.

The above assertion declaration is pair with the perspectives on numerous researchers and authors. For example, Odugbesan (2004) posits that aside from bestowing knowledge which is the core business for the university, it is an institution that is specialised in preparing qualified individuals to meet the human resource prerequisites of society. On the other hand, Okonkwo (2007) maintained that higher institutions of learning should furnish students with the knowledge, skills, and competence to becoming a viable resource in the world of work.

Electronic lecture delivery systems

Demetriadis and Pombortsis (2007) are of the view that as a method for guidance, advanced technology provides the opportunity for the online transferring of learning materials and lectures. This technology in most case include visual and audio conveyance of lectures accompanied by a corresponding referral materials (electronic slides or lecture notes). They use three unique terms to order the different format of technologically delivered lectures. These include:

- (i) ***Digital lectures:*** This is the visual display of instructional material to convey knowledge to the learner. These are usually recorded or live broadcast either on the web (internet) or recorded on a technologically prepared device. This method of lecture comes handy where the student is either a distance learner or as a revisional material for learning. This method of lecturing could be transmitted online via live-streaming or stored in an optical or audio storage media (compact disk, digital visual device)
- (ii) ***Live digitised lecture (LDL):*** This is a form of computerized learning material that captures classroom experiences such as lecturer-student participation without necessarily being in the same location ("in vivo"). The LDL is simply a digital outcome or view of the learning experience (where the lecturer educates and instructs students that are physically present in the lecturer-room). This is usually transmitted online.

- (iii) ***e-lecture***: This refers to an advance learning resource format recorded in studios (“in vitro”) only projecting the instructor(s). This type of learning experience engages students basically on a recorded instructional material. The student in this context only study from the recorded resources and does not create room for teacher-student interactions. The instructor in this mode of learning, addresses a presumed audience, usually a future audience. Thus, this form of lecturing can survive through time and can be used by a variety of people at different place and time.

These technological form of delivering lectures has however been adopted by quite a number of learning institutions over the years particularly to distance learners (Rui, Gupta, Grudin & He, 2004). Electronic or digitalised tutoring increase learning adaptability as these materials can be easily accessed online and reused when needed. In other words, technology has made it easier for students to access and use instructional materials either online or stored up in a computer device. It is therefore essential to note that advances in technology supports the effective development and utilisation of digitalised learning materials through the availability of the technological device (Joukov, Fauster & Chiueh, 2003).

Information and Communication Technology (ICT)

Information and communication technology (ICT) have been variously conceptualised. For instance, Tinio (2000) conceptualised ICT as simply a data handling device as well as an application that can be used for word processing, storage, transmitter and receiver of information for the benefit of its user. This tool/device is all encompassing and not limited to (i) the old ITs such as telephone, television set, and radio (ii) the new ITs such as the internet, computers, wireless technology, and satellite devices. All these devices are combined to work together creating a network that reaches every part of the world. Thus, the internet as a new IT is a powerful and awesome phenomenon.

Information and communication technology (ICT) is the development of devices of telecommunication and microelectronics that are utilized in the examination, acquisition, control/manipulation, recovery, transmission, development, display, gathering, and exchange of qualitative and quantitative information (Boritz, 2000). Adewole and Moharson-Bello (2007) stated that ICT is associated with the full scope of electronic advances and methods used to manage data and information. Idakwo, Usman and Umayah (2008) defined the information and communication technology (ICT) as an electronic-based system of data transmission, gathering, processing, and recovery. This view is supported by the findings of other researchers and scholars like Ogunsola and Aboyade (2005). ICT revolves around information and how it is processed.

Availability of ICT in Tertiary Institutions

Information and communication technology in tertiary institution can be successfully integrated when there is an availability of the ICT facility and the attitude and competence on the part of the instructors in adapting to technological advances in teaching and learning. To Uche, Okoli and Ahunanya (2011), the institutions’ physical environment, structures and facilities provides the right and suitable atmosphere for educating and learning. The development of infrastructure in higher learning institutions are complex and highly expensive; thus, to guarantee learning quality and maintain educational standard worldwide is quite challenging.

The educational system is made of distinctive features among which are the physical infrastructures/structures, the instructors, as well as the students. The physical infrastructures in the learning environment significantly contribute to the learning process. The physical environment and facilities give a clearer picture of what level of education could be provided by the institution. Thus, the environment and facilities of the learning institution is therefore a conditional factor in the learning process. It also portrays what the quality of the institution is to its expectants (Okorie and Uche, 2004).

Usage of ICT in Tertiary Institutions

Unbiased and non-discriminatory presentation of information is part of the way in which the world is transformed into a global information village through ICT. It is reported in UNDP (2007) that ICT is directly an authentic instrument for brisk admittance to ideas and experiences from a number of persons, groups and communities, and also offer a strong support for improving and enhancing service delivery. Parameters selected for estimating the general contributions of ICT to learning in Nigeria are dependent on their support for efficient and competent delivery of information, quick and rapid response, greater reliability, expanded convenience, unwavering quality, accessibility, etc (Wescott, Pizarro & Schiavo-Campo, 2007; Agyeman, 2007).

Theoretical framework

Goal theory

Goal theory was propounded by Roberto Michels (1911). The theory raised the objectives of organisations to focal position as the *raison d'etre* (the most important reason for existence) of all organisation. The contention of this theory relies on the fact that all activities in the organisation are arranged and coordinated toward the accomplishment of set objectives. The objectives or goals here are viewed as worthy premises, which guides the input and outcome of decisions. Goals are basic components of the organisation. To attain success, organisations, as a matter of fact, must outline its objectives and how it can be achieved (i.e, the strategies adopted). Adopted with regards to this study, the theory is very pertinent to understanding the goals the tertiary institution as an organisation that exists in the society is set to achieve. How it goes about responding or adapting to changes in its immediate environment goes a long way in determining the extent to which its organisational goals are attained. This explains why when ICT became vogue in the Nigerian society, tertiary institutions in Nigeria made efforts to set up its facilities in their various schools as well as did their best to adopt the national policy on ICT as a blueprint for implementation.

Presentation and analysis of data

Research Question 1:

To what extent are electronic lecture delivery systems utilized by lecturers for achieving objectives of tertiary institutions?

Table 1 Mean Responses of Respondents on the Extent of Utilization of Electronic Lecture Delivery Systems by Lecturers in Tertiary Institutions in Kogi State

S/N	Item statements	Mean	SD	Remarks
1	Laptop computers	3.89	1.06	High extent
2	Desktop computer	3.42	0.72	High extent
3	Cyber café	3.17	0.86	High extent
4	Interactive televisions	1.15	0.88	Little extent
5	e-mail facilities	3.09	0.98	High extent
6	Smart boards	2.60	1.14	High extent
7	Power point	2.58	1.17	High extent
8	Projectors	2.59	1.11	High extent
9	Electronic lecture	1.62	0.68	Little extent
10	Electronic library	1.67	0.62	Little extent

The data presented in Table 1 above revealed that seven out of 10 electronic lecture delivery systems have their mean value ranged from 2.58 to 3.89. The outcome displayed on the table revealed that the electronic lecture delivery systems are highly utilized by lecturers in tertiary institutions. Other electronic lecture delivery systems items have their mean values fall between 1.15 and 1.69 which indicated that they are

being utilized to a little extent. The standard deviations (SD) of the items as displayed on the table are within the range of 0.62 to 1.17; this implied that, the mean value of the responses had no significant distance with one another. They have similar opinions on the extent of utilization of the electronic lecture delivery systems by lecturers in tertiary institutions in Kogi State.

Research Question 2

To what extent are database facilities utilized by lecturers and students of tertiary institutions?

Table 2: Mean Responses of Respondents on the Extent of Utilization of Database for lecturers and Students of Tertiary Institutions in Kogi State

S/N	Item statements	Mean	SD	Remarks
1	Database	3.59	0.75	High extent
2	Files	3.32	0.94	High extent
3	Internet	3.02	1.12	High extent
4	Data processing software	3.52	0.81	High extent
5	ICT facilities	3.76	0.65	High extent
6	School website	3.75	0.84	High extent
7	Computers	3.85	0.69	High extent
8	External hard disk	3.72	0.88	High extent

The data presented in Table 2 above revealed that all database facilities have their mean values ranged from 3.02 to 3.85. The outcome displayed on the table revealed that the highlighted database facilities are highly utilized by staff and students of tertiary institutions in Kogi State. The standard deviations (SD) of the items as displayed on the table are within the range of 0.65 to 0.94; this implied that, the mean value of the responses had no significant distance with one another. They have similar opinions on the extent of utilization of database for staff and students of tertiary institutions.

Research Question 3

To what extent are word processing facilities utilized in tertiary institutions?

Table 3 Mean Responses of Respondents on the Extent of Utilization of Word Processing Facilities in Tertiary Institutions in Tertiary Institutions in Kogi State

S/N	Item statements	Mean	SD	Remarks
1	Computers	3.75	0.80	High extent
2	Word processor	3.35	0.77	High extent
3	Printer	3.44	0.81	High extent
4	Watermark	3.53	0.74	High extent
5	Application software	3.42	0.91	High extent
6	Ribbon	3.33	0.96	High extent
7	Mini toolbar	1.11	0.89	Little extent
8	Zoom option	3.66	0.64	High extent
9	Word perfect	1.48	0.63	Little extent
10	MS word	3.79	0.74	High extent

The data presented in Table 4 revealed that eight out of 10 word processing facilities (items 1, 2, 3, 4, 5, 6, 8 and 9) have their mean value ranged from 3.33 to 3.79. This showed that those items are highly utilized for word processing in tertiary institutions in Kogi State. The mean of items 7 and 9 however are, 1.11 and 1.47 respectively which indicated little extent of utilization. The standard deviations (SD) of the items as displayed on the table are within the range of 0.62 to 0.96; this implied that, the mean value of the responses

had no significant distance with one another. They have similar opinions on the extent of utilization of word processing facilities in tertiary institutions in Kogi State.

Discussion of findings

The findings of this study revealed that seven electronic lecture delivery systems were highly utilized in tertiary institutions in Kogi State. They include laptop computers, desktop computer, cyber café, e-mail facilities, smart boards, power point and projector. This finding is in agreement with Nwezeh (2010) that using laptop computers of high capacities, e-lecture and smart boards for instructional delivery help in achieving the objectives of establishing an institution. The finding is also in agreement with the findings of Lemke (2009) who found out in his study that varieties of information and communication technologies are still needed for teaching and learning. The finding of the study also revealed that electronic lecture delivery systems such as interactive televisions, electronic lecture and electronic library are utilized to a little extent. This finding is in consonance with the opinion of Gulati (2008) who stated that lecturers nowadays hardly utilized ICT facilities such as e-lecture and interactive television for teaching in tertiary institutions.

It was also found from the study that all the database facilities were utilized in tertiary institutions in Kogi State to a high extent. Among the database facilities are: database, files, internet, data processing software, ICT facilities, school website, computers and external hard disk. The finding is in consonance with Herie (2005) that using database facilities for storing information about staff and students help in achieving objectives of tertiary institutions.

The findings of this study also revealed that many word processing facilities were utilized in tertiary institutions in Kogi State to a high extent. These word processing facilities include computers word processor, printer, application software, ribbon, zoom option and MS word. This finding is in agreement with the finding of Welch and Sapire (2009) that word processing facilities such as computers word processor and printer are part of the most useful word processing tools used by staff in tertiary institutions.

The result of the study indicated that there was no significant difference in the mean ratings of lecturers and students on the extent of utilization of information and communication technology in achieving the objectives of tertiary institutions in Kogi State. The opinion of all the lecturers and students are similar. It implies that tertiary institutions in the study area are using the information and communication technology.

Conclusion and recommendations

Conclusion

Only few tertiary institutions make use of electronic lecture delivery systems, data processing facilities, and word processing facilities. All the database facilities were utilized by the institutions to a high extent. It was also concluded that many ICT facilities were utilized to a little extent. Those ICT facilities utilized to a little extent include interactive televisions, electronic lecture and electronic library, e-view, Stata, matlab, flexPro, Lab View, Lab Plot and ROOT, mini toolbar and word perfect, radio/TV, interactive television, intercom and Ethernet. The low usage of ICT in tertiary institutions in Kogi State could be largely due to lack of appropriate facilities, lack of skills by staff, under funding and poor perception of ICT use in the institutions.

Recommendations

1. Adequate fund be made available for the procurement of ICT gadgets and equipment in tertiary institutions and for training of manpower so as to acquire the requisite skills needed to handle and operate the ICT equipment if acquired. Fund should also be made available for the maintenance and continuous running of the systems after installation.

2. Workshops and seminars should be organized for both academic and non-academic staff of the tertiary institutions so as to provide staff with new knowledge on ICT and to improve on staff area of needs.

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