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Utilization of Information and Communication Technology Resources by Academics Staff and Students in Colleges of Education in Nigeria

[1]Ejigbo Danladi Stephen, CLN, [2]Munirat Yakubu, CLN, [3]Ayefu Omale IBN and [4]Ali Musa

[1]Kogi State University Library Anyigba
[2]Kogi State University Library, Anyigba
[3]Kogi State University Library, Anyigba
[4]Kogi State University Library, Anyigba

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The paper revealed the utilization of information and communication technology by academics staff and student in Colleges of Education in Nigeria. The main issues discussed are; the meaning of information and communication technology, the concept of ICT utilization in teaching, learning and research, concepts of Academics staff and student in Colleges of Education and their training needs for effective utilization of ICT resources, concept of ICT resources for effective teaching, learning and research in colleges of Education. Problems associated with utilization of ICTs, recommendation for effective utilization of ICT was made and conclusion was drawn.

Key Words: Information, Communication, Technology, Learning, Research Teaching, Academics, Resources, Utilization and Education

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INTRODUCTION

College of education in its broadest sense provide the backdrop against which development acquire its means. It is responsible for continuous preparation and upgrading of teachers who can stand out for their professional competence. College of education runs Nigeria certificate in education programs. Teacher education programs are structured to equip teachers for the effective performance of their duties. Academics in college of education teachers and studies as part of their job. They utilize information in the course of their duties to advance the mission of education in their instruction. The academics are the king pin of quality in education and expectedly, the mission of teacher education in Nigeria college of education can be attained by affective utilization of ICT resource for teachers, and as indispensable tool for teaching, learning and research activities. Information resources are required not only in the education sector but every aspect of the society, (Obiora E.A, (2014).

Information resources are defined as printed or electronic medium that can be accessed to satisfy a need. These changes are manifested in the conversion of printed biography source into CD-ROM, databases, direct

access to remote database on-line and the attendant shift in remote research strategies.

The use of information and communication technology (ICT) for teaching learning and research is indispensable because, the importance of information resource lies in its accessibility and utilization for over all development. The survival of research and other academic activities depend on information resources because information is the life wire of research. Academic therefore are expected to utilize a large amount of information resources to enable them function effectively in their day to day research problems especially where these resources are made available to them at the right time and in the right form.

Ugwuanyi (2007) describe information resource as the medium that convey information preservation. Information is vital for the education, employment and enjoyment of all Nigeria includes the visually implied person.

The dynamism of ICT can help colleges of education achieved its set objective in the areas of quality research, teaching, instruction and trainings in technology, applied science, commerce, arts, social science, humanities, education management and other areas of applied science relevance of the needs of the development of Nigeria in the area of industrial and agricultural production and distribution for research and development. ICT usage by academic in college and efficient conference, seminars and workshops relative to such other fields of learning is technologies, applied sciences etc. and serve to promote the objective and colleges of education.

In Nigeria education today, ICTs are being integrated into teaching and learning (Nwachukwu, 2009) it is being used to break down rote learning and make way for modern education (Adeogun, 2003). Aminpour (2007) noted that new technology provides opportunities includes the ability to tailor learning to the individual thereby means way for knowledge society.

ICT can be applied by academic through so many ways it can be used as means of information storage and retrieval and the method of doing research. It can also be used as the channel for delivering instruction and for giving assignment and sharing ideas with colleges in other institution (Ebrahim, 2009).

CONCEPTUAL FRAMEWORK

Information and communication Technology (ICT) is a general concept used to describe a range of technologies for gathering, storing, retrieving, processing, analyzing and transmitting information. Wikipedia (2009) defined ICT as the technology required for information processing, in particular the use of electronic computer and computer software to convert, store, protect, process, transmit and retrieve information from anywhere at any time. As such, advances in ICT have progressively reduced the cost of managing information, enabling individuals and organization to undertake information-related tasks much more efficiently. Yusuf and Onasanya (2011) defined ICT as computer based tools used by people to work with the information and communication processing needs of an organization. It encompassed the computer hardware and software, the network and several other devices (Video, audio, Photography, camera etc) that convert information (text), images, sounds, motion and so on into common digital form. Yusuf (2000) defined ICT as an electronic application of computing, 1communication, telecommunication and satellite technology.

ICT therefore, is the use of computer and telecommunication system in the collection, collation, analysis, processing, retrieval, transmission and communication of different forms of data which may include audio, visual and audio-visual formats (Okwor, 2002). Rahman (2002) defined ICT as the technology of creation, processing, storage, retrieval and transmission of data and information, including telecommunication, satellite technologies, electrical and electronic (hardware) and electronic computing (software) the internet and global system of mobile communication (GSM), also, Richardson (2003) defined ICT as technologies, which facilitate communication and thus the processing and transmission of information electronically. The benefits of ICT cannot be overemphasized in human society thus; Isoun (2003) contended that information and communication technology has comprehensively impacted its benefits on every society as the greatest change agent of human development. It is difficult world - over today, to think of any human life education, communication, research, banking, medicine, trade, culture among others that are not ICT driven. Bandele (2006) posited that ICT is a revolution that involves the use of internet (and its many services such as e-mail, voice mail, teleconferencing etc), CD-ROMS and a lot of more electronic based devices, which depend largely on telecommunication facilities. These kinds have as a matter of fact provided the lecturers, students and researchers opportunities to handle and manipulate information to meet their needs and demand.

It is the growth of the literature, the increasing volume of research findings, the growing dependence of modern society on relevant information and the visible problems created by the inefficient services that led to the development of ICTs in institutions of higher learning for teaching, learning and research (Chisenga, 2005). He stated that any institution that has effectively utilized these facilities can boast of having world wide access to much information to meet the needs of its academics.

Concepts of ICT Utilization in Teaching, Learning and Research

ICT has radically transformed most of the services

provided by academics in the teaching, learning and research. ICT is heavily utilized in the storage, processing and dissemination of information. It has made the organization of information very efficient, the delivery of information services more effective and the dissemination of information easier (Aina in Wombo and Abba, 2008).

The types of ICT facilities available for use includes computer, internet, teleconference, radio, tape recorders, email, phones, global services mobile (GSM), flannel board, projectors, screen, television equipments, internet café, CD-ROM, diskette, flash drives, personal computers (PCs), slide projectors, Opaque Projectors, overhead projectors.

The use of aids such as chalkboard, projectors, tape recorders, screen, and television equipment in many school systems have improved the quality of educational sector (Ekoko, 1996), However, ICT facilities are used to store information resources. Lecturers and librarians can store many lectures and research finding in CD-ROM, flash drives, floppy diskettes using computer and scanners, some valuable information can be uploaded/downloads through internet and printed as lecture notes and research finding.

Adubika (2006) stated that library has a paramount obligation to provide its users with the necessary information in a condensed form. The condensed form is to reduce the bulk of journals, newspapers, magazines, précis etc into microform, CD - ROMs, flash drives, floppy diskettes, downloaded journals articles from internet, computerized titles etc. ICT can provide high quality teaching development strategies with benefit beyond those found in traditional face-to face approaches. In teacher training, it provides an important opportunity for trainers when properly implemented. Serious minded teachers and lecturers can utilize those ICT facilities to bring home abstract lessons to the understanding of students. For instance, slide projector uses small negative films (motionless) and projects it for explanation of some concepts. Opaque projector enlarges tiny words or small pictures and gives one opportunity of training such pictures for classroom demonstration. Overhead projector enlarges words and pictures and projects to a screen for viewing and demonstration according to teaching (Ezugwu, 2008).

Academic staff professional skills can be improved when the internet is properly utilized. Hence, Owolabi and Attamah (2007) maintained that academic institutions in developing countries especially in Africa cannot afford to ignore the potentials of the internet if their teaching and scholars would make appreciable impact in the global information age. Internet connectivity as a means of academic empowerment and development has been acknowledged by Attamah (2005).

Adewale and Yusuf (2005) posited that ICTs are essential tools in any educational system. Hence, they have the potential of being used to meet the learning needs of individual students, promote equality of educational opportunities, and offer high quality learning material, increase self efficiency and independence of learning among students and improve teachers' professional development.

Kirschner and Davis (2003) identified two major frameworks for ICT use in education to include core or complementary technology. Core technologies framework refers to the principal way of organizing the learning experience. Under this learning are planned. On the other hand, as complementary -technologies they are seen as optional serving a valuable function but to be compensated for via core technology if so needed or dropped all together.

Anaekwe (2003) states that the impact of ICT is being felt in recent times, in all spheres of human endeavour and education sector cannot be an exception. In education sector, ICT remains the key factor that blends both the teaching and learning. ICT according to the World Bank (2003) holds out the opportunity to revolutionized pedagogical method and expands access to equal education system. Going by this, there is the need to brace up to the new challenge and systems of education through the development and use of ICT in schools (Kalu and EKueme, 2003) . The importance of ICT in education cannot be overemphasized. It does not for instance, only assists in pedagogy but also enhance storage of vital information like academic library, laboratories and staff strength enrolment records.

ICT simply mean all that is involved in gathering and processing information using modem communication technologies such as computers and other related equipment so that the services (output) generated can reach all that desire them at reasonable cost and in good time to overall benefit of mankind (Anekwe, 2008). Hence, Ojo (2005) contended that the teacher can take advantage of the dynamism of ICT to demonstrate some difficult conceptual theories and principles that will give meaning to this classroom instruction and this enhance this teaching and makes his class presentation an exciting one. The use of ICT in teaching and learning apparently facilitates both the efforts of the lecturers, as well as the learners, as the entire world is said to have been globally connected it then follows that the connectivity has no exception. The institutions of higher learning are the benefactors of most ICT facilities for instruction purposes.

Teaching, learning and research by academics in colleges of education has been deeply affected by ICT. Its utilization is becoming an integral part of academic functions. Hence, Watson (2001) posited that if the use of ICT in teaching and research is to result in any fundamental or lasting change, then a different model of professional development is required for teachers.

Inyama in Anekwe (2003) posited that computers are today being used in an extremely versatile way to aid the understanding of a wide variety of subjects as well as

mathematics. He outlined the use of ICT in education thus; the computer can guide a user through the course of instruction at video display unit in such a way to facilitate understanding of the subject matter. The student learning process is speeded up sometimes faster than when a human teacher is available. This process is termed “Computer Assisted Learning (CAL)”- Computer can also provide instructions to the students, ask questions (often multiple choice questions) grade the students’ performance and determine by it whether to take the subject forward to break new grounds or to repeat the portion of the lessons just concluded. Hence, Ojedokwu and Owolabi (2003) stated that internet resource is an invaluable tool for collaborative research among academics. Internet connectivity as a means of academic empowerment and development has been acknowledged by (Attamah, Ohakire and Okunaso, 2005) as an instrument for research and communication.

Ololube (2007) posited that internet is a powerful and efficient tool for searching, retrieving and disseminating of information among academics. Ojedokun and Owolabi (2003) agreed with the above statement when they maintained that the internet role in information handling, packaging, storing, retrieval and dissemination is at the root of any meaningful academic enterprise all over the world particularly in the west, in these countries, the internet has transformed the conduct of research and teaching in academic instructions by allowing lecturers a wide range of opportunities for accessing accurate and timely information as well as providing a medium for communication of their findings to a wider audience.

Thus, Yusuf (2005) posited that ICT is an indispensable part of educational administration as its application makes instructions more efficient and productive thereby engendering a variety of tools to enhance and facilitate teachers’ pedagogical activities. For instance, e-learning is becoming one of the most common means of using ICT to provide education to students’ both on and off campus by means of teaching online offered via web based system. ICT was used as a basis for the delivery of education, information and training.

Concepts of Academics in Colleges of Education and their Training Needs for Effective Utilization of ICT Resources

Academics are someone who teaches at a college, polytechnics and universities or who studies as part of their job while utilization could be seen as the use of something in an effective way. However, the utilization of ICT resources for teaching, learning and research in COE is becoming indispensable and popular aspect of the educational system. However, this has been hampered by the burden of incompetence. Teaching, learning and research have progressively moved from era of traditional methods of teaching and learning to the era of automated programmes using computer. Therefore, change training is important into the new and unknown. Therefore, training is essential requirement for successful adaptation of the new technologies. Oketunji (2000) suggested series of training and retaining programme for all categories of staff in the utilization of ICT equipment.

Odhigba and Oshiele (2007) agreed with the above when they cited training and retraining in modem ICT as a problem facing ICT implementation in Nigeria Egbukole (2010) stated that there remained a persistent recognition that staff needed re-skilled in order to adequately perform their duties in the rapidly changing information service delivery environment. Ozioko (2007) posited that the basic building block of ICT is the skilled and semi-skilled man power with basic skill for operating computer using elementary functions of standard software.

In order to accomplish ICT training, a training plan would then be assigned and should consist of one or more training intervention to meet competency gaps among various academicians. The lecturer’s incompetence on the basis of computer operation (keyboard skills, diskette formatting etc) has gross implication on their inability to use computer based ICT, software packages (e.g. self leaning CDs, CD-ROM, statistical/mathematical packages, computer assisted instructional packages, computer managed instruction (CMI), graphical illustrations, conferencing (etc). Therefore, the need for computer training of lecturers’ pre service and in service cannot be over emphasized. In using ICT, new lecturers need to be competent in the use of variety of use of software, particularly software that has specific application in various disciplines. For instance, apart from word processing, data processing, spreadsheet and so on that are important for all lecturers in the social science, statistics, education among others. They should be able to use statistical package for social sciences (SPSS) to enhance their output.

Salman and Olasina (2010) posited that there is an urgent need for library and information professionals to update or acquire additional training in order to argument the analyzed knowledge and skills with competency in ICT use. This is pertinent so as to impart the right knowledge to the students if they are to adapt to the new working environment. Nwakanma (2003) emphasizes that information professionals are expected to be aware and capable of using and demonstrating emerging ICTs. This can only be achieved through consistent training and re-training of library and information professionals.

Concept of ICT Resources for Effective Teaching, Learning and Research in Colleges of Education.

The ICT resource available for effective teaching and learning includes the following: computer, Fax machine, television, radio, internet, telephone, megaphone, scanners, printers, photocopiers etc.

Computer is a type of ICT resources which has been found worthy to provide varieties of programmed instruction to classroom interaction. Again, computer can be defined as a general purpose machine that processes data according to a set of instructions that are stored internally either temporarily or permanently. The computer and all equipment attached to it are called hardware. The instruction that tell it what to do are called software. The use of computer in teaching and learning has also help in modernizing the manual methods of teaching and research. The indispensability of ICT in the teaching and learning in colleges of education cannot be over emphasized. It has the viable potentials to accelerate the acquisition of basic skills and knowledge required in motivating the students to learn. ICT offers the teachers the new role that is preparing learners to manipulate information for solving social, political and economic problems.

The advancement of mobile phone in research and learning creates great impact in current awareness of new research finding through short message services (SMS) in mobile phone.

FAX Machine is another type of ICT facilities used in learning and research. It is defined as a device which scans, transmits, receives and print document (faxes) transmitted by telephone. It is also defined as a device that allows the user to fax information over a communication line. The scanning mechanism uses photo sensors to scan the document and read thousands of tiny dot areas to determine whether each dot is black or white. The machine then encodes and compresses this information and sends it over a telephone line to another fax machine. Fax machine can also be defined as a Telescoping device that electronically transmits written or graphic materials over telephone lines to produce hard copy at a remote location (Adrew, 2009)

Fax machine is very useful in rendering library services and operations. According to Mount Horeb Public library (2009) the primary purpose of fax machine is to facilitate access to information as it relates to the philosophy of reference services. Jin addition to this, fax machine serves to reduce document delivery time, improves sharing of resources among libraries and other information providing agencies, and enhances reference services at the library. Besides, the introduction of fax machine into library makes it easier to send books between libraries and schools. Moreover, Yadar (2004) notes that a fax is faster than overnight courier services and potentially cheaper. Another major advantages of fax machine is its durability, which is due to its relative simplicity. Again, due to the complexity of the machine it rarely breaks down. However when it does, it is easier to fix. As a result fax machine often last.

In addition to the various telecommunication facilities discussed above, internet also plays a vital role in library. According to Ezomo (2006) internet is the gateway for libraries and information centers to enter the electronic information era and provides information generated by different organizations, institutes, research centers and individuals all over the world. Internet is a worldwide network of computers and computer networks that can communicate with each other using the internet protocol. Any computer on the internet has a peculiar internet protocol address (IP) which enables other computers to route information from it. As a result any computer on the internet can send message to or receive message from any other computer using its (IP) Address. In this way, internet can be seen as a channel through which exchange of messages between computers exist. Besides, internet is a global system of interconnected computer networks that use the standard internet protocol suite to serve millions of users.

The advancement of internet in learning and research has great impact on library services and operations. Commenting on the relevance of internet on library services. Abraham (2010) opines that internet access enables libraries to locate information stored in other computers around the world. With the aid of online search facilities, information stored at different locations can be easily retrieved. He further explains that internet enhances the efficiency and effectiveness of library services. Queries from patrons are handled within the shortest possible time. Through internet, various library sub-system and data base are interconnected to indicate how they provide input to or obtain outputs from other sub-systems or data base. By so doing library stands a better chance of achieving greater effectiveness and efficiency of performing basic data handling tasks. Moreover, through networking such as Local Area Network (LAN), Municipal Area Network (MAN) AND Wide Area Network (WAN), Internet facilities resource sharing among libraries. Networking helps to reduce duplication of efforts. For instance, indexing and abstracting of library materials such as books, journals, newspapers and magazines etc can be shared among academics in the network libraries. Besides, sharing of electronic information resources such as e-books, e-journals with other libraries are possible through WAN. Internet has also been found worthy on the side of library users. Users are no longer restricted to days and hours in terms of using library materials. Internet opens 24hours every day, and is capable of providing all sorts of information. With the aid of internet, users can access library materials anywhere (even from their homes) and at any time. This therefore, reduces the cost and time users spent for going to the physical library. In addition to this, users do not need to cluster on particular library materials especially those materials that have high demand. Thousands of users can access a particular material at the same time through the aid of internet.

Finally internet has made it possible for people with disabilities to have the same desires and access to learn as others.

Electronic mail (e-mail) is another useful ICT resources

enhances teaching, learning and research. E-mail is a method of exchanging digital messages across the internet or other computer networks.

Ozioko (2007) states that electronic mail is the use of computer network to transfer data (figures, tables, and words) from one machine to another. It is a new age social service that keeps us always well informed and highly communicative in a world of events. Users can get access to this service in two basic ways-through the popular free email application such as Hotmail, America online, Yahoo. Etc or through the hosted email solutions delivered by the ISP hosting providers.

The use of e-mail in learning and research helps a lot of overcome the problems encountered in information delivery such as letter writing, current research result etc. with e-mail one can send a message to a far distance and within some minutes receives the feedback of such message. E-mail also helps researchers a lot in sending in their article for publications.

Teleconference is another ICT facility which has great potentials for teaching and learning. Davies (2008) defines teleconference as a telephone meeting among two or more participants involving technology more sophist than a simple two way phone connection. Teleconference is also seen as a telephone or video meeting between participants in two or more locations. The term can also be defined as a meeting among participants in different geographical locations through a telephone or video technology. Teleconference can be an audio conference or a video conference. It is an audio conference when it uses telephone or a two way radio system to connect participants' voices. In this case the participants cannot see each other rather only their voices are being heard. On the other hand, a teleconference is said to be a video-conference when the participants are able to see still or motion video images of each other. Video conference transmits both pictures and voices through video cameras and computer modems. Another form of teleconference is satellite teleconference. Satellite teleconferencing is another technology device used in sending a one way video broadcast from one location to many other locations through the use of satellite equipment. The one-way video broadcast is made interactive through the use of telephones and fax machines. Satellite teleconferencing is a one-way video, two way audio (Iv 2A) experience where participants can see and hear the presenter but cannot be seen by the presenter and can interact with the presenter only through the use of other audio media such as telephone or fax machine. However, satellite teleconferencing is quite different from video teleconferencing. While the former is a one way video, two-way audio (Iv 2A) technology where only the participate can see the presenter, the later is a two-way video, two-way audio (2V 2A) technology in which all parties (the presenter and the participants) are able to see and hear each other.

Teleconference is another modern communicating device, which has great impact in improving teaching, learning and research. The capability of teleconference in reaching or connecting large area gives academics the opportunity to participate in any issues concerning their professional discipline. With the aid of teleconference, academics can be in their offices or homes and have effective meetings with other people within or outside their locality. As such, transportation cost, time factor or distance can no longer prevent academics from attending conferences, seminars, and workshops.

Since teleconference encourages large participation it therefore, broaden the range of ideas and viewpoints to be discussed. It gives room for both lecturers and students to air their opinions. More importantly, teleconference enables people with disabilities, parents with childcare conflicts, elderly people, and people from remote areas to participate in any research issue of their interest like telephone, teleconference offers immediate feedback and allows people from remote areas to receive first hand information.

Problems Associated with Utilization of ICTs

In most of the institutions of higher learning, these ICT resources were provided to really bring into practice the aspiration of current social order in science and technology. With the application of these materials in lectures, laboratories and other way of instruction, teaching and learning could easily be enhanced (Ezugwu, 2008). In Nigeria, the nagging problem with the ICT utilization in institutions of higher learning, particularly colleges of education is the cost of ICT equipment in Nigeria whose economy is battered and currency seriously devalued as a result of global economic meltdowns. Obanya (2007) noted that the prices of computer hardware and software continue to drop in most developed countries, but in developing like Nigeria, computers and other ICT equipment are several times more expensive. While a personal computer may cost less than a month wages in Library and Information Science the average Nigeria worker may spend six months income to buy one. Hence, Anekwe (2009) posited that the vicious circle of poverty in Nigeria hinders the average Nigerian from owning a computer.

Inadequacy in the level of relevant infrastructure; particularly telecommunications facilities and power supply are some of the problem faced by libraries involved in the use of technologies. Inadequate power supply and lack of adequate infrastructure among the constraints plaguing the development of information technology application in Nigeria education system.

Odhigba and Oshile (2007) specifically reported 'irregular supply of electricity' by the Power Holding Company of Nigeria and frequent breakdown of stand by generators as problems encountered in utilizing ICT facilities. Various studies have shown the multifaceted

problems militating against the effective use of ICT in the teaching and learning process in schools.

Funding is of utmost importance in the adoption of any ICTs project while most benchmarks had budget allocation, limited funding renders this virtually impracticable in terms of day to day strategic operation (Muswazi and Yumbar, 2007) lack of fund is another bane in the implementation of ICT in colleges of education in Nigeria. Hence Itegboje and Okebore (2007) observed that the problem might be the fund not the technology but rather the will on the part of the government.

Recommendation for effective utilization of ICT

For Nigeria to overcome development disabilities and achieve self confidence, ICT facilities must be provided adequately to educational institution and colleges of education in particular (Okafor and Imo, 2008). The adoption of the Nigerian National Policy for information technology in 2001 is the right step towards ICT application in every sector of the nation's life particularly in research, teaching and learning. Kwachie (2007) was of the opinion that there should be adoption of ICT international standards and its inclusion in Nigeria curriculum and periodic training of lecturers in computer and ICT skills acquisition and government at all levels making ICTs a matter of printing by providing fund needed in the training of lecturers in computer educations. Nworgu (2006) posited that for National Policy to be revised there should be proper coordination of ICT policies and programme. Ezugwu (2006) posited that there should be total retraining of every academic staff in information and communication technology. This is borne out of the general inertia that computer internet and telephone services constitute information and technology only. Secondly that there should be orientation and workshop organized for some few days to enable old lecturers share ideas with the newly recruited members. Thirdly, that there should be encouragement of the lecturers to be utilizing the provided facilities as they do not enhance teaching but bring lessons to the understanding of the students. Langshak, Daze, Dutse (2003) suggested the use of photo voltaic technology as alternative source of power supply. The technology involved the use of array to treated cell panels used to capture solar energy for various uses including powering computer system. Thus, Okorie (2005) opined that government should provide adequate funds and necessary infrastructure facilities and national information technology policy should be implemented to enhance an efficient services delivery using ICTs in teaching and learning.

Seminars, conferences and workshops are essential ingredients towards improving any skills hence; Meziobi (2004) opined that seminars, conferences, workshops and in-service training are to be invigorated as to extend teachers knowledge base and ICT education programme. He emphasized total re-training of every academic staff in ICT.

High cost of ICT equipment in developing countries and Nigeria in particular has been the bane behind the low utilization of ICT facility (Okafor, 2008). He suggested that importation of ICT facilities should be duty free so that it can be affordable to every teacher. Secondly, the federal, state and local governments, corporate bodies and parents Teachers' Association (PTA) should extend helping hands in the provision of ICT facilities to schools within their locality through adopt - A school - project.

Jibril (2009) suggested that government should enforce compulsory ICT training at all levels of education programme. She described ICT as a language for survival in the world and the bed rock of development in any nation. And this can be done when ICT is made compulsory for teaching, learning and research, administration and management.

Therefore, teachers in tertiary institutions in Nigeria be trained not only to be competent in the use of ICTs but capable in their use and integrated for instructional purposes, capable teachers, in this context, refers to teachers who know how to learn, are creative, have degree of self efficacy, can apply competencies in novel as well as familiar situations and work well with others. Since lack of teacher computer skills is the single largest barriers to ICTs use in education, initial teacher training in Nigeria schools should incorporated necessary ICT training and staff development should be developed for serving teachers. Compulsory ICTs training should be enforced for all teachers, that is, ICT components should become integral part of teacher education programme for pre-service teachers at the colleges of education, universities and other teacher training institutes and also for serving teachers. In addition, regular workshops and seminars should be organized for serving teachers to keep them abreast of development in the field of ICT as they relate to education.

Provision of infrastructure needed for the implementation of ICTs in school should be made and this has several dimensions. In the first instance, schools should be equipped with necessary ICT facilities as envisaged in the national IT policy. For a start, shared ICT parks can be established for schools within a defined location to use on rotationally scheduled basis. The NITDA initiative in mobile computer laboratory can also be explored. Teachers at all levels should be assisted to acquire personal computer through loans as obtained in other countries, such teachers should have laptop or palm top computers which can be used at various setting (homes, offices, classroom, workshops etc). The British government teacher computer acquisition programme led in increased use of ICTs in British schools (Scrismshaw, 2004).

CONCLUSION

This paper was base on the utilization of ICT resources by academics in college of education in Nigeria. The ICT facilities available in colleges of education in Nigeria are few and the extent utilized by academics staff for teaching, learning and research purpose is low.

The staff requires some ICT training needs for effective utilization of ICT resources. The low extent of utilization of these ICT resources by academics staff is as a result of some problems such as inadequate funding, poor power supply and lack of training in effective use of ICT resources for teaching, learning and research in colleges of education in Nigeria.

Some strategies were identified for enhancing the utilization of ICT resources by academics staff in colleges of education in Nigeria for alleviating the problems in effective utilization of ICT facilities for teaching, learning and research purposes by the academics.

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