CHAPTER NINE

CHALLENGES OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) SYSTEM IN GOVERNMENT OWNED TERTIARY INSTITUTIONS LIBRARIES IN NIGERIA

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Abstract

Library is the nerve center of academic activities for its users. Hence, the need to provide users with relevant stock of intellectual contents for social, political and economic development through print, and information and communication technology (ICT) materials. This paper, therefore, examines the level of acceptability and challenges of ICT system in government owned tertiary institutions in Kogi and Kwara States, Nigeria. The findings were limited to availability, maintenance, training, usage and challenges of ICT by library management and the intellectual communities of the institutions under study. The study involved of 444respondentsdrawn from the twelve higher institutions which have not less than five years of existence as at the time of the findings in the two states. The respondents were randomly selected from among the registered staff, students and management staff of the libraries in the institutions. Two sets of questionnaires were used and administered on head librarians, and their patrons. The result of the findings showed that, staff and students were aware of the existence of the ICT section in the libraries and were enthusiastic to have, and access, ICT there. However, inadequate provisions of relevant knowledge resources in the libraries were observed. The major constraints towards ICT services by the libraries includes funding, space, high cost of bandwidth, maintenance, high cost of power consumption, shelve arrangement packages, retrieval system, and frequent upgrading of hardware system. Others include the usage of the materials by patrons, location of the resources in the libraries, poor skills, lack of time, restriction to access by staff, erratic power supply, and frequent internet service downtime. Suggestions are proffered to

improve the electronics section in the libraries, in line with the challenges.

Key Words: Information, Communication Technology, Academic Libraries, Library ICT and Library Services, ICT challenges in libraries.

Background to the Study

The term Information Communication and Technology (ICT) has become a household language. The concept of the term is no longer new in our society. The primary work of librarians is information gathering, processing, organizing, and dissemination or communication to the library patrons. What is new in the term ICT is the word 'technology'. Technology connotes 'scientific applications', in this case, on information and communication. This, in most cases, involves the use of computers and telecommunications equipment to store, retrieve, transmit, and manipulate data as complement to manual operations. Some of such technology or scientific equipment include, computer sets, television sets, radio sets, audio/video players, compact discs, cassettes, etc. Prior to the 21st century, the collection and use of these gadgets were not usual in library services.

However, by their introduction into library operations, there have been quite feasible improvements in library operations; but they are not without challenges. Kwara and Kogi states are located in the middle belt of Nigeria. Kogi state was carved out of the old Kwara and Benue States. Kwara State was one of the first twelve states that was created by the decree of the then Federal Military Government of Nigeria. Benue State was created out of the old Benue-Plateau State that was part of the twelve states created then. The states are relatively the same in terms of socio-political and economic background; and are geographically congruent. For some time now, the states are being governed by the same political party with same ideology in transforming education system. Both states own near identical post-secondary institutions that train students towards the award of degree, diploma, and certificates in different fields of human endeavour. The following academic institutions are presently in existence in both states: Kwara State Polytechnic, Ilorin; Kwara State College of Arabic and Islamic Studies, Ilorin; Kwara State College of Education, Ilorin; Kwara State College of Education, Oro; Kwara State College of Education (Technical) Lafiagi; Kwara State College of Health Technology, Offa; Kwara State University, Malete–Ilorin; Kogi State University, Anyigba; Kogi State Polytechnic, Lokoja; Kogi State College of Education, Ankpa;

College of Nursing, Obangede; and College of Health Technology, Idah. One of the educational services that facilitate the implementation of progressive educational policy and promotion of effective educational system all over the world is library; hence compulsory provision of library services in all accredited institutions and agencies in Nigeria. Library serves as one of the most important educational service providers in the development of individuals' intellect. This is achieved by the services in research development, reference service, acquisitions and organization in print and other electronic devices provided by libraries to their patrons, the library users. Libraries in academic environments, such as in Nigerian tertiary institutions, universities, polytechnics, colleges of education, colleges of health, and schools of nursing - help those communities greatly in their research, teaching and learning, community development efforts, as well as in publications. A well-equipped library with current facilities and collections are sine qua non for user's productivity towards achieving the set goals of the institution. One of the instruments that facilitate academic work nowadays is provision of ICT facilities. Acquisition and installation of ICT products in any educational institution, and more importantly in the library, enhance search and access of members of the academic community to current information. However, it is regrettable to observe that research is rarely conducted on the subject matter in most educational institutions in Nigeria. It was reported in a review that little or no attention is being paid to well-organized ICT systems in the institutions, let alone the libraries (Adetimirin 2007).

Review of Related Literature

Information Technology (IT) encompasses the notion of the application of computers to storage, retrieval, processing and dissemination of information. That is, the use of information technology, especially computer system, digital electronics and telecommunications, to store, process and transmit information. The related term, Information and Communication Technology (ICT), arises as a result of the advancement in IT that has partly led to the globalization of the world economy and requires seamless retrieval of information wherever it is provided; thus making communication and media essential parts of the technology. Communication among communities and between members of the same community has been highly enhanced through international networking (internet) such as electronic mail (e-mail) and Global System of Mobile (GSM) communication. ICT is a system for acquisition, processing, storage and dissemination of information by means of computers, office machines and telecommunications. The computer provides the facilities for the transfer or communications of data and its applications. Kuar (1996) observed ICT to be a network of information filed. To him it is a systematic

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organization and co-ordination of inter-connected libraries, documentation and information centers for achieving greater economy and efficiency. The main objective of an information network is to promote avenue for effective utilization of information through sharing of resources by group of libraries based on accepted agreements and policies. The use of computer technology and telecommunications added new dimensions to the concept of networking in the libraries. Bada (2001) examined the goals and objectives of information technologies as relates to library system to be:

a. Increasing the volume of work that can be achieved.
b. Expanding services without the need for additional staff.
c. Freeing staff from routine work as much as possible.
d. Speeding up processing of materials.
e. Improving the quality of existing services.
f. Encouraging better control over resources and services.
g. Encouraging cooperative ventures among libraries and institutions.
h. Improving the status of library and librarians through effective performance.
i. Facilitating creation of data bases..

Kabala (2004) observed that with ICT, staff and students can satisfactorily get answers to their queries within the shortest time, they can look up items of interest in electronics encyclopedia, articles on a particular subject from variety of publishers could be culled without having to buy the publications. To him, librarians can perform their functions more effectively by communicating with other libraries worldwide. Internet can be used to obtain important resources for teaching and learning by sending out orders to publishers and producers of teaching materials and requirements with ease. File transfer, and protocol for journal articles, magazine etc. can be down loaded.

Adetimirin (2007) observed that ICT can facilitate communications between teachers and students. It also provides students with additional opportunities to write, edit and undertake multimedia projects. But he noted that the adoption of these learning tools in higher education is dependent on awareness, availability and ability to use them. Akande (2004) observed that the educational use of internet is still very rudimentary, with heavy reliance on print materials. That no information communication technology products are used as such to deliver the contents, and provide students support. To him, there are hardly any other resources such as audio or video materials to accompany the materials, and therefore suggested that attempt should be made to take advantage of the emerging and new information and

communication technology products. Corbett and Williams (2002) observed that students' use of technology in education is expected to improve educational outcomes, increase skills in the use of technology itself, and decrease in inequalities among groups. Therefore the adoption and use of ICT could facilitate access to unlimited and current information, irrespective of geographical location and time. McMahon *et al* (1999), in their study, observed that the factors that influenced the way undergraduate students in UK universities use computers include access, training and time. Barraket and Scott (2001), in a study, highlighted ready access to infrastructure, availability of facilities, maintenance and up-grading of equipment as factors that affect the effective use of ICT.

Opaleke (2005) identified the general dearth of competent manpower to handle all aspects of automation, together with the poor maintenance of ICT systems in libraries, as hindrance to library stock of ICT equipment. He recommended recruitment of the right caliber of staff in libraries before setting up an ICT unit there. Going by the reviewed literature, it is obvious that ICT is no longer new to the development of education in Nigeria, as it has quite enormous advantages or benefits to users. Its acquisition, storage and utilization enhance academic activities. Use of ICT products, from the review, largely depends on users' awareness, availability of facilities and acquisition of appropriate skills to use them, while maintenance and administration should be handled by competent manpower or staff (Kuar, 1996; Akande, 2000; Barraket and Scott, (2001); and Opaleke, 2005). The salient point of this review is that, ICT development or growth in education cannot be overemphasized; while the enormous usefulness to students on assignment undertakings, literature search, and self-learning were highlighted. To this end, library activities, where ICT exists, enhance productivity. However, it could only enhance educational growth when users have free access, training and devote time to its use (McMahon (1999); Bada (2001); Corbett and Williams (2002); Kobala (2004); and Adetimirin (2007).

The Problem of the Study

As at the time of this finding, there were twelve tertiary institutions owned by the two state governments as enumerated earlier. Each of the libraries is a standard library, with qualified librarians and record of registered users. However, not all the units have statistics of users and use of the collections. Expectedly, every standard library is supposed to have virtual section with the following units: digital, audio-visual, automation and archival records. To what extent is ICT services being

provided in the institutions libraries, and how has it enhanced academic activities of the community members?

Objective of the Study

In the light of the submissions, the study examined:

1. Librarians and patrons' perception of ICT services in libraries;
2. The existing ICT facilities in the libraries;
3. The process put in place to encourage use of ICT in the libraries;
4. Patrons' perception of usage of ICT section; and
5. Challenges facing ICT application in the libraries.

Procedure for the Study

The population of the study comprised the users of each of the libraries. The sampling procedure was limited to users that physically came to the libraries within the period of ten working days of the three weeks of the study; and within the hours of 9:00 a.m. and 3:00 p.m. which is the peak period for most of the libraries. The study involved a total of four hundred and forty-four (444) respondents. This comprised forty-five (45) librarians, one hundred and seventy-three (173) faculty and non-teaching staff, and two hundred and twenty-six (226) students. The respondents were randomly selected as they entered into the libraries through the main entrance in each of the days in question. Participation was however voluntary. Once a user completed the questionnaires, he or she is subsequently left out.. The procedure lasted twelve working days in each of the libraries simultaneously. The study involved the use of research assistants in each of the institutions under study. Two sets of questionnaires were provided, a set for the librarians while the other was for the patrons. The responses from the respondents were collated and analysed for the report.

The Report of the study

Going by the analyses of the data from respondents' responses, the report is presented as follows:

Respondents' Perception of ICT Service in Library: Four hundred and forty-four (444) or100% respondents (comprising both librarians and patrons) **strongly agreed** that with ICT, librarians and patrons can:

a. Get answers to their queries within the shortest time possible;
b. Checkup items of interest in e-packs and nets such as internet & intranet;
c. Afford access to published articles and research reports;

d. Librarians can perform their functions more effectively by communication with other users world- wide;
e. Link to collections of other libraries far apart;
f. Encourage the use of internet service in teaching/learning and sending orders to publishers/producers;
g. Afford accessing of and downloading of journal articles, magazine etc.
h. Facilitate communication between librarians and patrons, teachers and students;
i. Provide patrons with additional opportunities to develop search skills;
j. Encourage better control over resources and services;
k. Improve the quality of existing services;
l. Speed-up processing of materials and ease reorganization of recorded statistical presentation.

However, some respondents have opinions to ICT in library in descending values as follows:

a. 54 or 34.68% **sparsely agreed** that it enhances services without the need for additional staff;
b. 74 or 16.66% **sparsely agreed** that it increases the volume of work that can be achieved;
c. 260 or 58.55% **sparsely agreed** that it frees staff from routine work as much as possible.

Based on the perception of the respondents, the existing ICT facilities were examined.

The Existing Facilities in the Libraries

Interactions with faculty, students and administrators in some of the institutions, coupled with interviews with library staff and on-the-sport assessment, showed evidence of rare functional ICT collections in some libraries. Of the twelve institutional libraries, eight (08) or 66.66% of the libraries had functional ICT unit in their libraries, while the other four (04) or 33.33% did not. None of the institutions had all the four units of virtual sections, digital, audio-visual, automation, and archival documentation in the libraries. The libraries with so called virtual collections have only digital hardware and few discs. The twelve (12) libraries had Computer Devices Read Only Memories (CD-ROM). These CD-ROM collections are those that followed some books into the libraries. However, the universities, polytechnics and two colleges of education were connected to internet services and subscribed to few electronic-books and journals. None of the libraries have

materials and resources on audio or visual, such as radio-cassette, television, slide, and the like, thereby neglecting their importance in reference services. Most of the libraries had computers ranging between 25 and 85, which could be considered grossly inadequate, compared to the number of registered patrons in each of the institutions library. Five of the libraries automated their collections. However, the stock of electronic resources ranged from two hundred and fifteen (215) to eight hundred (800) in the affected libraries. The subject coverage of the collection ranged from four (4) to thirteen (13) areas.

ICT Administrators/Manager

Two (2) of the libraries with ICT/digital unit had computer or electronic technologist in-charge of their ICT unit, while three (3) libraries had competent librarians who could manage the unit by virtue of their first degree specialization, which is science. The other seven libraries electronics departments are being managed by either library officers or assistants, as the libraries depend on electricians from outside for repairs and servicing.

Major Problems facing ICT in the Libraries

The major problems facing ICT in the libraries ranged from, lack of space, cost of procurement and installation, incessant power failure, institutional authority policy against its location in the library, shelves arrangement, CD preservation, frequent changes or up-grading of system, inferior replacement parts, multiple users and the harsh African weather.

Sensitization of users on ICT Facilities and Training

There were a number of means created by the librarians to sensitize users on the provision and availability of ICT services in the libraries. Four (4) libraries use handbills, Seven (7) libraries use notice boards, One (1) library use the post, and Eight (8) libraries use personal relationship or interactions. But two (2) libraries use academic board/senate forum to publicize their collections, facilities and training.

Patrons Self Operative Skill

Of the 444 respondents, three hundred and fifty-four (354) respondents, that is, 79.72% were computer literate, two hundred and fifty-one (251) or 56.53% of the respondents could search for information on the net, two hundred and seventy – four (274) or 61.71 could operate Computer Disk (CD) while all the four hundred

and forty-four (444) or 100% respondents could operate videos and tape recorders to tap information needed.

Use of ICT in/outside library

On use of ICT in/outside library by the patrons, one hundred and seventy-eight (178) or 40.09% respondents subscribed to internet on their personal computers for use, hence considered the need to consult library not necessary. Three hundred and twenty seven (327) or 73.64% use ICT facilities in their libraries, cyber cafés or elsewhere. Two hundred and twenty-two (222) or 50% mostly use ICT for internet search, while one hundred and thirty-three (133) or 29.95% use CD-ROMs occasionally. 344 respondents or 74.47% had access to video tapes or CD facilities at home for use, not for educational development but for entertainment.

Patrons' Awareness and Use of the Resources

A total of one hundred and fifty seven (157) or 35.36% were not aware of the existence of ICT in their library, while two hundred and eighty-seven (287) or 64.73% were aware. All the four hundred and forty-four (444) or 100% respondents listen to radio, but only one hundred and fifty seven (157) or 35.36% listen only when there are events such as football, presidential broadcast or news, particularly whenever there was no electricity (but) with dry cell batteries. Of the four hundred and forty-four respondents, two hundred and fifteen (215) or 48.42% respondents utilized ICT resources stocked in the libraries, that is, 74.91% of those that were aware of ICT section in the libraries.

Usage of ICT by the Patrons

Two hundred and fifty one (251) or 56.53% of total respondents used internet to browse information for research purposes, three hundred and forty (340) or 76.57%, to mail correspondence, two hundred and sixty four (264) or 59.45% respondents used video/CD facilities for entertainment and relaxation in or outside library, while two hundred and forty seven (247) listened to radio-cassette players for news and advertisement purposes.

Hindrances to Usage of ICT

There were quite a number of reasons for hindrances to use of ICT facilities by the respondents. First is the high cost or charges made on time spent, followed by poor computer skills which results in use of more time and more money before they retrieved the needed information from the net. Others include poor computer internet search skills, lack of time to search, partial success on search, irrelevance of

contents on information searched, and none access to the facilities at the time of need due to incessant electric power failure. With specific reference to usage in the library, factors like: slow network, insufficient hardware set, printing charges, time and hours of operations, unstable power without alternative source, restriction to the perusal of the subjects CD contents/abstracts, unfriendly staff guides, and low or no publicity of stock and contents on arrival, hinder the use and usage within the library.

Respondents' Suggestions for ICT Use

The respondents were of the following opinion: three hundred and sixty-three (363) or 81.75% wanted ICT skill acquisition to be made compulsory at 100 or 200 level of the institution, two hundred and sixty-four (264) or 59.45% wanted faculty staff to have knowledge of ICT unit library stock for teaching/ learning exercises, three hundred and twenty-four (324) or 72.97% wanted twenty-four hours library service. Three hundred and twenty-one (321) or 72.29% wanted libraries to prepare lists of their electronic software subject by subject, with abstracts to encourage use. Four hundred and twenty (420) or 94.59% wanted standby generators provided for the library to allow full time utilization of the ICT facilities in the library.

Discussion, Conclusion and Recommendations

With the analysis of the responses, it was obvious that, ICT system was yet to be fully embraced in the Kwara and Kogi States' higher institutions libraries. This is dangerous to the educational development of the states. By now all the institutions should have automated their library system, and have reliable ICT section with such equipment like digital automation, audio-visual, and archival sections in the libraries, with a minimum ratio of a computer to five library registered users. Such section should have a trained staff such as a computer expert or a technologist to train users and maintain the systems. On space and number of ICT facilities, the library's ICT facilities in the institutions fall short of the requirements; hence the need for library extension or annex building to create space and accommodate enough ICT facilities. A functional library, as observed by the researcher, ought to have sufficient, relevant and functional ICT facilities that will contribute meaningfully to educational development of library users. The following is recommended as minimum standard requirements per thousand patrons of any library:

a. Two hundred computers for internet services for a thousand patrons
b. Fifty CD ROMs machines for a thousand clients

c. Sixteen automated line points for acquisitions, serials, reference, circulation, digital document, archiving, cataloguing etc.
d. Forty televisions connected to video/CD players with ear phones
e. Fifty radio/Tape with ear phones
f. Stocks of software covering the available subject areas with five copies per title and
g. Two laptop computers with projector for exercise.

However, the provision should depend on the number of potential/registered library users. Low numbers of skillful respondents was observed in the operation of ICT facilities. This occurrence does not augur well for advancement of education. This affected the usage of the facilities and made respondents mostly dependent on print resources. For this reason, the respondents' opinion to make training on the use of ICT facilities at 100 or 200 level compulsory is worth considering by education administrators to achieve the objectives of introducing ICT system; which is for the promotion of education standard in school system. The suggestions made by the respondents for improved ICT facilities and use is worth Government consideration for improved educational standard in Nigeria. There is still room for improvement by Nigeria's education administrators at all levels. To achieve the education set goals, legislation should be made to enforce establishment of ICT facilities in both public and private academic institutions in Nigeria.

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