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# Use of Information and Communication Technology (ICT) in Enhancing Services in University of Jos Library.

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**Abstract**
*The focus of this study is the use of ICT in enhancing services in the University of Jos Library. The study is guided by six objectives and research questions. In order to meet its objectives, primary data which consists of a set of questionnaire was designed and administered on a sample of 38, out of which 22 were properly filled, returned and used for the study. Frequency counts and percentages were used for data analysis and tables were provided where necessary. Analysis revealed that ICT facilities are readily available in the University of Jos library and used regularly by majority of the staff. The study also revealed that ICT use has enhanced services in the University of Jos library to a very large extent in terms of accessibility, use and speed. A good number of staff are effective in ICT use. The major problems staff encounter in the use of ICT are slow/inconsistent internet connectivity and frequent power failure. It was recommended among others that, funds be made available to upgrade internet connection and maintenance of ICT facilities.*

Keywords: *ICT, Library Services, University of Jos.*

## Background to the Study

Information and Communication Technology has become imperative not only to educational technology sector, but to the field of librarianship. As the world witnessed a revolution of ICT, the impact of computers and new information technology facilities has influenced all aspects of librarianship and information services delivery in libraries. Information and Communication Technology (ICT) is an electronic application of computing, communication and satellite technology (Yusuf and Onasanya, 2004). It comprises of machineries and tools necessary for the generation, processing, storage, retrieval and dissemination of information (Mabwonka and Okwilage, 2004).

Information explosion necessitated the introduction and use of ICT for information generation, management and dissemination in libraries. With the introduction of ICT in libraries, activities that were considered important in the past or those that were limited by time and distance are now being performed with ease (Osagie, 2002). The most commonly cited advantages of ICT, according to Barrakat and Scott (2001), are that they overcome the tyranny of distance by providing remotely accessible learning opportunities and new ways of interacting with fellow students and staff, and the tyranny of fixed class times by providing greater opportunities for students to learn in their own time.

Libraries are social institutions, created to conserve knowledge, preserve the culture heritage, provide information, under-gird and underpin education and research, and to serve as fountains of recreation. (Aguolu and Aguolu; 2002). Libraries, which were considered only as the store houses of knowledge, have got a new outlook in the modern ICT era. The activities which were carried out manually in libraries with so much pain and strain are being carried out smoothly with the help of ICT with greater effectiveness (Vinitha Kanthimathi and Tharani, 2006). This confirms the fact that ICT enhances library services.

The advancement of science and technology has made a tremendous improvement and change in library services worldwide. The services rendered with the help of ICT are faster and more effective. The revolution of ICT is now making great impact in all fields of Knowledge. And the field of librarianship is also deeply affected by this revolution (Rahman, 2002:39). ICTs are becoming natural parts of a man's daily life. Thus, their use in education by staff and students is becoming a necessity (Gambari and Chike, 2007).

The growing use of ICT to support learning and research in Nigerian University libraries offers both new possibilities and new challenges for facilitating access and equity for all users. Among its challenges, are the urgent need to carry the end users along by creating awareness in the minds of the library users to develop the right attitudes to ICT and the management of access to information facilities in order to ensure even distribution of opportunities serious and effective use of ICT resources amongst the staff and students (Osagie, 2002).

Information and Communication Technology (ICT) at the University of Jos library become the driving force in the new service platform of the library. This involves the application of computer and other communication technology to provide what was previously provided in 'hard' or physical copies. The adoption and adaptation of ICT by the University of Jos library follows a global trend in the provision of effective information services to users (Obaje and Sani, 2008).

**University of Jos Library Organization**
Organized on subject division basis, the University library is divided into (3) broad divisions namely; Administration, Subject Libraries and Support Services which includes orders, cataloguing, circulation, serials and reprography. This division is generally responsible for the acquisition and processing of all library materials. The library Administration which includes the system sees to the effective running of the university library. The system unit is responsible for the computerization and digitization of the library.

The subject libraries are essentially service points, numbering eight and corresponding roughly with the number of faculties in the university, the subject libraries seek to concentrate at one point and for the convenience of the reader, the range of interest to clients irrespective of their format. For example, for education all the reference and leading books in that discipline are assembled together with the reading tables in close proximity.

In addition, each subject library is headed by a librarian, whose primary duties include; the development of the collection and provision of reference and information services to the clientele. In addition to the subject libraries, there exist the following separate collections;

General section where books of a general nature e.g. general encyclopaedia and dictionaries are shelved, Thesis and Dissertations collection; Microforms Collections; Bauchi, Benue, Plateau State special collections; Nigerian Federal and State government documents, Intergovernmental publications; Non-governmental organizations; Conference proceedings, serials collection.

All the above are housed in the Documents section of the university library, except for books of general nature and serials collection which are shelved in the respective subject libraries, back sets of serials are available in the serial sections of each of the libraries.

The library Administration sought advice from the Director of the computer centre and internally the library ensured that the systems purchased were compatible. Consequently, in October 7, 1992, the library took delivery of its first Micro Computer from Commercial and Scientific Computing (Nigeria) ltd; Lagos. The Library acquired four (4) more PCs by the first quarter of 1995.

Part of preparation for digitization, library staff, along with the rest of the University participated in training sessions offered by the computer centre. These training services include "Introduction to Computers" and "Internet" - Internet work in International Development, which is an internet-based distance education course offered at the University of Iowa and University of Jos. Internet was first offered by Cliff Missen of Wider net, Stephen Akintunde one of the 1st graduates, now teaches the course.

Internet exposed the librarians to the internet. Librarians also acquired webpage, design skills which enabled them to design a webpage for the library. These activities motivated the library administration

to acquire more computers to support in-house, computer based training. Right now, the library has more than 60 computers.

**Objectives of the Study**

The objectives of the study are:

1. To determine the available ICT facilities in University of Jos library.

2. To ascertain the level of use of the ICT facilities by librarians, library officers and system staff of University of Jos library.

3. To determine whether ICT use has enhanced library services in University of Jos library.

4. To determine the level of skills acquisition by staff of the university library.

5. To identity the constraints in the use of ICT facilities by staff in provision of and enhancing library services.

6. To suggest strategies on how to overcome such constraints.

**Research Questions.**

This study will attempt to answer the following research questions;

1. What are the available ICT facilities in University of Jos library?

2. What is the level of the use of ICT facilities in University of Jos library?

3. Has ICT use enhanced library services in the University of Jos library?

4. What is the level of ICT skills acquisition by staff of the University of Jos library?

5. What are the constraints/problems encountered in the use of ICT facilities by the staff?

6. What ways can such problems be overcome?

**Methodology**

The chosen research design for the study is survey method. The target population is 110 library staff of which 38 samples was drawn. The sample comprises of 20 para-professional and 18 professional staff. The encompasses 3 heads of sections, 9 librarians, 3 assistant librarians, 4 system programmers, 1 system analyst and 19 library/clerical officer (Compiled and culled from: University of Jos library staff posting as at November, 2008).

The main research instrument used for data collection was structure questionnaire. The questionnaire was divided into two sections;

a. Section 'A' covers demographic information of the respondent

b. Section B covers available ICT facilities, level of use of ICT facilities, level of skills acquired and problems encountered in the use of these facilities.

**Procedure for data collection**

In collecting data for the study, the researchers collected an introductory letter from the Head of Department (H.O.D) to the University Librarian, University of Jos. The researcher personally administered copies of the questionnaire to the sample population in March, 2010. The questionnaire was administered for the period of 10 days. 38 respondents were contacted out of whom 22, representing 58% properly filled and returned the questionnaires. This was used for the purpose of analysis.

**Data Analysis, Results and Discussion**

The data collected were analysed using frequency counts and percentages and tables were provided where necessary.

A total of thirty-eight (38) copies of the questionnaire were administered and only twenty-two (22) representing 58% were retrieved and found usable.

**Table 1: Distribution of Respondents into Rank**

| Respondents Rank | Frequency | Percentage (%) |
|---|---|---|
| H.O.D | 1 | 4.5 |
| Librarian | 11 | 50 |
| Library Officer | 5 | 22.7 |
| Clerical Staff | 5 | 22.7 |
| **TOTAL** | **22** | **100** |

**Table 2: Available ICT facilities in University of Jos library**

| S/N | Facilities | YES | | NO | | TOTAL | |
|---|---|---|---|---|---|---|---|
| | | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| 1 | Internet Connectivity | 17 | 77.3 | 5 | 22.7 | 22 | 100 |
| 2 | Computer | 22 | 100 | - | - | 22 | 100 |
| 3 | Telephone | 12 | 54.5 | 10 | 45.5 | 22 | 100 |
| 4 | Scanner | 10 | 45.5 | 12 | 54.5 | 22 | 100 |
| 5 | Printer | 15 | 68.2 | 7 | 31.8 | 22 | 100 |
| 6 | Wireless radio | 1 | 4.5 | 21 | 95.5 | 22 | 100 |
| 7 | Video/project or | 2 | 9.1 | 20 | 90.9 | 22 | 100 |
| 8 | CD-ROM | 6 | 27.3 | 16 | 72.7 | 22 | 100 |

Table 2 shows that 17(77.3) % respondents agreed that there is internet connectivity as against 5(22.7%) respondents who disagreed. For computer facility, 22(100%) respondents agreed that they have computers. For telephone, 12(54.5%) respondents agreed that they have telephone while, 10(45.5%) respondents disagreed. For scanner, 10(45.5%) respondents agreed that they have scanner. While, 12(54.4%) respondents disagreed. For printers, 15(68.2%) respondents agreed that they have printers while, 7(31.8%) respondents disagreed. For wireless radio, 1(4.5%) respondent agreed to have wireless radio while, 21(95.5%) respondents disagreed. For video/projector, 2(9.1%) respondents agreed that they have video/projector while, 20(90.9%) respondents disagreed. For CD-ROM, 6(27.3%) respondents agreed that they have CD-ROM. However, 16(72.7%) respondents disagreed.

The analysis revealed that an average majority of 10(48%) agreed that they have the above mentioned ICT facilities. While, a 12(52%) disagreed that they have all these ICT facilities.

**Table 3: Level of use of ICT facilities in University of Jos Library.**

| Facilities | Very Frequently | | Frequently | | Not Used At All | | When the Need Arises | | Undecided | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Freq | % | Freq | % | Freq | % | Freq | % | Freq | % | Freq | % |
| Internet Connectivity | 10 | 45.5 | 5 | 22.7 | 1 | 4.5 | 4 | 18.2 | 2 | 9.1 | 22 | 100 |
| Computer | 15 | 68.2 | - | - | - | - | 3 | 13.6 | 4 | 18.2 | 22 | 100 |
| Telephone | 7 | 31.8 | - | - | 1 | 4.5 | 8 | 36.4 | 6 | 27.3 | 22 | 100 |
| Scanner | 5 | 22.7 | 2 | 9.1 | - | - | 7 | 31.8 | 8 | 36.4 | 22 | 100 |
| Printer | 5 | 36.4 | 2 | 9.1 | - | - | 8 | 36.4 | 4 | 18.2 | 22 | 100 |
| Wireless radio | 3 | 13.6 | 1 | 4.5 | 2 | 9.1 | - | - | 16 | 72.7 | 22 | 100 |
| Video/projector | - | - | 2 | 9.1 | 1 | 4.5 | 9 | 40.9 | 10 | 45.5 | 22 | 100 |

Table 3 shows that internet connectivity is used regularly as 10(45.5%) respondents agreed to that, 5(22.7%) respondents use internet connectivity frequently, 4(18.2%) respondents use internet connectivity when the need arises, while 2(9.1%) respondents did not respond to the question. For computer, 15(68.2%) respondents use computers regularly, 0(0%) respondent use computers frequently, 3(13.6%) respondents use computers when the need arises, 0 (0%) respondents do not use computer at all, while 4(18.2%) respondents did not answer the question.

For telephone, 7(31.8%) respondents use telephone when the need arises, 1(4.5%) respondent never used the telephone at all, while 4(18.2%) respondents did not answer the question. For scanner, 5(22.7%) respondents use scanner regularly, 2(9.1%) respondents use scanner frequently, 7(31.8%) respondents use the scanner when the need arises, 1(4.5%) respondent never used the scanner, while 6(27.3%) respondents did not answer the question. For printer, 8(36.4%) respondents use printer regularly, 2(9.1%) respondents use printer frequently, 8(36.4%) respondents use printer when the need arises, while 4(18.2%) respondents did not respond to the question. For wireless radio, 3(13.6%) respondents use wireless radio regularly, 1(4.5%)

respondent use wireless radio frequently, 2(9.1%)respondents do not use wireless radio at all, while 16(72.7%) respondents did not respond to the question. For video/projector, 2(9.1%) respondents use video/projector frequently, 9(40.9%) respondents use video/projector at all, 10(45.5%) respondents did not answer the question.

The analysis revealed that an average of 7(31.8%) respondents use ICT facilities regularly, 2(9.09%) respondents use ICT facilities frequently, 6(29.5%) respondents use these ICT facilities when the need arises, 1(4.5%) respondent do not use ICT at all, while 6(27.3%) respondents did not respond to the question; indicating that ICT facilities are regularly used by an average majority of staff in the library. This is similar to the study of Crosby (2000) and Oketunji (2001) who on separate occasions revealed that ICT facilities are used in circulation, cataloguing, serials bibliographic services, interlibrary loan and library cooperation.

## Table 4: Extent of enhancement of Library Services in University of Jos by ICT Facilities

| Response | Frequency | Percentage (%) |
|---|---|---|
| To a very large extent | 21 | 95.5 |
| Averagely | 1 | 4.5 |
| Somewhat | - | - |
| Negligible | - | - |
| TOTAL | 22 | 100 |

library as 21(95.5%) respondents agreed to that. While 1(4.5%) respondent agreed that ICT facilities have enhanced library services averagely. This finding agrees with Oni (2004) in his research on "Enhancing the performance of library operations through appropriate information technology" points out that, the use of computer and other ICT facilities in the library helps to eliminate some of the repetitive nature of manual work.

## Table 5: Level of ICT skills and Effectiveness/Competence in skills

| Response | Frequency | Percentage (%) |
|---|---|---|
| Very Effective | 6 | 27.3 |
| Effective | 12 | 54.5 |
| Fairly effective | 4 | 18.2 |
| Not effective at all | - | - |
| TOTAL | 22 | 100 |

Table 5 above shows that 6(27.3%) respondents have to a very large extent acquired ICT skills hence are very effective in the use of ICT facilities, while 12(54.5%) respondents an average of majority have acquired to some extent ICT skill and are effective in their use, while 4(18.2%) respondents agreed that they are fairly effective in the level of ICT skills acquired. The analysis revealed that an average majority of 12(54.5%) respondents are effective in the level of ICT skills acquired. This finding can be corroborated with Okoro and Ekere (2008) that emphasized that librarians and information professionals are required to be skilled and competent with search engines, internet facilities, database software and internet development and management to be able to access individual needs and respond with Information that serve patron's needs.

## Table 6: Problems normally encountered in the use of ICT facilities

| Response | Frequency | Percentage (%) |
|---|---|---|
| Insufficient Training/Skills | 1 | 4.5 |
| Slow/inconsistent internet connection | 10 | 45.5 |
| Frequent power failure | 6 | 27.3 |
| Poor funding | 5 | 22.7 |
| TOTAL | 22 | 100 |

of slow/inconsistent internet connection with 10(45.5%) respondents agree to that, frequent power failure has 6(27.3%) respondents agree to that, poor funding has 5(22.7%) respondents agree to that, poor funding has 5(22.7%) respondents agree to that.

The analysis revealed that an average majority of 10(55.7%) respondents agree that slow/inconsistent connection is the major problem encountered in the library, followed by frequent power failure as 6(27.3%) respondents agreed to that. This finding can be corroborated with Wombor and Tukur (2008) in their study on "the state of ICT in Nigerian University Libraries: the experience of Ibrahim Babangida Library, FUT Yola" noted that problems militating against development of ICT in university libraries are: frequent power outages, network fluctuation, slow internet connectivity and high cost of ICT facilities and maintenance.

**Table 7: Ways of Improving Use of ICT facilities in University of Jos Library.**

| Response | Frequency | Percentage (%) |
|---|---|---|
| Increase funding for library | 17 | 77.3 |
| Workshops, trai ning on ICT should be organized frequently | 5 | 22.7 |
| TOTAL | 22 | 100 |

Table 7 shows that increase funding for libraries was suggested by 17(77.3%) respondents, followed by ICT workshops and training to be organized frequently suggested by 5(22.7%) respondents. Analysis of the results shows that the need for increase funding for University of Jos library is very prominent in the responses.

**Summary of major findings.**
The following are the major findings of this research;
1. Majority of ICT facilities mentioned are available in the University of Jos library.
2. ICT facilities are used regularly by majority of the staff.
3. It was clear from the study that ICT facilities have enhanced services in the University of Jos library to a very large extent in terms of accessibility, use ability and speed.
4. Majority of the staff are effective in ICT use with the level of skills they have acquired.
5. The major problems staff encounter with the use of ICT facilities are slow/inconsistent internet connection and frequent power failure.
6. Majority of the staff suggested increase funding for libraries so that problems encountered can be overcome.

**Recommendations**
Based on the findings of the study, the following recommendations are proffered:
1. University of Jos administration should purchase more ICT facilities for the library.
2. There is need for application of ICT facilities in departments that are yet to fully utilize and replace manual work carried out with ICT use especially the circulation section of the library.
3. University of Jos library should continue to employ the use of ICT facilities regularly in their routine services, seeing the tremendous improvement and change it has brought.
4. University of Jos library administration should organize training and workshops on ICT frequently to raise the level of competence in the use of ICT facilities by library staff.
5. Funds should be made available by University of Jos administration to upgrade the internet connection subscribed for and for regular maintenance of ICT facilities in the library.
6. University of Jos administration should ensure constant power supply to the library to power the ICT facilities. Hence, a standby generator should be made available.

**Conclusion**
From the major findings of the study the following conclusions are drawn:

It was discovered from the study that majority of ICT facilities are somewhat available in the University of Jos library and these facilities are being used regularly by majority of the library staff. The implication of this is that, ICT is now making great impact in the University of Jos library, as activities which were carried out manually in the library with so much pain and strain are being carried out smoothly with the help of ICT with greater effectiveness.

The major problems staff and students encounter with the use of ICT facilities are slow/inconsistent internet connection and frequent power failure. However, in spite of the limitations mentioned, ICT has made the University of Jos library got a new outlook and the services rendered with the help of ICT are faster and more effective.

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