

# Challenges and Prospects of Using Information Communication Technologies (ICTS) among Nigerian Polytechnic Libraries Reference Services

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## Abstract

This study focused on the threats and challenges of using information communication technologies in reference services of polytechnic libraries was carried out using 600 questionnaires and observation was also used as instrument for data collection, survey method used adapted for this study. The data collected was analyzed using percentages and frequencies, means and standard deviation of the facilities, limited duration of use, denials to information into storage media, like diskettes and flash drives as some of the major threats and challenges of the optimal utilization of these facilities among the selected polytechnic libraries' Reference sections, suggestions and recommendations were proffered such as extending the duration of use, working towards generations of funds internally, among others, to check the threats and challenges.

## 1. Introduction

It has been observed that many scholars and authors have written at different times on "information communication technology (ICTs) and "Reference service" in Nigeria Academic Libraries, but none have concentrated on threats and challenges of ICT use in reference service as its main subject. It has also been observed that there are differences in the definition and understanding of the term, reference service. This however could be said to reflect the varying ideas, perspectives, image and principals of the researchers.

Reference service, which literarily means the service or function performed by the reference section of the library, is not so easy to define. Some see it from literary perception of using reference materials in the library while others refer to it as a personal assistance given to persons in search of information either from within the library or outside the library.

Although the traditional reference service of using the printed reference sources is still being practiced, most reference libraries around the world are now attending to users information needs via "the use of information communication technologies (ICTs). The traditional desk-bound reference services are now being complemented by remote reference services. The evolution of the use of information communication technologies in reference services has made it possible for librarians to communicate with "the users through E-mails, telephone cells, chats and other instant messaging software that help clients get their questions answered information needs satisfied from remote places without face to face interaction with the reference librarians seated behind the reference desk.

The roles of reference libraries have thus evolved in response to new societal and technological developments. They now use the new technologies to search for information and communicate the reference library patrons on their information needs. Information communication technology (ICT) has indeed become a basic ingredient for information availability, accessibility and dissemination. The services of the reference librarian in the presence of ICT are no longer being restricted by the library opening hours just like the scope of information resources now also includes both printed and electronic resources.

The application of ICT to library services has generally been accepted by academic libraries as the most means of providing timely, accurate and efficient information services. Though it has been established that its application in libraries and specifically in reference services is of enormous advantage, most reference sections of academic libraries in Nigeria cannot still boast of having them in their libraries. In some libraries where are available, a lot of factors still pose as threats and challenges to its optimal utilization in the area of service delivery, especially due to the fact that it is a new innovation in Nigeria. Hence, the decision to study the threats and challenges in using IC T facilities in reference service of academic libraries; case study of musa abdullahi library hasssan usman katsina polytechnic katsina, the intention of making recommendation on steps to be taken in order to check the threats and challenges. The specific objectives of this study bare as follow;

1. To find out the exact ICT facilities that are being used in the reference section of the library under study.
2. To establish the working condition of these facilities.

3. To identify the threats and challenges to the optimal utilization of these facilities by the users.
4. to make recommendation based on the finding of the study.

## 2. Literature Review

Services of the reference section of the academic library. Libraries, generally are regarded as the intellectual hub of polytechnics, the reference section of library is the 'heartbeat' that sustains the library and makes it indispensable. The success of the teaching, research and knowledge advancement function of the polytechnic is completely dependent on the reference section of the library, without which these function can never be achieved.

However, the services of the reference section of academic libraries can be deduced from the definition of the term, reference service according to Edoke (2000) is the personal assistance given by the libraries to individuals, in search of information for whatsoever purpose. Bunge (1999) and (1997) also defined reference service as personal assistant given librarians to individual users who are in pursuit of information. Nwalo (2000) opines that reference work is all about the librarian's professional effort in making information and knowledge more readily available to those who need them.

In effect, reference service simply means professional assistance given by the librarian in order to satisfy the information needs of users from either within the library or from outside of the library. From the above definitions, the services of the reference section of academic libraries include; provision of needed information, assistance in locating information materials both from within the library and outside of the library, provision of information in anticipation, etc.

According to the American Library Association (ALA) Reference service division, there are two (2) recognizable essential types of reference services. These are direct and indirect services.

Under directly reference services, personal provide directly to the user. It may take the form of library instruction or information service consists of preparation and development of indexes, bibliographies and other selection aids.

### **Information communication Technology use in reference services:**

Information communication technology which most often is interchangeably used with the term "information technology" refers to the application of modern electronic and computing capabilities (technologies) to the creation and storage of meaningful and useful facts or data (information), and its transmission to users by various electronic

Ordinary, information communication technology encompasses two (2) terms. These are;

1. information technology; This refers to the items or equipment (hardware) and computer program (software) that allows us to access, retrieve, organize, manipulate and present information by electronic means. Personal computers, scanners and digital cameras fit into the hardware category while the database storage program and multimedia programs fit into the software category.
2. Communication Technology; This refers to the telecommunication equipment through which information can be sought, accessed and transferred. Example are telephones, facsimile, modem, etc. the bringing together of the above two components have brought about great improvement in the quantity and quality of library services to users and also an amazing reduction in the time of delivery.

Madu (2004) listed three (3) major areas of library operation that are particularly amenable to the application of information technology to include, housekeeping functions, compact disk Read Only Memory (CD-ROM) searching, and Networking.

Generally, information communication technologies application to reference services is evidenced in the following areas;

### **Online public access catalogue (OPAC)**

This is an important finding tool for information held in the library, as well as information that is held outside the library. It is the automated version of the author, title and subject catalogue cards. It makes retrieval of information faster and easier than when the catalogue cards are being searched. OPAC is most essentially needed for reference and circulation services. Most academic libraries have their OPAC accessible only at their premises while some still have theirs accessible through the internet.

### **Personal computer application (PCA)**

The personal computer more than every other device of modern science, has become instrumental in storing and retrieve data and information. For instance, information on registered users, borrowers, due and overdue dates, etc are now computerized. Selective dissemination of information is equally carried out the use of personal computer. Personal computer is the power house for the administration of ICT will neither be seen nor felt.

### **Computer disk read only memory (CD-ROM)**

This is an information technology with great potential for libraries in general. It is durable and has very large

storage capacity. CD-ROM is user friendly and does not require telecommunication facilities before it can be used. It hold text, pictures and sounds.

### Networks

The obvious implication of the exponential growth in the world production of documents and information is that no library can be self-sufficient in meeting the information needs of its users hence the need for resource sharing and information network. A network according to Aina (2004) is a computer system that uses communication equipment to connect two or more computers and their resources. In the terms of Madu (2004), a network is a way of connecting computers so that they can communicate with each other and share resources like printers and storage space. The above definitions imply that network /networking is the brain behind resource sharing. ICTs on the other hand, provides a platform for library network and also offers opportunity for resource sharing which is a device evolved by libraries to improve their services to users by broadening the base of information availability.

### Online searching

Online database is another reference tool in modern information system. It can be defined as computerized store for information, which is accessible through the host computer or across computer networks. This implies that the user can search a database from remote computer or terminals interactively through a system called on-line information retrieval system. The interaction in on-line searching is fully conversational as the computer or CD-ROM software will respond immediately to question or commands, which can still be followed by further enquiries. The implication of the above is that on-line searching could be done using CD-ROM or searching directly from from a networked computer.

On –line searching as a reference service is an important service especially as the electronic publishing of some important journals, magazines, e-books and other materials on the internet (which is growing on a geometrical progression) has removed the need to physically acquire such materials in printed form by libraries that have internet access. All these imply that ICTs are required for online searching. Hence, Ayo (2000) stated that some libraries are using ICTs for activities like database management internet search, website management and general on-line service for their users

**Table 1**  
**Response on a available ICT facilities being used in the reference services of the library**

| ICT facilities | yes          | No          | No response | Total       | Mean   | Standard deviation |
|----------------|--------------|-------------|-------------|-------------|--------|--------------------|
| CD-ROM         | 527<br>100%  | -           | -           | 527<br>100% | 1.0000 | 0.00000            |
| Facsimile      | -            | 527<br>100% | -           | 527<br>100% | 2.0000 | 0.00000            |
| internet       | 527<br>100%  | -           | -           | 527<br>100% | 1.0000 | 0.0000             |
| printer        | 439<br>83.3% | 88<br>16.7% | -           | 527<br>100% | 1.1670 | 0.37331            |
| computer       | 527<br>100%  | -           | -           | 527<br>100% | 1.0000 | 0.0000             |
| scanner        | -            | 527<br>100% | -           | 527<br>100% | 2.0000 | 0.0000             |
| telephone      | -            | 527<br>100% | -           | 527<br>100% | 2.0000 | 0.0000             |

Table 1 above indicates 100% presence of CD-ROM, Computer and internet connectivity in the library under study. A number of four hundred and thirty nine being 83.3% respondents also accepted the presence and use of printer in the service delivery of the reference section of the library. On the other hand, some users denied the use and presence of facsimile, scanner and telephone in the library's service to its users.

**Table 2**  
**Response on efficiency of ICT facilities in the polytechnic libraries**

| ICT Facilities | Not at All   | Some times  | regularly    | Very regularly | No response  | Total       |
|----------------|--------------|-------------|--------------|----------------|--------------|-------------|
| CD-ROM         | -            | 87<br>16.5% | 158<br>30.0% | 282<br>53.5%   | -            | 527<br>100% |
| Facsimile      | 335<br>63.5% | -           | -            | -              | 192<br>36.4% | 527<br>100% |
| Internet       | 13<br>2.5%   | 17<br>3.2%  | 98<br>18.5%  | 399<br>75.8%   | -            | 528<br>100% |
| Printer        | 79<br>14.9%  | 24<br>4.6%  | 167<br>31.7% | 248<br>47.1%   | 9<br>1.7%    | 527<br>100% |
| Scanner        | 349<br>66.2% | -           | -            | -              | 178<br>33.8% | 527<br>100% |
| Telephone      | 364<br>69.1% | -           | -            | -              | 163<br>30.9% | 527<br>100% |

The above table gives the sum total of regular and very regularly response for CD-ROM as 30% and 53.5% respectively. Internet received very regularly response 75.8%. printers are disclosed to be performing very regularly by 47.1% of the respondents while 31.7% declared its efficiency to be just 'regular'. Facsimile was accepted by 63.5% respondents as not working at all while the remaining respondents were indifferent. That is, they are neither here nor there. For scanner and telephone, they received 'not efficient at all' response of 66.25 and 69.1% respectively while the remaining respondents did not give any response.

From observation, the researcher was able to find out that the indifferent responses from respondents on facilities like facsimile, scanner and telephone was due to the fact that they (Respondents) have never seen nor used these facilities in the service delivery of the library.

**Table 3**  
**Response on threats and challenge to optimal utilization of the facilities**

| S/N | inhibitors   | SD           | D            | NS           | A            | SA           | No response  | Total       | mean   | Standard deviation |
|-----|--|--------------|--------------|--------------|--------------|--------------|--------------|-------------|--------|--------------------|
| 1.  | Inaccessibility to these facilities                  | -            | 83<br>15.7%  | 164<br>31.1% | 79<br>15%    | 201<br>38.1% | -            | 527<br>100% | 3.7552 | 1.12475            |
| 2.  | Inadequate number of these facilities                | -            | -            | -            | 254<br>48.2% | 273<br>51.8% | -            | 527<br>100% | 4.5180 | 0.60015            |
| 3.  | Skills to use these facilities                       | 59<br>11.2%  | 103<br>19.5% | 159<br>30.2% | 27<br>5.1%   | 9<br>1.7%    | 170<br>32.3% | 527<br>100% | 2.5085 | 1.37586            |
| 4.  | Irregular power supply                               | 110<br>20.9% | 58<br>11%    | 153<br>29%   | 148<br>28.1% | 9<br>1.7%    | 49<br>9.36%  | 527<br>100% | 2.5085 | 1.37586            |
| 5.  | Duration of use is limited                           | -            | 8<br>1.5%    | 28<br>5.3%   | 284<br>53.9% | 37<br>7%     | 170<br>32.3% | 527<br>100% | 2.2524 | 1.37586            |
| 6.  | Cost charged are expensive                           | -            | 39<br>7.45%  | 149<br>28.3% | 48<br>9.1%   | 121<br>23%   | 170<br>32.3% | 527<br>100% | 2.5085 | 1.93709            |
| 7.  | Printing costs are expensive                         | -            | 19<br>7.45%  | 203<br>38.5% | 135<br>25.6% | -            | 170<br>32.3% | 527<br>100% | 2.2524 | 1.62527            |
| 8.  | Frequent computer breakdown                          | -            | -            | 259<br>49.1% | 98<br>18.6%  | -            | 170<br>32.3% | 527<br>100% | 1.5408 | 1.12597            |
| 9.  | Frequent down time of server                         | -            | 182<br>34.5% | 87<br>16.5%  | 88<br>16.7%  | -            | 170<br>32.3% | 527<br>100% | 1.8539 | 1.45120            |
| 10. | Saving information into storage media is not allowed | -            | -            | -            | 233<br>44.2% | 124<br>23.2% | 170<br>32.3% | 527<br>100% | 2.9450 | 2.07163            |

**Key; SD=strongly disagree; D=disagree; A=agree and SA=strongly agree.**

The above table reveals that the major threats to the use of these ICT facilities, as generally accepted by the entire study population, are in adequate number of the facilities as well as not being allowed to save information into storage media. Limited duration for use was accepted by 60.9% of the population as another threat and challenge to the facilities usage. Inaccessibility of these facilities was equally attested to by some of respondents as another factor challenging their use. Printing cost and frequent computer breakdown was also indicated as another factor by few members of the study population.

#### **Possible solution to the threats and challenges.**

The respondents were also asked to suggest possible solution to the various threats and challenges that inhibit the optimal utilization of these ICT facilities in the library. Their suggestions are as follows;

- Users should be allowed to save information into storage medium such as flash drive.
- The library authorities in the concerned institutions should provide alternate source of power supply for these facilities.
- Printing cost should be reduced to three naira per page.

Also, from interaction with the librarians, apart from the above listed inhibitors, lack of adequate training on the of the library personnel is also a serious problem inhibiting adequate utilization of these facilities. The researcher was made to understand that most of the personnel in the reference section of the library lack the skill to efficiently utilize these facilities hence skilful staff members from other section of the library (outside reference section) manage this facilities.

### **3. Discussion of findings**

The finding of the study show that ICT facilities in the form of computers, printers, internet services and CD-ROM search services are being used in the library under study. It also revealed that these facilities are in good working condition.

On the other hand, the analysis of the results reveals that quite a lot factors stand as threats and challenges to the optimal utilization of ICT facilities in the reference service delivery of academic libraries. The entire population of study generally accepted inadequate numbers of these facilities in the library as well as not being allowed to save information into storage media as their major threat and challenge. This collaborates with Edom's (2007) finding in his work on use of ICT facilities in information sourcing and retrieval by the academic staff in Nigeria universities. This work identified inadequate number of ICT facilities as well as irregular power supply as the major problem to ICT use.

Furthermore, a study carried out by aduwa- ogiegbaen and iyanu (2005) on 'problems and prospects of using ICT in secondary schools in Nigeria' identified funding, inadequate number of infrastructure, limited access, among other factors as impediment to ICT's successful use. The for going are indicators that Nigerian educational institutions at secondary and higher/tertiary levels suffer the same fate. The general problem of inadequate number of facilities in the libraries is coursed by inadequate available fund. This was also revealed in a research by Okiy (2005) on 'Founding Nigerian libraries hence, enough funds are not allocated for hardware and software maintenance.

On the other hand, not being allowed to save information into storage media (such as diskettes and flash drives), which a generally accepted problem in this work was not identified in the previous studies carried out on this topic. This was however found out to be as a result of the fact that none of the previous works had this particular question in their questionnaire.

Another survey research on the use of ICT equipment carried out by Daniel et.al (2003) shows 70% respondents acceptance of incessant electric power failure as a major impediment while this particular work has 39.3% acceptance of this factor.

A population of three hundred and twenty one (321) respondents being 60.9% Of the respondents complained that the duration allowed them to use these facilities is insufficient. The researcher was able to discover that this limited duration allowed them was as a result at the fact that there are limited members of these facilities on ground and since a large number of users are queuing to use them, the management decided to have a limited time that each user should be allowed to use them so as give room for other waiting client to also use them.

Some other respondents, in the population of 25.6% attested to printing cost being expensive for them while another population of 15% and 38.1% of the respondents agreed and strongly agreed respectively that inaccessibility of these materials is yet another factor that pose as threat and challenges to their uses of these facilities.

### **4. Conclusion**

There is no doubt that reference sections of academic libraries are the power generating house of the academic libraries without which the libraries with out which the library will remain irrelevant in today's information age.

The statement also, that ICT application to reference services guarantees effective and efficient services unquestionable. At the same time, it is not also surprising that a lot of factors stand as threats and challenges to the efficient and effective use of ICT facilities in reference section of academic library especially, as the use of these facilities are new innovations in Nigeria libraries. In the light of these, if the libraries must live to continually fulfill their primary goal which is, the satisfaction of information needs of users, the following recommendations means to check these challenges should be considered and implemented.

1. The bodies responsible for funding academic libraries should ensure that the amount budgeted for the library is completely utilized in developing the library, and not diverting it to other sections. The library on its own should also develop some fee-based electronic reference service as, selective dissemination of information, abstracting and indexing services to individuals etc. this will help them generate funds internally to augment what is being allocated to them for the acquisition of additional ICT facilities to enable larger number of users to access them.
2. With the acquisition of more facilities, the duration of use by users should be extended so that they will have enough time to adequately utilize them.
3. The library should embark on price reduction for the use of these ICT facilities so as to encourage higher patronage from clientele.
4. Alternate source of power supply should be provided by the library to forestall problem of power outage since power Holding company of Nigeria (PHCN) is not reliable with power supply.

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