

**APPLICATION OF INFORMATION AND COMMUNICATION  
TECHNOLOGY (ICT) FACILITIES TO REFERENCE AND INFORMATION  
SERVICE (RIS) PROVISION IN UNIVERSITY LIBRARIES IN NORTH WEST  
ZONE OF NIGERIA**

**Umar G. Gama, *Ph.D***

**Abstract**

*The paper examines types of RIS provided in university libraries in North Western zone of Nigeria. The research was based on three objectives i.e. to find out the types RIS provided, various kinds of ICT facilities used in the provision of the services and the challenges facing effective service delivery with the ICTs. Nine universities located in the geopolitical zone were surveyed through their reference librarians. Questionnaire was the only instrument used to collect data, which were analyzed using descriptive statistics. The findings revealed that all the libraries studied provide RIS that could be termed as core. They apply variety of ICT facilities such as photocopiers, projectors, Internet and CD-ROM to provide various kinds of RIS. Irregular Power supply and inadequate ICT facilities were the major constraints to effective RIS delivery using ICT facilities.*

**Key words: Reference and Information Services, ICT facilities, University Libraries, North Western Zone, Nigeria.**

## **Introduction**

Advancement in Information and Communication Technologies (ICTs) world over has necessitated a drastic shift by organizations including libraries from the traditional ways of providing services to ICT based service delivery. As service agencies, libraries, especially academic types are forced to embrace the development in order to facilitate their service provision. Ajibola and Tiamiyu (2000), and Osinulu (2003) observed that for libraries to continue to be relevant and effective in the delivery of their services they have to continually use information technology.

A number of services such as technical, bibliographic control, circulation, reference etc. are provided with the aid of ICTs (Madu & Adeniran, 2000,). The magnitude of the provision of the services may depend on a number of factors such as the library type, staff strength in terms of quantity and quality, financial strength, etc. While some of these services have direct link with users, others have not. Reference and Information Service (RIS) for instance is one of those services that are meant to have direct contact with users by way of assisting them to understand the technicalities of library services and to prepare them on how they could drive maximum benefit from the services. In order to do that effectively, ICTs facilities are employed. Variety of ICTs such as computer, Internet, CD-ROM, etc. are used to enhance RIS service provision (Gama, 2008).

Apart from few special libraries, university libraries in Nigeria are regarded to be at the forefront in the application of ICT facilities to provide services such as circulation, technical, managerial, reference etc. The nature of RIS in some cases requires prompt actions on the part of the reference librarian in an attempt to provide satisfactory services. Sometimes the extent to which such prompt service delivery could be provided especially in academic libraries may lie on the availability of resources and facilities that would facilitate that. Academic library users are different from other library users in some respects. They are generally

scholars whose use of the library facilities assists them to write papers, form class lectures, write assignments, enhance productivity and efficiency in discharging their duties and responsibilities, etc. Their information seeking behavior may be different from users in other types of libraries especially the public. Observations have shown that academic library users would prepare to get their required information or sources as quickly as possible. They are as well supposed to be exposed to variety of services provided by their libraries so that they could maximize the benefit of their stay in the universities. Reference section of any library is saddled with the responsibility of easing the hardship users may face in their efforts to use the library facilities. The types of services they provide are aimed at that. With the development of modern technologies such as the Internet, CD-ROM, telephone etc library service delivery are enhanced. Ozioko, Ezeani and Omeje (2010) assert that IT development has brought about the provision of library services to users and management, which would not have been manually. This study therefore, attempted to find out variety of RIS provided by the libraries as well as the types of ICT facilities employed to facilitate delivery of the services.

### **Objectives of the study:**

1. To find out the types of RIS provided by university libraries in North western zone of Nigeria.
2. To identify the types of ICT facilities used in providing various types of RIS in the libraries under study.
3. To identify the challenges facing the libraries in using the ICT facilities to provide RIS services.

### **Methods**

Survey research method was used for the study. It was used because the subjects for the study were dispersed in different geographical locations of the north western zone of Nigeria. Population of the study comprised the entire

universities located in the geopolitical zone, which comprises of seven states as indicated on table 1. A sample of nine universities was used for the study. They were selected because they were established for over five years. Those not considered were either established last year or this year, which implies that some of them have not even admitted their pioneering students. Questionnaire was the only instrument used to collect data from the respondents. Heads of reference sections of the libraries were considered the most appropriate subjects for the study. Their selection as the subjects was informed by their positions as heads of the reference sections of their respective libraries. Thus, they were considered to be in the right position to respond to the items contained in the instrument that addressed the research objectives. The instruments were administered to them through research assistants. The data collected were analyzed using descriptive statistics.

**Table 1: Population and sample size of the universities.**

S/N	University	Date Of Estab.	State Location	Ownership	Selected Universities
1.	Ahmadu Bello Univ.	1962	Kaduna	Federal	√
2.	Bayero University	1975	Kano	Federal	√
3.	Federal University, Dutse	2011	Jigawa	Federal	X
4.	Federal University D/ma	2011	Katsina	Federal	X

5.	Kaduna State Univ.	2005	Kaduna	State	√
6.	Kano Univ. of Science and Technology	2001	Kano	State	√
7.	Katsina University	2005	Katsina	Private	√
8.	Kebbi State Uni. Of Science and Technology	2007	Kebbi	State	√
9.	Nigeria Defense Academy	1960	Kaduna	Federal	√
10.	North-west University	2012	Kano	State	X
11.	Sokoto State University	2012	Sokoto	State	X
12.	Usman Danfodio Univ.	1975	Sokoto	Federal	√
13.	Umaru Musa Yaradua Univ.	2007	Katsina	State	√

Key: √ = Selected      X = Not selected

### **Findings and discussion**

#### **Response Rate:**

A total of nine copies of questionnaires were administered on reference librarians of the nine selected universities in north western zone of Nigeria. All the copies of the questionnaires administered were retrieved and found usable. This signifies 100% response rate. The high response rate was realized because most of the research assistants used were librarians working in their respective selected libraries.

### Types of RIS Provided by the Libraries

In order to find out the types of RIS provided by the libraries, a list of various kinds of services that were found from the literature being provided by reference sections of various libraries was provided for the reference librarians to respond to. Their responses are indicated on the table 2.

*Table 2: Types of RIS provided*

S/N	TYPES OF RIS PROVIDED	UNIVERSITIES								
		ABU	BUK	KSU	KSU	KU	KUS	NDA	UDU	UMY
1.	Answering Reference Questions	√	√	√	√	√	√	√	√	√
2.	Inter Library Loan service	√		√						√
3.	Library Orientation Service	√	√	√	√	√	√	√		√
4.	One to One Library Instruction Service			√						√
5.	Indexing Service	√		√				√	√	√

6.	Abstracting Service	√		√				√		√
7.	Referral Service	√	√	√	√	√	√	√	√	√
8.	Photocopy Service	√	√	√	√	√	√	√	√	√
9.	Bibliographic Verification Service	√								
10.	Selective Dissemination of Information Service	√		√		√		√	√	√
11.	Display of New Arrivals	√	√	√	√		√	√	√	√
12.	Table of Contents Service									
13.	Production of Guides for Publicity and Education	√						√		√
14.	Contributing to or Preparing Library Publication Service			√						
15.	Compilation of Union List	√								
16.	Fee-Based Services and Information Brokering									
17.	Processing of Theses and Dissertations	√		√				√	√	
18.	Literature Search Service	√	√					√	√	
19.	List of new arrivals		√							

Key:

**ABU** Ahmadu Bello University; **BUK**: - Bayero University, Kano; **KSU**:- Kaduna State University; **KSUST**: - Kebbi State University of Science and Technology; **KU**:- Katsina University; **KUST**: - Kano University of Science and Technology; **NDA**:- Nigeria Defense Academy; **UDUS**:- Usman Danfodio University, Sokoto; **UMYU**:- Umaru Musa Yaradua University;

Varieties of RIS are provided by different kinds of libraries. Some libraries provide many of such services while some provide only few. The amount of such services provided may depend on a number of factors such as the type of the library, its financial capability, staff strength and capacity, staff initiatives, types of users etc. From the table above, it is clear that five services (answering reference questions, library orientation, referral, photocopy and display of new arrivals) were commonly found among all the libraries studied. These services could be considered as part of the core RIS expected to be provided by academic libraries. Readers, for instance are faced with a number of difficulties in their efforts to use library facilities effectively. They ask variety of questions. Some of these questions according to Adomi (2008) citing Katz (1987) are categorized as directional, ready reference, special search and research. The bulk of reference work revolves around answering questions related to these. Reference service is not just about answering users' questions, it is also about introducing or enlightening users about the entire library facilities meant for their use. For this reason, academic libraries especially, organize orientation programs for their users. The occasion is used to inform especially newly admitted students about resources, services and other facilities that they could benefit from.

It is a fact that no library is self sufficient. Users may sometimes require some resources or services that are not available with their libraries. In their efforts to assist users to solve their information needs, reference librarians refer

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such users to appropriate individuals or agencies that they think they could get what they wanted. Referral service enables users to benefit from other sources of information which, they probably did not know about before they were referred.

Libraries are not meant to be static. Amogu (2010) citing Ranganathan's fifth law of librarianship maintains that library collection must continue to grow in size. In order to bring to the attention of users about new acquisition, reference librarians display such resources usually at strategic locations where users could easily see them. In essence, the libraries are introducing the new resources to users in case they would want to use them in some few days to come. From the table it can be noticed that only one library (KU) is indicated not handling the service by its reference section. The findings of this study corroborate with that of Gama (2008), where he found out that among federal university libraries in Nigeria surveyed, virtually all the services were found being provided by reference sections of the libraries.

It may not be seen as surprising to have found out that none of the libraries provides table of contents and fee-based and information brokering services in their reference sections. Academic libraries are relatively larger in collection size than special libraries. The table of contents service, which is mostly provided in special libraries, may be difficult to be provided by academic libraries especially considering the rate of their acquisitions and the nature of services they provide. Most reference services are provided free of charge especially in academic libraries. The few that may attract fees may be photocopy, browsing and printing of literature search results, which may not be handled by the reference section.

### **Types of ICT Facilities Used in Providing RIS**

The study was interested in finding out the types of ICT facilities applied in the provision of various kinds of RIS in the libraries studied. Table 3 below presents

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the data collected from the reference librarians of the universities. Types of ICT facilities applied to facilitate various RIS delivery are also explained.

*Table 3: ICT application to RIS*

S /	TYPES OF ICT FACILITIES USED IN PROVIDING RIS	UNIVERSITIES								
		AB U	BU K	KS U	KSUS T	K U	KU ST	ND A	UD US	UM YU
1.	CD-ROM	√		√	√		√			
2.	Chat			√						
3.	E-mail			√		√				√
4.	Internet database search	√		√		√	√	√		√
5.	Photocopier	√	√	√	√	√	√	√	√	√
6.	Projector	√		√		√			√	√
7.	Telephone					√	√			√
8.	Word processing	√		√						√

Table 3 presents types of ICT facilities used in providing RIS in the university libraries studied. From the table it could be noticed that photocopier is the common facility used by all the libraries in facilitating RIS delivery. The facility is used to provide copies of articles contained in reference sources that are needed by users. In their study, Anaeme and Anyaegbu (2010) discovered that 100% of the subjects studied indicated that irregular photocopy service was a problem to them in using their university library. This indicates the importance of having the facility in reference libraries. All the libraries that indicated using CD-ROM facility use it in providing SDI services. The only library that indicates using chat facilities uses it for answering reference questions. While KSU uses email to answer reference questions and to provide referral services, KU and UMYU provide SDI services with the help of email facility. The Internet was found to be used by almost all the libraries in providing literature search service. All the five libraries that indicated using projector in RIS delivery use the facility to enhance library orientation service delivery. While KU uses telephone to facilitate the provision of SDI service, KUST uses it to answer reference questions. UMYU on the other hand provides inter-library loan (ILL) service with the aid of the facility (telephone). Adomi (2008) citing Stwodah (2005) describes telephone reference service as that which facilitates use of the library facility by its users without being physically present at the library. Word processing facility was found to be used by three libraries. Among them, ABU and KSU use the facility in contributing to or preparing library publications and in compiling union list services. In addition, KSU uses the facility in the production of guides for publicity and education. UMYU on the other hand provides indexing service using the facility.

ICT application to library services generally enhances service delivery. The more services are provided using ICT facilities the more it is likely that users patronize the services. For instance, in a study conducted by Amogu (2010) on

the availability of ICTs and users' patronage of academic libraries in Abia state, the findings revealed that over 80% of the users surveyed positively indicated that the level of user patronage was high if ICT facilities are used to facilitate service delivery in academic libraries in Abia state. This finding implies that the level of academic competence expected of the users may be affected if their university libraries operate manually. This is because the level of patronage of the libraries, which would have availed them ample opportunities to access variety of information resources with ease is lacking. In essence, academic libraries are established to support teaching-learning and research activities. The quality of teaching and research to a large extent depends on the availability, access and use of information. These variables may not be adequately realized if the libraries continue to operate manually. The Internet, for instance provides abundant opportunities for users to have at their disposal unlimited information resources as well as to have unlimited access to them. It was reported that use of ICT facilities in work place increases the speed by which duties are performed as well as make job more interesting by academic librarians (Ezeani and Ekere, 2009). When librarians find their work interesting and easy to provide, users stand a better chance to exploit as much as possible relevant information resources that would enhance their academic activities.

**Challenges Associated With the Application of ICT Facilities to RIS provision:**

The respondents were asked to freely indicate problems that affect provision of RIS with the aid of ICT facilities. Their responses are presented on table 4;

**Table 4: Challenges to ICT application to RIS**

S/N	Challenges	UNIVERSITIES									
		ABU	BUK	KSU	KSUS	KU	KUST	NDA	UIDUS	UMY	
1.	Inconsistent power supply	√	√	√	√	√		√		√	
2.	Inadequate ICTs facilities	√		√		√	√	√	√		
3.	Insufficient space to house the ICTs			√							
4.	Non interest of users	√						√		√	
5.	Inadequate ICT skills on the part of the reference librarian				√					√	
6.	Indifferent attitudes of the library management to support ICT application.										
7.	Absence of policy to guide the use of ICTs in RIS										
8.	Unreliable Internet network					√		√		√	

No library exists without problems. However, the less the problem the better for both staff and users. Table 4, reveals the nature of problems the libraries face with regards to the use of ICT facilities to provide RIS. The most common

problems facing most of the libraries were found to be unsteady power supply and inadequate ICT facilities. Aliche (2009) observes that constant power failure affects the growth and performance of ICTs. Without steady supply of power, ICT facilities cannot be put to maximum use because virtually none can be operated without it. Unreliable Internet connectivity was another problem being faced by some of the libraries. The facility can be described as all embracing without which some other facilities such as email, chat etc cannot be used. Internet use in RIS provision was found to be one of the major means of providing answers to various reference questions. (Olson, 1995, Curry and Harris, 2000). Effective RIS delivery may depend to a large extent on the skills of the reference librarians in using the ICT facilities to provide service. It is worth noting that the study reveals that most of the respondents indicated to be competent in using the ICT facilities to provide RIS services. Although the instrument was not designed to find out the level of their skill or competence, however, the finding was at variance with the conclusion made by Ojedokun and Okafor (2011) in their study. They concluded that librarians in Nigeria lack information technology skills.

### **Summary of findings:**

Results of the study could be summarized as follows;

1. Varieties of RIS are provided by the university libraries in the north western zone of Nigeria. Common services found among the libraries included answering reference questions, library orientation, referral, photocopy and display of new arrival services. Table of contents and fee based and information brokering services were found not provided by any of the libraries. Compilation of union list and preparing list of new arrivals were the least services provided by the libraries.

2. Photocopier was the only facility found commonly used by all the libraries in the provision of RIS. The facility is used by the libraries to produce copies of interested articles for users. Use of the Internet to provide literature search service to users was also found to be common among most of the libraries. Projectors such as power point, slide, overhead were also revealed to be used by most of the libraries especially in providing orientation services. The least used facility was found to be chat social network.
3. Irregular power supply, inadequate ICT facilities were found to be the major challenges affecting application of the ICT facilities to provide RIS.

## **Conclusion**

The study concludes that the libraries provide the services that could be termed as essential and core in any reference section of a library. Although all the libraries use one form of ICT facility or the other in providing RIS, the use of computer / word processor was minimal.

Steady power supply was the major challenge associated with the provision of RIS with the aid of ICT facilities.

To this end, the following recommendations became necessary:

- As academic libraries, university libraries should ensure that services such as preparation of list of new arrivals, contributing to or preparing library publications, production of guide for publicity and education services are vigorously provided by reference librarians.
- Word processor should be maximally utilized in the provision of other services such as preparation of list of new arrivals, contributing to or preparing library publications, production of guide for publicity and

education services, which were found to be provided by only few libraries.

- Library managements should device means of providing alternative power supply system to complement the supply from the national grid. The possibility of providing uninterrupted standby generating plant, solar system etc should be explored. It is also strongly recommended that academic libraries must have uninterrupted Internet connectivity. This could probably be done by formulating ICT policy by all the libraries.

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