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*International Library Movement*  
(A Guide to Research in Library/Information Technology & Heritage)

ESTD. 1974

Founder PT. N.K. Bhag

Vol 34 (No.4) 2012



ISSN 0970-0048

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*Volume 34*

*No. 4*

*2012*

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**INTERNATIONAL LIBRARY MOVEMENT** is Published by **ILM FOUNDATION** in March, June, September and December. Its aim is to keep an international readership informed about the Library/Information Technology & Heritage. Contribution should by sent as per international Standards.

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**DECEMBER 2012**

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# THE CHANGING ROLES AND CHALLENGES FOR LIBRARIANS AND INFORMATION PROFESSIONALS IN THE ERA OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)

SAMUEL A. AMKPA, MICHAEL ALFRED OBAJE

An Information revolution has come on board in the world and has greatly threatened the traditional library practices and services. Librarians and information professionals therefore, have to embrace this information revolution and participate actively and effectively in order to remain relevant, especially in the universities. Rahman (2002) noted that, this revolution is now making great impact in all fields of knowledge, and the field of librarianship is also deeply affected by it. Information and Communication Technology (ICT) can be broadly defined as technologies that provide an enabling environment for physical infrastructure and services development of applications for generation, transmission, processing, storing and disseminating information in all forms ([www.ucc.co.ug/nationalIctPolicyFramework.doc](http://www.ucc.co.ug/nationalIctPolicyFramework.doc)). Libraries, which were considered only as the storehouses of knowledge, have got a new outlook in the modern Information Communication era. Information is needed quickly, seamlessly and with expert human guidance. These expectations constitute a major challenge for librarians and information professionals who have usually provided services at their convenience, not always quickly or seamlessly; the implementation of ICT in the libraries has demanded for a new form of library service which is to enhance user satisfaction.

The library as the life blood of higher educational institution can benefit tremendously from the facilities provided by the ICT. University libraries can be transformed into a new information services unit, providing electronic cataloguing, electronic on-line, public access catalogue, electronic acquisition and serials control, electronic interlibrary loan, and electronic circulation functions. But it must be realized that many university libraries in Nigeria are yet to take advantage of modern ICT.

## OBJECTIVES

- 1) Traditional roles of Librarians and Information professionals in the provision of library services.
- 2) Major changes in library services as a result of the introduction of Information and communication technology (ICT).
- 3) Roles of librarian and information professionals in the provision of library services.
- 4) Skills and competences required of librarians and information professionals for effective service delivery in this information age.
- 5) Major challenges before the librarians and information professionals in this ICT era.

### **TRADITIONAL ROLES OF LIBRARIANS AND INFORMATION PROFESSIONALS IN THE PROVISION OF LIBRARY SERVICES**

Some of the traditional systems are characterized by manual systems of information organization, utilizing predominantly pre-co-ordinate indexing systems with resultant author/dictionary/catalogs as the main storage and retrieval devices. Unfortunately, this is the predominant method in most of the libraries in our institutions of higher learning even today. According to Crosby (2000), most of the libraries in Nigeria continue to use traditional tools in the acquisition, processing, storage and delivery of services to their information communities. Under this type of arrangement, majority of the library subscriptions are in printed format.

Some of the traditional roles of librarians and informational professionals are highlighted by Martin (1996) as:

- Liaison with users: the subject librarian is often formally associated with particular schools or department.

- Enquiry work: often including timetabled stints on enquiry desks.
- Selection of materials and management of materials budgets: traditionally the subject librarian selects books taking into account recommendations from users.
- Cataloging and classification: the latter in particular is commonly done by subject staff in some libraries.
- Managing collections: including looking after collections, in some cases 'subject area' or 'subject floor', binding administration, conspectus activity, relegation of material, etc.
- User education: particularly library induction to new students.
- Production of guides and publicity: including subject guides, etc.

The foundations of librarianship which include skills in cataloguing, classification and user education that are relevant in an electronic age as they are in a print based and will continue to provide a solid base of roles and skills.

### **MAJOR CHANGES IN LIBRARY SERVICES AS A RESULT OF THE INTRODUCTION OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)**

The advancement of science and technology has made a tremendous improvement and changes in library services worldwide. The increasing role of technology in libraries has a significant impact on the changing roles of librarians. The major changes are discussed under the following library services.

#### **Cataloguing and Classification of library materials:**

Cataloguers now catalogue and classify resources in an increasingly digital

environment, using cataloguing modules in a library's management software. Catalogues classify books, videos, CD-ROMs, and other materials thus, people can find what they're looking for. Materials are described by subject discussed, date published, format, author, title, and thousands of other characteristics, creating a complete record of each item. People find the record when they search for one of its characteristics. Using computers, librarians are creating different catalogs for different kinds of readers. A catalog designed for casual browsers, for instance, might display summaries of each book. Technology has also made cataloging more efficient. Catalogers add the records they create to a shared international database. When a library acquires a new material, technicians search for it in the shared catalog. If the record exists, technicians and cataloging librarians verify and customize the data without having to create a record from scratch. Catalogers customize records to make them useful to searchers. "Librarians have been sharing cataloging for a long time, but electronics and the Internet have made it easier (Crosby, 2000). The software provides access to databases, websites, electronic books, CD-ROMs, DVDs, and a host of other digital formats, through online documentation and automated catalogues. Card catalogues are being replaced by Online Public Access Catalogues (OPAC). These electronic databases of bibliographic records are faster, easier to use, and offer multiple keyword searches to find more items or refine searches. Many libraries' OPAC are web-based databases which can be searched by anyone in the world by internet access.

### **Circulation of library materials:**

Circulation module has a database of users' details necessary for circulation of materials, provides overdue list, charges, generates reminder notice on borrowed materials. Crosby (2000) stated that, years ago, paper cards and ink stamps were the primary waysw books were tracked, now, most librarians use automated circulation systems to simplify book management. Librarians also set policies about lending time and renewals and, in libraries.- that offer computer access, they established rules governing computer use. Materials are circulated electronically to users with the aid of hand held scanners and bar code labels. Request for materials, reservation and renewal are done online. Request/reservation slips are printed out

to retrieve the material for the user. Request/reservation is cancelled if the user failed to turn up after some days.

### **Reference services:**

ICT provides full text article databases, electronic books, chat-based interactive technologies, Current awareness services, selective Dissemination of Information, Users' portals services, videoconferencing, voice-over-IP applications, telephone and e-mail have already impacted the services and roles of reference librarians and information professionals. Traditionally, human intermediation occurs in a face-to-face mode where users express their information problems (or what they know about them) to intermediaries. Jane and McMillan (2003) noted that there is evidence, both anecdotal and recorded, that increasing numbers of people are turning to the Internet as their preferred source of information, and this is being reflected in library reference desk statistics. Coffinan (2004), noted that by the late 1990s, it had become apparent to many that if librarians were ever to successfully move their reference service to the web, they will need something live, interactive and real time. Something that allowed reference librarian to work with patrons to help them find the information they wanted at the right time when they sought for it and not days later in an e-mail. This has resulted to the use of reference application like Web contact software centre, to provide on-line chat where patrons can get instant response from the reference Librarian and enable users and librarians to look at and work with the same on-line source simultaneously.

Understanding these varied technologies, including imaging technologies, web mark up languages, metadata, user interface design, internet searching are all changes in reference services.

### **User education:**

Library instruction is becoming increasingly different from the orientation and tool-based instruction of the past. Information literacy or library instruction is to enable a user to recognise information when it is needed. And also to acquire the

ability to locate, evaluate, and use effectively the needed information. These are the major parts of user's education today. Training on how to form appropriate search terms, important search engines, directories and relevant discipline based on databases are very essential to users now than ever. Users' education is focused more on information literacy, which enables learners to master content and. extend their investigations, become more self-directed, and assume greater control over their own learning and also recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information.

### **Roles of Librarians and Information Professionals in this ICT era:**

New roles emerge for librarians and information professionals as a result of introduction of ICT to library and information services. Ugboma and Edewor (2008) emphasized that library and information service provision has witnessed a paradigm shift, from purely, traditional, and physical manipulation of information resources to technological manipulation as well as electronic provision of library and information service. This is because of the discovery and application of ICT to library operations. Ugboma and Edewor (2008) affirmed these new roles of librarians as follows:

#### **1) Creation of web pages:**

Designs the library's web page, searches and evaluates information resources to be linked to the site, and create an awareness of library services on the web.

#### **2) Development of digital contents:**

Develops digital contents to facilitate access to e-materials. Librarians are actively involved in the development of digital contents to meet the users information needs.

#### **3) Collaborators:**

They collaborate with Information Technology professionals to design and



evaluate systems that would facilitate and improve service delivery. Create alliances with “digital friendly” groups and individuals. Choose automated library management systems that are reliable and user’s friendly.

#### **4) Information brokers:**

They act as information brokers for both print and electronic media. Identify, retrieve, organise, repackage and provide electronic access to digital information sources.

#### **5) Educators:**

They are involved in the training of users, on internet use; CD-ROMs, search engines, online databases, OPAC and online tutorials. Train the users in the use, evaluation, and management of electronic information and communication Technologies.

#### **6) Policy makers:**

Participate in the development of an information policy that ensures total or selective access to all information resources from internal records to external databases.

#### **7) Business Managers-**

Negotiate with publishers and aggregators for the most advantageous licence agreements for e-journals and databases. Ensure that contractual, legal and ethical obligations regarding information use are met. Knowledge of terminology, delivery modes and legal aspects of electronic information access.

In the same way, Abbas (1997) summarized the roles of librarians in an electronic age as:

- gateway to future and to the past, knowledge manager/worker, organizers of networked resources, advocates for information policy development, Community partners, sifters of information resources, collaborators with technology resource Provider, technicians and individual information consultants

Similarly, Anderson (1996) identified the emerging roles of librarians and information professionals in a Digital environment to include;

- 1 Selecting electronic resources and evaluating their quality;
- 2 Developing expeditious and effective locator tools to make the complex web of resources more readily accessible to both sophisticated and naive users;
- 3 Bring value-added components and indexing to the numerous resources, which will continue to proliferate since anyone can now, in effect, publish on the web;
4. Delivering information services where librarians are not merely the passive catalysts who direct inquiries to relevant sources, but provide the information that users actually seek -analyzed, evaluated, synthesized and transferred in its most useful form;
5. Teaching novices how to find resources, libraries can also teach specialists how to locate relevant resources outside their own disciplines and even within their own fields;
6. Teaching critical evaluation skills, which include assessing the authenticity and quality of what is found and determine whether an identified document is worth downloading;
7. Functioning as a bridge between system designers and users, by having sufficient credibility with programmers and by understanding users' needs, librarians can serve as the user's advocate with the system designer while also interpreting to the user what may or may not be technically feasible.

Librarians in electronic library will perform a role of guiding users through an overwhelming myriad of information resources in both print and non print formats, teaching users to be better able to navigate through the maze of information resources. The challenge that librarians face as knowledge navigators is to link information to the process of acquiring knowledge from that information.

### **SKILLS AND COMPETENCES REQUIRED OF LIBRARIANS AND INFORMATION PROFESSIONALS FOR EFFECTIVE SERVICE DELIVERY IN THE INFORMATION AGE**

Librarians and Information professionals are required to be skilled, responsive humanists; competent to be able to assess individual needs and respond with information that serves the patron's needs. Librarians are no longer considered as simply conservators of information; the emphasis now is on the dissemination of information. For this reason, librarians need to be aware of the various forms, how they are disseminated, and how they best serve particular information needs.

Ward (1999) gave some of the skills and competencies required of librarians and information professionals to include:

#### **Institutional knowledge:**

The information professionals are expected to have a clear understanding of their institutional or organizational goals, objective and mission.

#### **Specialist Subject Knowledge:**

Information professionals should have thorough knowledge of the subjects and interdisciplinary research in those areas and be concerned with analyzing the contents and evaluating their relevance.

#### **Communication skills:**

These are skills and values that professionals should acquire to enable them

work and contribute effectively to the organization or institution, client and profession. These range from having good communication skills to bringing the services positively to the notice of those entitled to use them.

### **Professional Competencies:**

Information professionals should have professional knowledge of information resources, access, technology, management and the ability to use this knowledge as a basis for providing the highest quality information services.

According to Okore and Ekere (2008) the e-competencies required of librarians and information professionals as:

- have basic knowledge of computers and their capabilities; competency with: Search engines, internet facilities, e-mail, web URLs, navigation tools, web browsers and web file formats, database software and intranet development and management

Similarly, Pinfield (2001) stated that.. new roles for librarians imply new or newly adapted skills, in addition to the 'traditional' professional skills (cataloging, classification etc.). Librarians are increasingly being expected to develop Skills such as: Subject expertise, people, communication, technical/IT, presentation and teaching, financial management, analytical and evaluative, team-working and team-building, flexibility, ability to learn quickly and vision skills.

Librarians and information professionals must be equipped with a wide range of personal and transferable skills in order to manage the changing environment. In like manner, Omekwu and Echezona (2008) stated that management and interpersonal skill make librarians: More effective managers of networked resources and services, possess expert knowledge of the content of information resources, including the ability to critically evaluate and filter them, provide excellent instruction and support for library and information services users, use appropriate information technology to acquire, organize and disseminate information, and analyse the

professional domain and where it is heading.

Professional competencies relate to the special librarians knowledge in the areas of information resources, information access, technology, management and research and the ability to use these areas of knowledge as a basis of providing library and information services. Personal Competencies represent a set of skills, attitudes and values that enable librarians and information professionals to work efficiently; good communicators; focus on continuing learning throughout their careers; demonstrate the value-added information services.

### **MAJOR CHALLENGES BEFORE THE LIBRARIANS AND INFORMATION PROFESSIONALS IN THIS ICT ERA IN NIGERIA**

The advent of ICT in libraries and information services has brought a lot of challenges to librarians and information professionals. Womboh & Tukur (2008) noted that, the number and quality of computer-literate librarians and library staff are not adequate. The major challenges facing librarians and information professionals in this information age are given below:

- the problem of retrospective conversion of materials into digital formats;
- high cost of equipment e.g. computers, stabilizers, network facilities, UPS, etc leading to few workstations for users;
- power failures-frequent power outages or erratic supply of electricity;
- clients' and staff attitude: Resistance to change by clients and staff poses a serious challenge. New technology is not always accepted by users and staff easily.

Equally, Womboh & Tukur (2008) stated that:

*Another problem militating against the development of ICT in university libraries is the negative, laissez-faire attitude of lecturers, students, and even librarians. These people feel that the government or their employers should train them in ICT.*

*This is a very wrong conception and belief*

- Creation of awareness
- Insufficient funds make subscription to relevant online databases difficult.
- Network fluctuation and slow internet connectivity.
- Poverty and high cost of training of skill manpower
- High cost ICT facilities maintenance

Gboyega (2003) summed up, the following as the salient features of the current state of libraries and information services in Nigeria:

- insignificant investment in new technologies;
- inadequate current information resources in any format in most libraries;
- absence of resource sharing/networking services;
- grossly inadequate annual subventions;
- lack of a central coordinating body for library services;
- near-total absence of effective school libraries;
- absence of effective public library services in most communities and the poor state of existing ones;

Government and institutions' neglect is one of the challenges. This is supported by Womboh and Tukur (2008) who stated that:

*Due to harsh economic conditions and government apathy to library development in Nigeria, the state of ICT in university libraries is mediocre. The literature affirms that quality of a university can be judged by the content and quality of the service offered by the library. Due to the same economic conditions and government apathy, the content and quality of services of most Nigerian university libraries have deteriorated to such a level that the quality of the products of such universities has also been adversely affected*

In the same vein Amkpa and Abba (2009) identified the key issues relating to non-implementation of ICTs in Nigeria University Libraries to be funding, inadequate infrastructure and lack of training and education among others. The current state of libraries has not significantly changed as observed by Gboyenga in 2003, hence the challenges are enormous. Mbakwe (2004) observed that, library should be (ICT) compliant. ICT is the order of information services today, librarians should not allow the non-professionals to take over their jobs, as this will endanger the profession's competency. Librarians should stamp their feet on the ground in order to maintain the library relevance as the most important educational tool. Librarians must have to tell the world in general and University community in particular that they exist and are most relevant in any education set up especially in this new information age.

### **Implications**

There are consequences for failure of Librarians and Information professionals to move with the time in their profession. Information and Communication Technology and its impact have just begun. Those who cannot see this and accept its impact are likely to be redundant in the field. When librarians and information professionals feel reluctant to avail themselves to the information literacy world, information seekers will find it difficult to locate, evaluate and use information effectively. It is clear that librarians and information professionals will be left behind if they insist on the old roles of traditional librarians. Omekwu (2008) stated that, librarians without re-skilling and retooling themselves cannot meet up with the demands of the 21 st century information age. They must be ready to adapt, or wither away, defeated on the field, leaving users to the alternatives of search engines and Ask Jeeves. Ask Jeeves is a unique question-answering system that allows users to ask questions in plain English, and then delivers the answers. (<http://www.AskJeeves.co.uk>).

The information revolution and the pervasive thinking that everything is available on the web have created more challenges for information professionals. Acquiring and providing dependable access to electronic resources require

librarians and information professionals to learn and apply new skills and understanding evolving technologies, provide equitable access to usefully organized resources, and negotiate less-restrictive licensing policies.

The discussions from the review conclude that librarians' roles have shifted from emphasis on acquisition, preservation and storage to an emphasis on teaching, consulting, researching, preserving, democratic access to information, and collaborating with computer and information scientists in the design and maintenance of information access systems. Thus, librarians need to be managers of information access, designers of systems in conjunction with programmers, technicians, and service providers when working with users. While it is expected that librarians and information professionals should be equipped with multi-skills, multi-tasking abilities and competent in areas of work such as management, communication, public relations in this information age.

### **RECOMMENDATIONS**

The following recommendations are suggested to enhance librarians' changing roles and challenges in the era of ICT utilization:

- Librarians and information professionals need to acquire new skills through training, to access net resources and develop new strategies and services to meet the challenges of the knowledge age. They should not wait for the government or employers to train them, personal effort is required.
- Librarians and information professionals should learn and apply new skills in evolving technologies, provide equitable access to usefully organized resources.
- It is necessary that librarians provide authentic and reliable information, evolve strategic alliances, participate in network activities and contribute to the bridging of the digital divide
- The government should increase funding to Nigerian universities, in order to



automate their libraries.

- It is very important for librarians and information professionals to re-evaluate their roles in terms of how they contribute to the management of technology and information in the knowledge age. They must participate in information and knowledge creation, undertake information resources documentation, provide an information identification service and evolve new means of resource preservation.
- Striving to meet the rapidly changing needs of society and higher education, librarians and information professionals must continue to redefine their roles and emphasize new functions and services.
- That librarians and information professionals learn about new technologies and be aware of their strengths and weaknesses, change and adapt to the electronic information environment.

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