

## Librarians as Information Miners: The Case of Nigeria

Philomena A.Mamudu & Dumebi Otulugbu

### Abstract

---

The need to resolve the question of what special skills librarians in Nigeria need to possess to enable them discover and harvest knowledge from digital libraries, know the retrieval engines and indexing structure as well as identify information needs, fine-tune and/or situate search terms in order to harvest results within the fastest speed/time possible cannot be over emphasized. This paper therefore evaluates the knowledge and skills needed by librarians in Nigeria to achieve optimum competence and performance in the digital environment. It examines the features of some internet databases with the aim of appropriating them to facilitate the digital consciousness of Librarians in the Nigerian digital environment, since these databases have similarities in structure; hence the aim is to facilitate high quality and timely research output. An acquisition of the relevant skills will facilitate librarians' competence and performance in navigating, browsing and filtering digital reference services and electronic information services from the digital information sources. Relevant bodies or organizations that are directly responsible for the training and retraining of librarians are enjoined to organize among other activities, periodic workshops targeted at training librarians for the purpose of getting them ready for the challenges of the digital environment.

---

**Keywords:** digital environment, librarians' competence, ICT skills, search skills.

### Introduction

Libraries all over the world are experiencing changes. These changes have affected the way librarians discharge their duties. The world has turned into a global village; hence professions and professionals are adjusting their activities to accommodate – and be accommodated in – this change. Accordingly, libraries and librarians are caught in this web of change; hence the need to prepare Nigerian librarians for the challenges ahead. With the development of information and communication technology (ICT), libraries are no longer seen as just physical books that are kept

in a building, for users to come and access. Users are no longer required to visit a library physically in order to access it. Hence, this paper evaluates the knowledge and skills needed by librarians in Nigeria to achieve optimum competence in the digital environment. The growing need for librarians to meet the expectations and needs of the present situation cannot be overemphasized as users all over the world now browse the internet for information without having to come to the library. It is however pertinent to resolve the following questions:

- a. How reliable are the tools employed by users in their search for information?
- b. How fast can they get information out of these databases?
- c. Do they have the basic skills of searching for relevant information without getting distracted or lost/entangled in the web of information available on the Internet?

Libraries are now located in space, and their mobility makes it easier for users to have access to diverse information wherever they are. Library and Information professionals are now engaged in different sector as content developer, knowledge manager, and cybrarian and so on. This is due to the sea change in the info- world. The information world is now undergoing a transitional period. The world is shifting from a Library-centered to an information-centered society. Resources are shifting from paper-based documents to predominantly digital documents, that is, using search engines, online databases, data mining, etc (Halder,2009:93).

The World Wide Web (WWW) has somewhat become a blessing for some librarians while for some others, it is the greatest nightmare. While some librarians claim that the new trend in the profession has made information seeking, 'mining' and disseminating easier and fun, other professionals believe that it has demystified the profession. According to Moorman (2004:14), in many ways, the internet has become both a blessing and curse, especially for

librarians. While we benefit from the ease of having an incredible amount of information readily available at our fingertips, we also have seen a dramatic increase in the questionable quality of that same information. Our goal of providing reliable, trustworthy, and relevant information for our patrons has become much more difficult because of this vast increase in the amount and quality of information available and produced.

Users often get confused because the internet (being an information super-highway) is flooded with both relevant and irrelevant information. The ability of a librarian to get reliable information in the shortest time possible from electronic databases is therefore imperative. Hence, librarians now play the role of advocate, consortia manager, consultant, content manager, facilitator, educators, intermediary, publishers, intermediaries, knowledge manager, researcher, sifter, web designer, etc (Halder, 2009). Considering the amount of diverse task placed on the shoulders of librarians, there is the need to train, re-train and re-orientate them for the challenges of the digital environment.

For Nigerian librarians to remain relevant in the information, digital or virtual environment, there is therefore the need for conscious efforts to be made in preparing them to meet up with the pace of other information professionals in developed countries, who have embraced the change occasioned by the digitization of the global environment and have continued to worked towards achieving expertise in the business of information mining and dissemination.

### **The Role of the librarian in the information world**

The librarian has diverse roles to play in the information world. Indeed, various functions such as collection development and acquisition, cataloguing and classification, circulation, reference

services, preservation, conservation and archiving – are now being performed electronically. Hence, there is the need for the Nigerian librarian to acquire the necessary skills to be able to handle these duties. Apart from the traditional roles aforementioned, the librarian should be able to provide reference services as well as learn and access user's information needs, as aptly corroborated by Rao and Babu (2001:27) who argue that “The leveraging of the available information to suit the needs of the clientele is also best done by the librarians”. However, “to sustain in the field of librarianship, librarians need to equip with technical skills such as knowledge of HTML, programming languages, knowledge of hardware basics and troubleshooting, understanding of software programs, and the skill to search, display, and retrieve data effectively in a variety of information retrieval systems” (Morris, 1999 in Rao & Babu, 2001:30)

The 21<sup>st</sup>-century librarian should thus be sufficiently equipped and ready to serve and satisfy IT conscious users. Accordingly, Drake (1996:7) argues that “Clearly, we need a new breed of librarians who understands and integrates technology, information and learning into a new model” and concludes that “this new model will be far more exciting than the old one.” Thus we now have a new breed of cyber librarians who Hathorn (1997), as cited by Rao and Babu describes as “Cybrarians,” in reference to those who specialize in locating information on the internet, and are experts in searching the web for relevant information for users.

There are several databases available online which provide electronic information to users, most of which have the same search features but vary in collections and sizes. Knowledge of how to ‘mine’ information from at least one of these databases normally gives a general idea of how to use electronic databases to gather relevant information for users.

### **Features and characteristics of some electronic databases**

These electronic resources are popular for their ability to harness information from different sources, bringing them together to answer the queries of users. They make sourcing for information and doing research less cumbersome and fast. One query, for instance, has the capacity to reveal several resources from different sources.

HINARI (Health Internetworks Access to Research Initiative), AGORA (Access to Global Online Research in Agriculture) and OARE (Online Access to Research in the Environment) programmes are products of “Research4Life” and provide developing countries with free or low cost access to academic and professional peer-reviewed content online. The Research4Life programme constitutes a public-private partnership between the World Health Organisation (WHO), Food and Agricultural Organisation (FAO), United Nations Environment Programme (UNEP), Cornell and Yale Universities, more than 130 science publishers led by the International association of STM Publishers, and technology partner Microsoft. The partnership’s goal is the attainment of six of the United Nations’ (UN’s), eight Millennium Development Goals, by reducing the gap in scientific knowledge between industrialized countries and the developing world.

HINARI was launched in 2002, and is managed by World Health Organization (WHO) in partnership with Yale University Library and over 100 publishers. It provides access to over 5500 peer-reviewed journals covering medicine, nursing and related health and social sciences

disciplines. Over 3300 public institutions in 105 eligible countries have already registered for access to the HINARI database.

OARE was launched in 2006, and is managed by the United Nations Environment Programme (UNEP) in partnership with Yale University and more than 50 publishers. The database provides access to more than 2000 scientific journals in a wide range of disciplines contributing to the understanding of the natural environment, including environmental toxicology and pollution, zoology, botany, ecology, environmental chemistry, geology, hydrology, oceanography, meteorology, climatology, geography, environmental law and policy, conservation policy and planning, environmental biotechnology, environmental engineering, energy, and many other disciplines. Over 1100 institutions have registered for access to OARE.

AGORA was launched in 2003, and is managed by the Food and Agricultural Organization (FAO) in partnership with Cornell University and over 40 publishers. It provides access to over 1200 high quality international journals covering agriculture, fisheries, food, nutrition, veterinary science and related biological, environmental and sciences in public institutions across the world. Over 1600 institutions have registered for access to the database.

The features of HINARI would be used to explain how these databases work. The major strength in the database is the use of PubMed search engine to locate/search articles. Before a search is begun, the following steps have to be followed to arrive at the specific information needed:

- a. Identify and define your information need. That is, type of information and type of audience.

- b. Choose your search terms. Search terms have to be clear, concise and straight to the point and it has to include the unique words that would appear in your article.

After deciding on the search terms to use, it is then keyed into the PubMed (search box. On the PubMed homepage, the active query box is in the grey horizontal bar running across the PubMed page. Ensure that the box adjacent to “Search” displays PubMed and that the search terms are entered in the longer search box. Once the search statement is entered, click on “GO” to run the search. It is instructive that, to make use of PubMed, a searcher will need to login to HINARI website found in [www.who.int/hinari](http://www.who.int/hinari) where the login page may be selected. After logging in, the searcher goes to the full-text journals, databases and other resources page, and then, selects the hyperlink ‘Search HINARI journal articles through PubMed (Medline).’ The result may then be filtered by narrowing from the broad to the specific search words. Results may also be filtered and narrowed by using the ‘limits’ function in PubMed. The following limits available for use include those by Author, Journal, Date, Language, Subset, Age, Publication Type, Title/Abstract and Affirmation.

When the search has been completed, the following have to be essentially resolved before the result may be considered for use:

- a. Is the information directly relevant to your topic?
- b. What kind of material is it?
- c. Is the author/Sponsor of the website identifiable?
- d. What is the date of publication of the webpage?
- e. Would you cite this material in an academic paper?

The information, once the foregoing questions have been resolved, is ready for use and dissemination. It is noteworthy, however, that a comprehensive training can only be achieved if the training module of the database is visited.

There are some other electronic databases available for subscription. Some are free for developing countries (like Nigeria) while others are paid for. INGENTA, LEXIS-NEXIS, JSTOR, EBSCO-HOST, EBRARY are examples of some of the available databases for use. Familiarity with these databases and their search features (via their respective websites or URLs, as the case may be, would give a librarian an edge over some users who are only familiar with general search engines.

### **The way forward for Nigerian librarians**

Librarians no longer have monopoly as far as the provision of print information is concerned; hence they are challenged to (re)construct their identity and relevance in the ICT world. The world is moving at such a pace that much development is happening outside the library and the academic community. Libraries are in a transition period and many of them are fighting to meet up with the diverse and ever changing needs of the 21<sup>st</sup> century user. These questions then come to mind:

- a. Can Librarians still be relevant in this era of information explosion?
- b. Can Nigerian Librarians meet up with their counterparts in developed countries?
- c. What is the place of physical books in all of these?

Librarians are, and will still be relevant in the ever-dynamic information world; users crave for general knowledge on how to navigate the web for information and entertainment. The Librarian



should rather look for specific skills that would get reliable and credible information in the fastest time possible. Thus, as Saffo (1994:2) avers, “The future belongs neither to the conduit or content player but to those who control the filtering, searching, and sense-making tools to navigate through the expanse of cyberspace.”

The traditional professional skills of librarians can be converted to suit new and emerging trends in librarianship. What makes a librarian different and important to the user in the contemporary/traditional library is his/her ability to get to books on the shelves with ease. What makes a librarian get to books on the shelves with ease is their familiarity with the shelves and the style which has been used to classify the books. That same skill and zeal can be complimented with the acquisition of (even more functional) ICT skills. This is the only way that librarians can construct their identity and continued relevance in the ICT world. In other words, as librarians familiarize themselves with the shelves, they should also familiarize themselves with the internet, as well as the style which has been used to classify the electronic materials.

Nigerian Librarians can compete with their counterparts in developed countries if they stand together and work together to achieve excellence in this 21<sup>st</sup> century. In this regard, There is the need for collaboration and formation of library consortia with the primary purpose of training and retraining librarians to meet ICT challenges. During such trainings and workshops, librarians would gain better knowledge of the skills they need for the ‘mining’ of information from electronic databases. In this regard, the Nigeria Library Association (NLA) should play a leading role in helping Nigerian librarians to grow by organizing training workshops from time to time. This will keep the librarians abreast of new and/or emerging trends in the information world, in line with the position of Rao and Babu (2001:27) that “The familiarization with new gadgets and

methodology of locating information for vast majority of population requires guides and librarians can easily fit into this role with training.”

Nigerian librarians should also endeavor to crave self development; the lukewarm attitude of some librarians towards the application of information technology to their work is detrimental to them and, even, to the body that they represent. Library schools in Nigeria need to restructure their curriculum to cater for the new trends in librarianship. A fresher from the library school cannot bring to play what he/she was taught in the library school when faced with the present challenges of the profession. Employers should also work on their mode of employment. Only librarians who are ICT conscious should be brought into the library system. Librarians who are already in the system, but are not ICT conscious, should be required to undergo relevant ICT training. Every system needs librarians who crave for self development and are hungry for knowledge. Employers should also continue to train their librarians so as to be able to retain them for the future.

### **Conclusion**

The mobility of the library means that libraries now exist in space and can be accessed anytime, anywhere, on any platform and via a variety of databases. This simply means that multiple users can make use of the same library material at the same time and in different places. It shows the advantage of the electronic library over the physical library. This, however, does not mean that the physical book in the library can or should be discarded; it simply means that both the print and electronic collections of libraries should coalesce and grow simultaneously.

Significant populations of library users are now ICT conscious; hence, their (users') needs are changing. This, accordingly, calls for a change in how they are served. Libraries should develop policies to suit their users' needs. These policies can be developed after a comprehensive analysis/survey of users needs. The policies will help them to know what percentage(s) to devote to print and electronic resources during acquisition. Librarians should be equipped to face the challenges of the future, stay in advance of need, not take their existence for granted, have faith in themselves and their capability, construct their continued existence and relevance, crave self development, learn from one another and be confident and bold enough to claim the future. "In future, librarians will focus on people and the learning environment, not the local stock of physical objects. The challenge is to transform the library into a customer oriented rich learning and service center where people and problem solving are important. This new environment will foster self motivated and lifelong learning and actively support learning, teaching, research, and personal and professional growth"( Drake ,1996: 5).

It is quite apt to note Drake's averment that "Librarianship is the second oldest profession and we have survived wars, plagues, coups d'état, economic depressions, economic booms and every social and cultural change. We are leaders and survivors." Thus Nigerian Librarians will be able to construct their identity and indispensability as information miners, as this will enable them to conveniently navigate the ICT/mobile/virtual world space.

### References

Drake, M.A (1996). Information, Librarians, and Learning: The challenges Ahead. Follett Lecture Series. Accessed April 24, 2011 at <http://www.ukoln.ac.uk/services/paper/follett/drake/paper.html>

- Halder, Sambhu Nath (2009). Multimodal roles of Library and Information Science professionals in present era *International Journal of Library and Information Science*. 1 (6), 92-99
- Hathorn, C (1997). The Librarian is Dead, Long Live the Librarian. PRETEXT Magazine.  
Accessed 30 April, 2011 at <http://www.pretext.com/oct97/features/story4.htm>
- Moorman, Paul J (2004). Mining Information Gold in the Blogosphere: How to use Web logs as reliable research tools. *AALL Spectrum*. Accessed April 24, 2011 at: [http://www.aall.org/./pub\\_sp0411\\_Mining.pdf](http://www.aall.org/./pub_sp0411_Mining.pdf)
- Morris, B.A (1999). Digital Libraries: Their Impact on the Future of the Library and Librarians.  
Accessed April 24, 2011 at: <http://www.biermans.com/culminating/spring1999.htm>
- Rao, Nageswara K and Babu, KH (2001). Role of Librarian in Internet and World Wide Web Environment. *Informing Science*. 4 (1), pp26-34.
- Saffo, P. (1994). It's is the content, stupid. *Wired*, 3.12. Accessed April 24, 2011 at: <http://www.wired.com/wired/archie/2.03/context.html>
- Screenivasulu, V (2000). "The role of digital librarian in the management of digital information systems (DIS)." *The Electronic Library*. 18, (1), pp12-20.