

DATABASE MANAGEMENT IN THE NATIONAL
BIBLIOGRAPHIC CONTROL DEPARTMENT
OF THE NATIONAL LIBRARY OF NIGERIA.

By

ABEL OMENUWOMA ODHIGBA

And

SOLAPE OSHILE (MRS)
NATIONAL LIBRARY OF NIGERIA

ABSTRACT:

The paper attempts to examine the place of ICT in database management in the National Bibliographic Control Department of the National Library of Nigeria. It discusses the efforts the department has made in the computerization of its operations and database maintenance. Problems that are encountered in the application of ICT in the department were enumerated and the way forward proffered.

INTRODUCTION

In the nineteenth and twentieth centuries, the world witnessed a tremendous growth in human knowledge. The phenomenon was matched with a corresponding growth of information transfer media such as books, journals, reports, theses, dissertations and other documentary forms. The management, organization and dissemination of information as a result of the explosive output became a problem to scholars, Librarians/ information scientists, and other information professionals. In the twenty first century, the convergence of computers and telecommunications, made Global Information (GI) possible, and this had an impact on all areas of human endeavour, especially Library Information storage and retrieval services. Libraries are thus being transformed from book centered to information centered institutions and emphasis is shifting from book collection and storage to access and provision of electronic information services.

DEFINITION OF TERMS

Database:

The bibliographic database contains records of documents including such fields as Name, Author, Title of documents, Place and year of publication, Publisher, Journal Volume and Issue Number, Pages etc.

A database system is a computerized record keeping system whose overall purpose is to maintain information and make it available on demand.

Operations that can be performed in a Database system:

- (i) Adding new titles to the Database
- (ii) Inserting new data into the existing files
- (iii) Retrieving data from the existing file
- (iv) Updating data from an existing file
- (v) Deleting data from the existing file
- (vi) Removing existing files from the database.

DATABASE MANAGEMENT SYSTEM (DBMS)

Database Management System is a set of programmes which facilitates the creation and arrangement of data to minimize duplication, modifies data within the Database and provides ready access to data. The DBMS Software acts as the vehicle for accessing information from the database and simplifies the task of the computers operating system.

MANAGEMENT

Management is usually described in terms of four interrelated functions (a) Planning (b) Organizing (c) Monitoring and (d) Controlling activities and resources to achieve the objectives of the Department.

Database Management therefore entails planning, organizing, monitoring and controlling the resources to periodically analyse the National Bibliographic Control Department (NBCD) operations with a view to identifying data processing problems. Database Management in the Library sector entails information storage and retrieval through the Computer System.

FUNCTIONS OF THE NATIONAL BIBLIOGRAPHIC CONTROL DEPARTMENT.

The National Library of Nigeria as the country's National Bibliographic Agency is responsible for National Bibliographic control in the Universal Bibliographic Control network aimed at achieving Universal Availability of Publications. These statutory functions performed through the National Bibliographic Control Department include:

- (a) The production of the National Bibliography of Nigeria (NBN)
- (b) The administration of the Nigerian ISSN center and the ISBN Agency, and the assignment of International Standard Serial Number and the International Standard Book Number to Nigerian publications
- (c) The maintenance of the National Union Catalogues (NUC) and National Union list of Serials (NULOS)
- (d) The provision of Cataloguing – In publication (CIP) data on publishers request
- (e) The establishment, compilation and maintenance of authority files viz Name, Authority file and National Authors and Subject Authority files for specific Nigerian subject headings used in the NBN.
- (f) The maintenance of cataloguing standards in the country; and
- (g) The implementation of IFLA and UNESCO programmes.

USERS OF THE BIBLIOGRAPHIC INFORMATION OF NBCD

- (a) Lib rarians
- (b) Booksellers
- (c) Researchers
- (d) Publishers
- (e) Authors
- (f) Governments

LIBRARY AUTOMATION:

What exactly is automation? Websters New Collegiate Dictionary defines automation as the technique of making an apparatus, a process or a system to operate automatically: Library automation therefore is the application of computer to Library house keeping operations and services. The term library automation is used "Inter-changeably with terms such as electronic library, computer-based library system, application of

information technologies to library operation and services. The introduction of computers in handling data and information has actually revolutionized access to information all over the world. The adoption of Information Communication Technologies (ICTs) in organizations has been seen to be twofold: to organize in-house information and make it available for retrieval as well as to access external databases, which contain published and semi-published information.

Kibirige (1983) identifies four fundamental incentives of automation in either industry, business or in information centres. These are:

1. Cost Reduction - Saves operation costs and overhead expenses
2. Service improvement through reliability, accuracy, and promptness.
3. Performance/Effectiveness Control through regular checks
4. The Bandwagon - appearing to be abreast of current practices

Also Rowley (1988) emphasizes that the adoption of computers has become necessary for four main points:

- a. Increased workload - this may be because the organization is responding and engaging in more activities, with a need for more record - keeping and information from a wider variety of sources.
- b. Need for greater efficiency and the need to save staff time and money and thus cut expenditure on staff.
- c. New services and functions - computers may be seen as a means of offering additional services and functions;
- d. Networking and co-operation - the fact that data is stored in a computer facilitates its communication to other computers and other computer users.

Although the driving forces in the development of automation came outside the library profession, there is no doubt that there exists a general awareness of the need for automation. Librarians quickly saw its significance and began to take a major role in its development. This is because ICT is helping other companies and also has enormous potential to benefit librarians. At this juncture it is pertinent to look at the role of ICTs in National Bibliographic Control Department.

APPLICATION OF ICT TO LIBRARY SERVICES:

Information and Communication Technology (ICT) improves the

FUNCTIONS OF THE NATIONAL BIBLIOGRAPHIC CENTRE

modes of doing research, publishing, processing, storing, retrieving and disseminating large quantity of information. Since the library is mainly an information centre, the introduction of ICT makes library users and librarians have access to libraries. Virtually all libraries, at least in the most developed countries have quick access to well organized information. It is obvious that electronic technologies have already had considerable impact, and are now members of networks that generally facilitate the location of sources of information and the gaining of access to them. Card cataloguers have largely been expanded through the addition of materials not previously included. The whole idea of what a catalogue should be is changing. It is no longer seen as a tool bounded by the collections of a single library but one that reveals the availability of resources in a network or even one that is essentially a gateway to a universe of information resources in printed, electronic or other forms. Use of terminals or workstations to access databases of various kinds is now routine for many libraries. In Nigeria, some libraries have been much faster than others in turning the technology to their advantage and thus offering innovative services to their users.

We shall now consider some of the products of ICT that can be utilized in acquisition and cataloguing in an automated library.

The Internet

The Internet is arguably the electronic resource that is now having the most significant impact on library services and operations and on the professional activities of libraries. This strength of impact is due to its multi-faceted nature, since it simultaneously fulfills three important roles in library services. First, it is a resource that can be consulted and used like any other reference tool. Secondly it is more dynamic and far-reaching than any other resource used in library setting. Finally, it provides a medium of communication that has extended the potential of librarians for interaction beyond the physical library. Through access to the Internet, librarians have found new ways to store, find and communicate information among themselves and with users. For reference and public service librarians, this access has created many new and different service options.

Getting connected to the Internet has been easier for academic and

government libraries than it has for public and rural libraries, where connectivity has been a major stumbling block to Internet use. Since the early 1995 privatization of the Internet, opportunities for connectivity have expanded considerably, with fierce competition in the commercial sector to market Internet to business, non-profit organization and individuals.

We shall highlight some of the services available on the Internet as related to acquisition and cataloguing in libraries in Nigeria.

Electronic mail (E-mail):

Electronic mail software, commonly referred to as E-mail, allows users to send messages to and receive message from other computer users. The other users may be on the computer networks or on a separate computer system reached through the use of communications equipment and software. Each E-mail user has a mailbox and an address to which the mail can be sent. To make the sending of messages efficient, E-mail software allows the user to send a single message to a distribution list consisting of two or more individuals. The E-mail software takes care of copying the message and routing it to each person on the distribution list. E-mail system usually has a mail-waiting alert that notifies a user through a message or sound that a message is waiting to be read if the user is working on another application. For a small monthly fee, (in-fact some are free) users can receive mail from and send mail to other users. E-mail can be very useful in acquisition. For example, we use E-mail to receive pro-forma invoices from our overseas book vendors to order for information products such as catalogues of publications, and to select relevant information materials for our library acquisition.

World Wide Web (WWW):

Another information service on the Internet is the World Wide Web (WWW) or, for short, the Web. The concept of web offers the advantage that we can get more information about a particular topic or subject just by clicking on it. When that particular topic or subject is chosen, we can read the entire information contained therein. The documents can also be linked to other documents, which may be on the same topic or subject but with different source. Organizations, especially publishers now have

their web sites. Websites are increasingly useful for; central bibliographic resources, feedback and enquiry forms, access to other online services, registration and subscription services, searchable catalogues, etc. This is a good tool for acquisition.

The application of ICTs or library automation did not come overnight. It was a long process. Libraries existed for many centuries without automation, but as technology emerged in the world at large, libraries embraced these tools as a means to avoiding some of the menial tasks inherent in managing large collections

TYPES OF DATABASE IN NBCD:

Efforts have been made in the past to computerize the operations of the National Bibliographic Control Department of the National Library of Nigeria but they have not yielded the desired result. However in 2002, catalog database was created for the National Bibliography of Nigeria using the CDS 'ISIS Library Software. It is a menu-driven Micro-computer version that was developed by UNESCO. The CDS/ISIS was also used to develop the Nigerian File of International Standard Serial Number.

Another database created is PUBL, which is for the Nigerian ISBN Publishers Directory. These databases are created, updated and maintained by the Database Management, Publications and Training Section of the International Programmes and Publications Division of the NBCD.

DATA ORGANISATION

As a result of garbage in, garbage out in computer system, efforts are being made to see that the information is organized to satisfy the user's needs. Towards this, input worksheets have been designed whereby cataloguers feed in the exact information using the necessary identifier. The same worksheet is on the computer system for the data entry. There are online editors made up of librarians and computer experts who edit whatever has been entered by the data entry staff.

PROBLEMS ENCOUNTERED IN APPLYING ICT IN THE DEPARTMENT.

1. There are insufficient number of computers and even the few available are very old.
2. The working environment is not conducive as most offices where the computers are kept are without air-conditioner and this makes them breakdown frequently.
3. Lack of Local Area network, as all the computers stand alone; this does not allow the work to move fast and loss of record occurs very often..
4. Also there is lack of Wide Area Network (WAN); as a result no link exists between the department and the Reference and Users Services Department (RUSD) as well as with the Collection Development and Processing Department (CDPD).
It is being suggested that since the functions are interwoven, information generated should be made accessible to other departments through the Wide Area Network.
5. Lack of internet facilities; this has not allowed the department to interact with other international databases.
6. The special software for the development of ISSN database called OSIRIS developed by the Hungarian ISSN centre has not been put into use because staff are yet to be sent to the centre in spite of the fact that the Hungarian Government promised to be responsible for accommodation. As a result of this, the department has been using manual processing of worksheets which it sends to the international centre in Paris for documentation. This practice has kept the department behind schedule. Recently, the international ISSN centre requested that all participating countries should start utilizing the virtual cataloguing client software in place of the OSIRIS software to facilitate the process of registration of serial titles. In-fact payment has been made in respect of the software by the Nigerian ISSN centre and very soon staff of the centre would undergo training on the use of the software.
7. Irregular supply of electricity by the Power Holding Company of Nigeria and frequent breakdown of the standby generator has slowed down the work of the department.

8. Lack of Training and Retraining: the staff in the Database Management needs training and retraining in modern ICTs to fit into their new roles and so the necessary infrastructure should be put in place.

The Way Forward:

- a. Provision of adequate infrastructure: Some of the inhibitors of information technology are in-adequate communication- facility, and constant supply of market for information and knowledge resources. In solving this problem, the government has taken steps to liberalize the market in the telecommunication industry by licensing another communication outfit (i.e.Globacom) to be a carrier. This will create competition and increase the bandwidth access as well as the speed of data/information transfer. Similarly, effort is on towards improving the power distribution and electricity supply nationwide. Projects such as rural electrification and building of private power stations are steps in good direction.
- b. Management Support: The support from the management circle is usually a major factor in determining the success of our libraries. Where the management team does not fully back the project, it is inevitable that the project will fail. Management support is pivotal to success as fund is required at every stage of the project implementation. In tackling these problems, the librarian has to do his homework thoroughly and make sure he/she has enough information to convince and or gain the confidence of the management while defending the project proposal.
- c. Collaboration and Consortium: In this age of fast growing development in ICT and limited resources locally, there is need for institutions performing similar functions such as public libraries, government libraries, and special libraries to come together in order to be able to exchange information and share resources. Libraries in Nigeria should collaborate with the Federal Ministry of Education, and the National Universities Commission (NUC) which has started a virtual library project. When there is a consortium of similar institutions, it provides a forum for formulating and defining information policies that will enhance the utilization of ICT.

d. Staff Training: Lack of adequate training for the staff is one of the hindrances to the utilization of new technology. As Nigerian libraries are becoming electronically inclined, it becomes necessary to retrain and re-orientate the library personnel. Continuous education in the areas of computer technology and management of information is a must for librarians and information specialists to function in this Century. Education is also very paramount to the management of automation in our libraries. It is a fact that the library manager of today needs different skills from that of yesterday, and perhaps greater managerial sophistication. Both the users and the librarians should be educated on a continuous basis. It is therefore important to involve the staff that will be operating the system in every stage of the computerization programme to ensure that they are adequately equipped for the task ahead.

CONCLUSION:

Today ICT is available to libraries and is capable of controlling the basic activities of libraries. It provides, several advantages for libraries and their staff. The benefits of library automation are numerous and include: better service to library users, more efficient utilization of library resources, provision of services to both the local and global community, as well as more effective way of fulfilling the colossal information needs of emerging information age. Automation which the department has embarked upon offers exciting opportunities for library systems. However library staff will need to keep abreast of developments in the local as well as the international scene. The successful operation of an automated library also depends largely on the management's choice of the right equipment, hardware and software and also on trained staff to manage the system.

REFERENCE

1. Ajibero, M.I. (2003) Current Trends in Technical Services. The role of ICT. A keynote address presented at the 23rd Annual Seminar/workshop of Cataloguing, Classification and Indexing Section of the Nigerian Library Association held at Ilorin from 2nd-8th November.
2. Ajibola, B. and Tiamiyu, M. (2000) Library Automation for the Information Age: Concepts, Technologies and Strategies. Ibadan Centre for Leveraging Information for Productivity, pp. 15-17.
3. Kibirige, H. (1983) "The Information Dilemma: a Critical Analysis of Information Pricing and Fees – Controversy". Westport, Con: Greenwood Press. Pp.47.
4. Odhigba, A.O. (2001) Database Management of National Bibliographic Control Department Operations. A paper presented during the orientation programmes for newly recruited Library Assistants organized by NBCD of the National Library of Nigeria between 9th – 11th April.
5. Rowley, J. (1988) The Basics of Information Technology, London: Clive Bingley.
6. Tedd, L.A. (1993) An Introduction to Computer Based Library System. 3rd ed new york : John Wiley.
7. Turner, C. (1988) Organization of Information Principles and Practices. London Bingley.
8. Websters New Collegiate Dictionary. 8th edition (1976) Springfield Mass: Garinde Merrian Co.