MODERN TECHNOLOGIES IN INFORMATION MANAGEMENT : PROBLEMS AND PROSPECTS FOR NIGERIAN LIBRARIES

MICHAEL G. OCHOGWU
Senior Lecturer
Department of Library Science
Bayero University
Kano
Nigeria

The ways and extent of the application of modern information technologies to the management of library operations in Nigeria reveals that very little application of technology has so far been made, as many libraries still utilize conventional tools that have become anachronistic in searching, acquiring, processing, organizing and disseminating information to their patrons. Recommendations are made to improve the situation, particularly in the context of coming information age of the 21st century.

INTRODUCTION

In a society where information is essential, the library function of information supply will be crucial [1].

The mechanization and electronic data processing applications to decision making in information management by library managers is a relatively recent phenomenon. However, decision making as a science in libraries is as old as libraries themselves. Decisions have always been made with regard to the trinity of acquisition, organisation and dissemination of information resources in libraries. But, changes in societal demands for information utilization have forced the information profession to look for more effective and efficient methods of processing, storing and retrieving the information resources. Furthermore, as the economic and political values of information become more recognized, their management becomes even more crucial. To cope up with these challenges, librarians and other information professionals have resorted to the application of modern information technologies in this area.

These technologies are being applied principally for the improvement of intellectual,physical, speedier access of library resources, and access to larger database of information resources, and also,

the generation of more authentic and accurate management information for planning purposes. It is also aimed at the provision of more effective and efficient services to individuals and organizations that have become more sophisticated in their information seeking habits and behaviours.

The basic premise of this paper, therefore, is to raise a few salient questions that will help further analysis of the subject. Consequently, therefore, there is a need to define what these modern technologies are? In what ways can libraries in Nigeria apply them to their systems cost-effectively? To what extent have the libraries utilized them in their operational activities? What are the problems militating against their full exploitation? What strategies have been developed by our libraries to overcome these problems? and finally, what hope do Nigerian libraries have in these technologies in their future decision making processes?

MODERN TECHNOLOGIES

For the purpose of this paper, modern technologies are used to denote a wide range of technologies comprising of computer technologies of various kinds – telecommunications technologies, micro technologies, fiber optics, satellite transmission, telefacsimile transmission and teleconferencing among others. These technologies offer a wide range of services to libraries, industries, manufacturing organizations and government establishments. Some of these include online information services, view-data information services, in-house computer systems, time sharing services, microcomputer based systems and the electronic office systems [2]. Libraries being non-profit organizations have not been able to utilize many of the above technologies, particularly in developing countries, though formidable advancements have been made in the countries, particularly in the U.S.A. and U.K.

APPLICATION OF TECHNOLOGY AND CURRENT TRENDS

Library Automation

Considering the scope of library automation, Nigeria's participation in this area may be examined from three perspectives – technical processing, information storages retrieval systems, and systems analysis operations research.

In the area of technical processes, studies by Ochogwu [3] and Eyitayo [4] have shown that Nigerian libraries have not achieved any appreciable success as far as automating their internal procedures are concerned. One may not, however, doubt the progress made by some special libraries in this regard. Therefore, using Montague's [5] analysis of the historical development of library automation in the U.S. into developmental, operational and integrative phases, Nigeria could be said to be approaching the developmental phase which is characterized by system experimentation, development and entrepreneurship in a limited number of institutions around the country.

The application of computer technologies for information storage and retrieval is in the form of establishment of general specific subject computerized data banks and databases. Because, these data banks and databases contain large volumes of information and have the advantage of access to large volumes of information over their printed versions. Other added advantages include faster speed of retrieval of information, update facility, and the generation of better management information. A number of proposals have been put forward in Nigeria particularly in the area of science and technology, but this has unfortunately remained on paper as nothing has been put into operation.

With regards to systems analysis and operations research, only a limited number of libraries and mostly, the developed systems have applied them as tools in their internal information processing operations. Even though the benefits derived from their application in libraries as quantitative techniques of effective and efficient management of libraries are appreciated, lack of funds and technical know-how limits their wide scale usage.

Resource Sharing

The linking of several libraries either of the same type or of different types to share their resources has become the trend during last three decades, greatly enhanced by the application of computer technologies – the basic aims being to reduce the cost of operations to individual libraries, as well as increased access to large bibliographic databases of information resources. With the aid of the computer and telecommunications technologies, libraries have been able to form library and information networks. Prominent among these networks are those found in North America such as the Online Computer Library Center (OCLC), Research Libraries Information Network (RLIN). Washington Library Network (WLN) amongst many others.

Preservation of Library Materials

Library materials must deteriorate overtime, factors responsible being patron usage, high-acid content in paper, atmospheric factors and biological forces such as, mould, rodents, fungi, etc. In such situations, libraries must, therefore, embark on preventing the materials from deterioration through conventional care and restore the deteriorated materials through mechanized and electromechanical devices. Some of these devices are microfilming, deacidification especially mass deacidification and edition binding.

Automatic Extraction of Information from Texts

The use of computer technologies to index and abstract information from documents eliminates the problems of inter and intra indexer and abstracter inconsistencies that are common features of manual processes.

Automatic Transmission of Texts

The use of telecommunications and computer technologies to transmit messages electronically from one library to another ensures both – accuracy and speed of information transmission.

PROBLEMS OF APPLICATION

In addition to the problems discovered from Eyitayo's survey [6] there are also areas that need some urgent attention by Nigerian libraries

in their efforts to apply modern technologies.

The problem of inadequate resource base in the libraries and the low volume of transactions is one which usually does not merit any form of computerization. In addition to this, librarians in the developing countries in general suffer from a lack of appreciation of computerization from their parent institutional administrators. The resultant effect is long delays in the approval of proposals and sometimes an eventual rejection.

A major problem of computerization of library operation in a developing country like Nigeria is the lack of technical know-how and show-how among many professional librarians. This sometimes leads to a socio-psychological fear of job displacement among professionals and non-professionals alike.

It could also be argued that the lack of competition for services by for profit information brokerage organizations firms in Nigeria makes libraries become lousy in the provision of their services [7]. This is in contradistinction to the situation in a developed country where free lance librarians and information brokerage firms also have a big control of the information delivery business.

FUTURE PROSPECTS AND CONCLUSION

As we move from the industrial age to the post-industrial or information age, it is important that our libraries start preparing themselves by discontinuing the conventional methods of organizing and disseminating information resources.

These methods have become anachronistic for the information management problems of our time. It is expected that as information technology product marketers become more available in Nigeria, they may become more affordable by libraries. But the crucial question that needs to be answered is whether or not our professionals will be able to exploit fully the opportunities that these technologies offer. It is necessary to develop strategies in the following areas :

1) the training and retraining of librarians as modern information managers, not necessarily training to work in libraries only;

2) good public relations by library managers to convince their users and most importantly their fund providers to appreciate the importance of viable library projects such as computerization;

3) the development of alternative funding sources so as to break the mono-cultural tendency of relying on the government as their only source; and

4) library managers becoming more pro-active information processors and disseminators rather than reactive.

As we move closer to the 21st century, libraries in the developing countries of which Nigeria is one are to take more crucial decisions in the management of their information resources in this impending age of mechanized library operations with even greater development-oriented technological ambitions.

REFERENCES

1. LAIRSEN (Svend). The idea of an electronic library: a critical. essay. *Libri.* 38, 3; 1988, September; 163.

2. WILLIAMS (P W). New opportunities from information technologies. *Jour. Inf. Sci.* 2; 1980; 30-35.

3. OCHOGWU (M G). Auomated systems as technological innovations in Nigerian university libraries: a paper presented at the Library Information Science Week, University of Maiduguri, July 15-16, 1987; 7-9.

4. EYITAYO (Adekunle O). Status report on the attitude of automated library system vendors to investing in Nigeria. *Program.* 23, 3; 1989, July; 251-252.

5. MONTAGUE (Elenor). Automation and the library administrator. *Jour. Lib. Autom.* 11, 4; 1978, December; 314.

6. EYITAYO (A O) *opcit.*

7. OCHOGWU (M G). Alternatives in librarianship: prospects and problems for the Nigerian graduate. *Jour. Edu. Lib. Inf. Sci.* 30, 4; 1990, Spring; 277-279.