

PROBLEMS AND PROSPECTS OF APPLICATION OF INFORMATION TECHNOLOGY IN NIGERIAN LIBRARIES

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ABSTRACT

This paper focuses on the problems and prospects of the application of Information Technology in Nigerian Libraries. It shows how computer, a component of information technology is used to carry out some transitional role of library in order to enhance their productivity in rendering more effective services to the nation. Some basic procedures on the computerization of library resources, the prospects of information technology as well as the problems of information technology application in Nigerian libraries are discussed in the study. In conclusion, the paper gives some recommendations on the computerization of libraries in the country.

INTRODUCTION

Although Information Technology (IT) appears to be a recent phenomenon in the information industry, its role cannot be easily ignored. The gap between the developed nations and the less developed countries like Nigeria is traceable to this phenomenon. Information and Communication Technology (ICT) has revolutionized the way the professional librarian/Information Specialist/Documentalist works and offers services. It has brought in some way a kind of refocusing on information sources and access to information on a timely basis. This requires change, or a paradigm shift and total computer literacy on the part of the library professional in order to cope with these changes.

The issue of library computerization has long been a subject of discourse at library conferences and in the literature. The scope of Information Technology in library operations has engaged the attention of a number of

professionals. According to Oketunji; (2000), this term is almost synonymous with "library mechanization". In the same vein, it would be convenient to equate library computerization with automation".

A library system, whether it is computerized or not is an organized set of activities performed on information or operations to achieve a specified result. When a computer (Information Technology Component) is used to support a library function, that is, when a computer is used to perform some of the basic processing operations such as acquisition, cataloguing and circulation of materials; or providing access to information one can say that, in some way, computerization of library function has taken place. (Corbin, 1998).

INFORMATION TECHNOLOGY

Information Technology, according to Margholani (1987) is a term that encompasses the notion of the application of technologies to information processes (generation, storage, processing, retrieval, dissemination, etc.). According to the American Library Association (1983), "Information Technology is the application of computers and other technology to the acquisition, organization, storage, retrieval and dissemination of information to users". Mathew (1999) quoting Merton (1990) referred to it "as the mechanism used to process, store and transmit information which can be in numeric, text and graphic form." The components of IT include: input, output, procedure, people, Database, on-line information search, CD-ROM (compact Disc-Read only Memory), multimedia network, internet and World Wide Web. Finally, Daniel (1999) identified the following range of equipment as pertinent to information technology. They are: "Cameras, Scanners, Keyboards, Telephones, Fax machines, photocopiers, computers, Compact disks, video and audio tapes, cables, monitors, printers, optical fibre transmission lines, micro-wave nets, televisions, etc." According to him, there is need to follow certain procedures when carrying out library computerization.

STAFF PREPARATION AND TRAINING

Before the installation of information Technology system in library operations, library staff have to prepare themselves and be trained on how to handle or operate the new information system just acquired to organize, store and disseminate information resources to the users. Of all the stages involved in computerized systems, the one that may ultimately be the most crucial determination of success though the one most often sacrificed in the midst of all the other activities - is the preparation and training of the staff. This should be viewed as only one phase in the process. Staff preparation and training should not be narrowly defined or seen as an activity that is

figured and completed at a swoop; rather, it should be seen as a continuing process. Most professional librarians have little or no previous training or experience in computer use, hence a certain element of resistance is to be expected which can be reduced, if not eliminated, through a planned programme of practical training and retraining both in-house and off site.

TRAINING OF LIBRARY USERS

Most Library users have little or no familiarity with computerization, thus problems of adaptation and resistance is to be expected as well. A Library should be prepared to put in place an "end-use" support which includes regular consultation and briefings on the benefits to be derived from the new system. This includes a much-enhanced search and retrieval capacity, selective dissemination of information and the generation of a much improved information bulletin. (Nwalo, 2005). A training programme for "end-users" should become a regular feature of the Readers' Services Section/Division of a computerized Library, once the computerization is embarked upon.

CONVERSION OF LIBRARY RECORDS

When a Library decides to computerize, one of the tasks that must be faced is the conversion of manual bibliographic records to machine-readable form. Banjo (1994) asserted that computerization will make a library to commence creating machine - readable records only for new items acquired. Bibliographic records that exist only in non-machine readable or manual form will still represent a large percentage of the collection - virtually everything catalogued until the time the library begins to use computerized services or system. If the library wants to put these manual records into a form that can be read and manipulated by a computer, it is faced with the major task of converting them.

The conversion of manual records that have cumulated over decades can be a huge undertaking and so expensive that some libraries may consciously decide not to attempt it. Such libraries might decide instead to maintain a dual-catalogue. A financial argument might be made in favour of establishing a dual public catalogue, but it would be extremely awkward to maintain two-circulation system side-by-side. For a computerized circulation system, at least the major portions of Library's older holdings will have to be converted to machine-readable form. Any library computerizing its functions should plan positively towards the conversion of its bibliographic records. The size of collection in a Library is a pointer to how easy or otherwise the task would be accomplished. A complete conversion will give a library an opportunity to clear up inconsistencies in its catalogue that might have arisen as a result of decades of changing catalogue rules, reversals in library policies and procedures.

There are many options available to libraries at present but three main options are prime:

- " Conversion by an outside agency on behalf of the library
- " Deriving records from external databases.
- " In-house conversion.

In the first option, an outside bureau takes care of the task of conversion. Hence the library makes use of the knowledge and skill of experts in data conversion without bothering Library staff with extra labour in addition to their routine duties. On the other hand, the option is quite expensive while the preparatory work for the project can prove to be very time-consuming. (Corbin, 1998).

The second option involves the use of existing databases from outside the library. An example is the employment of the database of a library that has similar collection profile. A copy of such database can be used as a basis for one's own data-conversion. The hit-rate depends on the nature of the database in relation to the nature of the collection, but complete coverage may never be achieved by a single database.

The last option is the direct conversion of manual records to computer-based database. Though labour intensive, it is about the best method available to libraries under the existing circumstances. The process is straightforward; it requires that the library enters descriptions of the data found in its manual files, derived from the shelf list cards into the database one by one. Re-editing is often considered desired for some of the materials due to changes in cataloguing standards. This method is comparatively cheap and the number of errors made during data-entry is low provided that quality control is maintained.

PROSPECTS OF INFORMATION TECHNOLOGY APPLICATION IN NIGERIAN LIBRARIES

In Nigeria, the application of IT in Library operations will bring about the following advantages:

First, it will bring about improved capability. Computer is an essential tool now available to librarians for improving their services to their clientele. They must disabuse their minds as Alemna (1996) truly argues, about "the notion that automation will take over their function and hence their usefulness. This feeling may result in a failure to rise to the challenges, posed by computerization. Instead, they should begin by acquiring some knowledge of both computer language and the language of the sciences, and to become

acquainted with the theoretical foundations of communication. This will help in enhancing their services to the Library users.

Second, application of information technology to Library operations allows easy integration of various activities. By computerizing clerical and repetitive functions in acquisition, serials control, circulation and cataloguing, and by fitting appropriate telecommunication gadgets to computers, thus facilitating local, regional, national and world-wide- Access to numerous bibliographic, numeric, textual databases for scholars and professional Librarians will be enhancing their job performance in information - handling, and at the same time having "more time to formulate policies and take management decisions (Alemna, 1996). Besides, a wide knowledge base is provided for information seekers. What cannot be got in the library database could be got in the database of another library. Of interest today to librarians is the fact that the internet is becoming increasingly universal for effective distribution of book titles in the world market. "The application of computers to library functions offers quicker and easier ways of performing increased workloads of library tasks with greater efficiency. New library services and functions such as instant update on requests and overdue as well as networking and cooperative activities among libraries can be carried out routinely and faster with computers" (Aguolu and Aguolu, 2002)

Furthermore, increased productivity is also recorded when IT is introduced. It also enhances greater efficiency. For instance, the cataloguing, classification, indexing and other library functions are performed faster (Apotiade, 2002)

The use of information technology fosters easy and quick access to information. The delay that would have resulted due to manual operation is removed. Information can be got from a database at the press of a button compared to days or weeks it will take if such information were to be obtained manually.

Current information is also assured through the use of IT. For instance, a Library that is hooked to the internet can easily get from the National Assembly Library more information concerning the impeachment motion being moved by the legislators against the president or his deputy. Despite the problem of strain on the eyesight, power failure, and limited portability, it is becoming clearer everyday as a rule, the more up-to-date and essential the information required by the reader, the more likely it is to be published electronically. Librarians can harness up-to-date information through the application of IT to the improvement of their Library and information services. The application of information technology in Nigerian libraries enhances image-boosting. The Library profession stands to benefit from enhanced

image professionalism which we have in the case of professions like Accounting, Medicine and Computer science among others.

Finally, increased revenue may result in the case of library computerizations. This is so because payments will be made by users for any service rendered such as assessing the net or various web-sites. A good example is the availability of internet services at Kenneth Dike Library of the University of Ibadan.

PROBLEMS OF INFORMATION TECHNOLOGY APPLICATION IN NIGERIAN LIBRARIES

Shepherd (2000) stated that there are some common pit falls that interfere with computerization of the Library services. The first among which is poor communication between management, staff and the change agents. Without careful explanation, a staff may misinterpret the reasons for the introduction of a new system and improperly evaluates its benefits. Poor communication will turn people off, cause worry, and convert potential information technology advocates into opponents. Second, unanticipated technical problems associated with the change. Technical problems may arise if there are no manuals, if forms are badly designed or if the system software still has "bugs" in it. Even if we provide all these things, technical problems can still arise. Besides, there is the fear of the unknown, uncertainty, tasks enlargement or reduction. The introduction of a new system often demands redefinitions of duties and responsibilities. Departmental relations may change. Personal and procedural failure resulting from perceived inability to cope with the intricacies of new procedures can contribute to a climate of resistance. Job performance may lose the glamour that goes with such activities. If the work to be done is "de-skilled" by the computer or does not provide for the exercise of individual judgment, people will create the opportunity to use their judgment in an operation even when it is not required. Supervisors and middle managers are typically the most neglected group in the computerization process. The question uppermost in their minds is "What happens to my job when the people I supervise are using new technology?" People may develop hostility towards themselves or others leading to confrontation with supervisors, peer, and subordinates. This can lead to a deterioration of interpersonal relationships, morale and service.

There is also the failure of the new system to meet stated management objectives such as improved job satisfaction. Staff may identify certain inadequacies associated with the new system before management and may reject it because it does not serve the organization's stated objectives. Of course this is a clear signal to management that the next technology has some defects and so should be reviewed. If the signal is unacknowledged, staff may change their internal motivational aspirations and attitudes toward

the new system. Communication takes time. Management can contribute to the failure of a new system by not providing appropriate support through such things as training, compensation, equipment and furnishings. Resistance to change must be addressed by focusing on the sources of the problem rather than the symptoms. Dealing directly with, hostility, production bottlenecks, or data entry errors will have no permanent, desirable effects. Managers (Librarians) will record greater success if they have in place specific strategies for handling change or innovations.

CONCLUSION AND RECOMMENDATIONS

Computers have great potentials for use in the Library. They form part of the established features of modern libraries in developed countries. In the case of the developing countries and particularly in Nigeria the problems of infrastructure, technical and staffing inadequacies, are common constraints on widespread use of computer in Nigerian libraries. Indeed, the benefits that computers bring to libraries, their users, and the nation at large are tremendous, and should not be ignored. Efforts should be made to overcome the constraints on computer use. It is recommended that Nigeria's present renewed zeal, concern and efforts towards economic reconstruction and development through the provision of investment incentives, deregulation and other fiscal capabilities and infrastructural provision be extended to the area of IT. This would necessitate better funding of institutions' libraries so that computerization may be embraced by many more libraries in Nigeria.

Consequently, our goal as librarians is to maximize our resources so as to serve our users effectively. A revolution in information technology is occurring now and it is a revolution that needs to be embraced and supported by all. We suggest that feasibility study needs to be conducted by each Library before introducing any computer-based system, taking into account variables like finance, environment, level of infrastructure etc. Such a study will form a basis for decision-making, and for such a decision to be valid, it needs to be based on adequate information, generated from a critical evaluation of the existing system and a thorough perception of alternative system(s) (Edoka, 1983).

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