

AUTOMATED INDEXING AND ABSTRACTING SERVICES IN NIGERIAN LIBRARIES.

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ABSTRACT

Indexing and abstracting services constitute one of the media for disseminating information and enhancing literature search. Automation increases the library's ability to achieve this objective. While some Nigerian libraries have succeeded in automating their services, the technology is generally under utilized. Major constraints to automated indexing and abstracting services are: inadequate finance, poorly developed IT infrastructure, poor technology expertise, and lack of cooperation among information scientists and librarians. Librarians need to develop a clear view of the complex issues involved and equip themselves to meet the challenges of emerging technologies.

INTRODUCTION

The influx of computer applications for library and information work has brought about tremendous changes in the role of libraries. While the developed world has greatly benefited from this technology, we in Nigeria are yet to harness this developed medium. Some indigenous libraries such as, Raw Materials Research and Development Council, Financial Institutions Training Centre Library, Federal Institute of Industrial Research Library, etc, have automated their services.

There is need for libraries in the country to take advantage of the new information technology to provide a wide range of services and products. Indexing and abstracting services constitute one of the media for disseminating information and if well distributed and used, the service can act as social instrument capable of promoting national technological, economic and social goals.

WHAT IS AN INDEX ?

Lathrop (1996) defines an index as a detailed topic analysis of the

text. It is a highly condensed overview presented as a conceptual map that helps readers see the scope and content of the entire document and navigate through the information.

A usable index should:

- ✘ Anticipate how readers will search for information;
- ✘ Help readers retrieve needed information;
- ✘ Show how various topics interrelate;
- ✘ Group together scattered information on a subject in the document;
- ✘ Discriminate between useful information on a subject and a passing mention; and,
- ✘ Exclude irrelevant information that offers nothing significant to readers.

WHAT IS AN ABSTRACT ?

An abstract can be defined as "an abbreviated accurate representation of the contents of a document without added interpretation or criticism and without distinction as to who wrote the abstract". The aims of the librarian for preparing abstracts are:

- ✘ to ensure maximum use of information materials;
- ✘ to prevent duplication of research efforts;
- ✘ to save the time of the users and to ensure bibliographic control;

The users aim for using abstracts includes:

- ⊙ to look for specific information in their chosen field;
- ⊙ to keep abreast of current literature and trends in their field of interest and in their fringe subjects; and
- ⊙ for retrospective reference or information retrieval.

INDEXING AND ABSTRACTING SERVICES

Indexes and abstracts are compiled and disseminated in order to aid literature search and facilitate information retrieval. According to the 'Encyclopedia Americana' (1981), as the extent of knowledge grows, literature searches become more complex and demanding. The mass of information examined and digested has increased very rapidly since World War 11. Under these circumstances, researchers must increasingly rely on published indexing and abstracting journals in which the literature of all fields are organised in such a way that all worth while publications

will be quickly and easily retrievable.

The service is normally restricted in scope to certain subject areas and their functions are specifically the preparation of abstracts and indexes.

Below is an illustration of how the service runs:

ABSTRACTING AND INDEXING SERVICE

Author or Editor



Abstracting and index preparation

Abstract journal

Index volumes, title lists,
bibliographies

Although, there are many abstracts and indexes prepared for use in the developed world, such as Chemical Abstracts, Library and Information Science Abstracts (LISA), Dissertation Abstracts International, etc, there is need for our libraries to create and develop their own databases. Witten et al (2001) observed that "developing the capability of creating information collection will allow developing countries to participate actively in the information society, rather than observing it from outside." Therefore, access to information emanating from the various research activities in a library's parent institution as well as other relevant organizations need to be documented and made available to our scholars as well as to the global community.

AUTOMATED INDEXING AND ABSTRACTING

New Encyclopedia Britannica (1990) describes automation as the application of machines to tasks once performed by human beings or increasingly to tasks that would otherwise be impossible. It is the machine's ability to regulate itself (something made possible by the technology of feedback) coupled with the means of handling information rapidly and automatically that has made automation important.

One of the many arguments in favour of automation is to alleviate and solve the problem of bibliographic search. According to Shera (1968) "there appears to be very good reason for...the assumption that machines

can be built which, will relieve the scholar of much of the burden of bibliographic search and that, they will eventually be able to provide the precise information the user needs, when he needs it..."

The support of the computer and its application for the data makes possible the maintenance of far more complex structures than it is feasible or economic to maintain by hand.

Collision (1971) maintains that speed of production is a major reason to automate the abstracting and indexing service. Due to delays caused by the conventional method, editors of abstracting journals turn to the new system that reduces the time gap between writing of the original book or article and publication of the abstract. Also by feeding the computer with the necessary instruction, the index to the journal can be produced as well.

The opportunity for networking and cooperation is a good reason to automate. The fact that data is stored in a computer facilitates its communication to other computers (Rowley, 1998).

In a conclusion drawn in 1995, Dowlin (1995) commented that the library that ignores national, political, technological and community pressures to use the evolving systems and tools will not only face a reduction in support but may miss an opportunity to continue as a major change agent in our society.

ISSUES IN AUTOMATED INDEXING AND ABSTRACTING

In any given circumstance technology is an enabler of services; the highest priority must be given to its performance for effective service delivery. Therefore, once the decision has been made to automate a library needs to decide on the type of database needed, the appropriate software and hardware, the human resource that will serve the purpose and the means of creating awareness to ensure maximum use. Proper preparation must be made if the challenges posed by an automated system are to be met.

HARDWARE

The Library will need a variety of hardware including microcomputers, minicomputers, Laser or Dos matrix printers and scanners. CD-ROM

drives will also be needed for storage and providing access. To avoid system failure and loss of data due to power failure, a UPS for each workstation should be acquired.

SOFTWARE

With the help of software professionals, the library can acquire suitable software that is interactive and screen-oriented, menu driven and flexible. A system that needs only one input to update and complete the information is preferable. It should also be flexible, easy to maintain and end-user friendly.

Adediji (2001), identified a number of Library application software, that come in integrated forms, on the market. Some of these are: CDS/ISIS (Computerized Documentation Service, Integrated Sets of Information Services), TINLIB, XLIB and GLAS (Graphical Library Automation system)

He assessed these packages and concluded that CDS/ISIS allows end-user to design the data structure to suit his information users; TINLIB and GLAS will be most efficiently operated in a Wide Area Network environment as they readily presume online interaction or an information exchange (i.e. through import and export module, e-mail) between end-user (i.e. the Library) and publishers, Library patrons for selection of title, SDI – selective dissemination of information etc X-Lib being a local package is expected to remove culture based problems. For instance documentation should be properly framed and worded and should recognize our local nomenclatures e.g. local government and country.

CDS/ISIS FOR WINDOWS

CDS/ISIS was developed by UNESCO in 1985 for use by information centres especially in developing countries. The windows version was launched about 1999. The National Library of Nigeria adopted the use of the package in 1995 and it is still being used in Indexing and abstracting. Usually, the first stage is the database definition, followed by the preparation of the worksheet, which is an electronic form used for data entry. Choice of the CDS/ISIS offers certain advantages. For example, it can be customized to suit the requirement of a particular organization in which case a system specialist may be invited to design a suitable

application. The package has great flexibility in use and design and permits indexing for keywords in all fields that have been made searchable in the field select table.

DATABASE

The primary responsibility of indexing and abstracting service is to prepare databases on subjects of interest. Database in the traditional library collection are largely text based. One of the most exciting aspects of automation is the ability to access information in formats other than text. According to Dalrymple and Roderer (1994) a database is a collection of data or a body of information that is organised for retrieval via a computer in any storage medium. It may be available through printed format; Online service, in Diskette or CD-ROM format. It can contain data in the form of words, numbers, images, or sounds.

Databases can be categorized into two:

- (1) Bibliographic databases (point to information located elsewhere)
- (2) Full-text databases (which contain the full body of information that can be accessed directly).

Indexes and abstracts are bibliographic databases on selected fields depending on the needs of the library's patrons. Choice of subjects will depend on the type of library: national, public, special, academic or school and your area of special interest. For instance in a country like Nigeria, special emphasis for the public or national library may include Health, Agriculture, Security, Nutrition, Politics, Economics, Culture, etc.

Having identified the subject area, materials to acquire may include government documents, newspapers, journals, project reports, patents, standards, reviews, unpublished research findings etc. Most of these materials are likely to be locally produced and contain indigenous knowledge systems Odusote (1995). O'Connor (1998) and Witten, (2001) stressed the importance of documenting and disseminating our indigenous knowledge as a way of contributing to the information society.

FORMAT OF PRESENTATION

Another important decision would be your format of presentation and availability such as:

- 1) Print on paper
- 2) CD-ROM
- 3) On-Line access
- 4) Internet access.

Dalrymple and Roderer (1994) compared these formats and concluded that CD-ROM may have the most potential as a relatively inexpensive publishing and distribution medium. However, up-dating a CD-ROM entails disc replacement whereas in online indexes daily updating can be achieved at minimal cost. Both formats will require the users to have access to computers which few Nigerians have. A better option may be to have both the printed and the computer readable formats.

Commenting on the issue of access, Dowlin (1995) observed that the traditional library service that requires the person needing material or information to go to the library facilities for service is less viable in a networked instant access world. Location of the library in the institution, where the patrons' offices are, and the time of the day that they seek information has to be taken into consideration in providing access. Thus, there is a relationship between computers for storage and computers for access and delivery. Computer files can be backed up regularly and moved to new and longer lasting storage media much more easily than is true for paper formats.

NETWORKING

According to Mishra (2001) networking libraries is useful especially in facilitating resource sharing and improving library services. Automation will afford libraries the opportunity of going into national library and information network as well as local library networks in indexing and abstracting. This will reduce the incidence of duplication of efforts arising from unilateral ventures. It will also ensure sustained documentation services development in the country.

THE INTERNET

Posting the products on the institutions' website will provide millions of people access to the information. The reason is that participation in the internet knows no boundaries both in geography and time. The internet is independent of distance and the information is accessed in

real or virtual time with little delay. Acquisition of the abstracts and indexes does not depend on mail or shipper delay. However, Phiri (1993) opines that the application of this system requires the existence of adequate facilities, technical expertise, communications infrastructure, a stable economy, reliable source of power and a literate population.

MARKETING YOUR SERVICE

Marketing the indexing and abstracting service is the next most important thing after production. This is because of the need for the clients to know of it so that all the efforts and investments will not be in vain. Promotion through newsletters, pamphlets, email, printed fliers or brochures may all be vital. This is where indexing and abstracting that is targeted to a particular audience like nurses; politicians, bankers, etc will have an edge since the indexer can personally speak to them on how the abstract journals can add value to their work. Besides, it can be observed that many people who could benefit from abstracts and indexes are initially not aware of their existence. Even when their attention is finally drawn to the service, they still have little idea of its full capabilities or even of its coverage and arrangement. Peterson (2001) reiterates that "Once you have made your client aware of your service, you may need to train them on how to use it". A study on researchers' use of abstracts and indexes in Nigerian Libraries, and their degree of success in obtaining information through this medium is hereby proposed.

PROBLEMS AFFECTING AUTOMATED INDEXING AND ABSTRACTING

Some of the problems that the nation faces in her information delivery system are: lack of adequate finance, information technology expertise, poorly developed IT infrastructure, delayed response to change and lack of coordination and cooperation among information scientists and librarians. Adequate funding is very crucial to the success of the indexing and abstracting service and is needed for sourcing for materials, providing computer infrastructure, acquiring the services of competent technical personnel etc. Commenting on this, Oketunji (2001) observed that "most libraries are not positioned for rapid change. Budgets are relatively fixed with little accommodation for special endeavors and so funding for

additional positions which is required for technology based services is usually difficult to obtain". To combat this problem other avenues for raising funds such as soliciting for grants and assistance from relevant international foundations, rich patrons, Non Governmental Organizations etc, could be explored. Also vigorous marketing and sell of abstract journals may yield dividend.

Another problem is lack of necessary software and hardware, most of which have to be imported from developed countries. Also, institutions and organizations that have installed computers lack qualified personnel such as systems analysts and computer engineers to run and maintain their system. Thus computer technology, where available, is underutilized. Unreliable electricity supply and undeveloped telecommunications infrastructure also constitute major problems as they adversely affect the functioning of computerized information systems. As a result, computer installations require the additional emergency power supplies, thus increasing the cost of computing.

Finally, libraries and information centres using computer facilities have developed systems independently resulting in inconsistency in programming, record format, output format, etc. There is hardly any scope of sharing of programming efforts and skills. If a new library wants to automate, it has to develop its own capabilities.

PROSPECTS

The effort of the National Library of Nigeria in organizing national seminars on information technology management is a step in the right direction. Some other institutions and associations like Centre for Management Development (CMD), Nigerian Library Association etc, also hold workshops/seminars on informatics aspects to speed up computer literacy among professionals. Indexing and abstracting services in institutions such as International Institute of Tropical Agriculture (IITA), National Library of Nigeria, Raw Materials Research and Development Council, etc have been automated with the help of technical manpower. What is now required is coordination of efforts.

At the international level software packages like CDS/ISIS and Greenstone are available free to developing countries. International sponsoring agencies like Ford Foundation also sponsor Nigerian graduates

to studies abroad in the field of information technology and management. Unfortunately, products of such programmes after graduation prefer to stay back in the foreign country where they studied due probably to the prevailing harsh economic conditions in Nigeria.

CONCLUSION

The main purpose of indexing and abstracting is to provide access to the wealth of knowledge emanating from the country. Automation increases the library's ability to achieve this objective. Being in the forefront of championing, content development and provision of access, the library's methodology must change. Librarians must not only learn new skills but also incorporate people with new skills into the library. Modality for cooperation and networking in the provision of indexing and abstracting services is an area for further research.

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