Information Retrieval Tools, Catholicon to Accessing Library Resources

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ABSTRACT

A lot of authors have defined the abstract from different point of view. Lancaster (2003) defines an abstract as a brief but accurate representation of the contents of a document and he opined that an abstract is different from an extract, an annotation or summary. Rowley (1996) defines an abstract as a concise and accurate representation of the content of a document in a style similar to that of the original document. She adds that an abstract covers all the main points made in the original document and usually follows the style and the arrangement of the parent document. Abstract as documentary products always take the form of short texts either accompanying the original document or included in its surrogate.

Abstracts are very similar to indexes. An abstract give a title description of the title or research paper listed. It is also states the objectives, methodology used in carrying out the research and the finding which helps the user to find it easier to know whether or not to follow a particular articles or publication.

It is pertinent to note here that most popular abstract found in most libraries is the Chemical Abstracts. Therefore a good abstract should be accompanied by adequate bibliographical description or reference to enable the original publications or articles to be traced, retrieved and utilized. The arrangement of abstracts can be done using any convenient method, although the most frequent are the alphabetical and classified arrangement.

It can be seen from the foregoing that creation of abstract should not be left for the haft-baked or incompetent. It is a core operation in document and information processing which requires good literacy skills and extensive experience in solid information handling skills would enable the abstractor to construct abstracts that should help in effective utilization of documents, either in library or elsewhere.

The term abstracting is simply and essentially, the process of producing a brief summary of a document showing silent issues like the objectives, scope, procedure or methodology, conclusion and recommendations contained in the document.

INTRODUCTION

A library is organized for use and maintain by a public body, an institution, a corporation, or a private individual. Public and institutional collections and services may be intended for use by people who choose not to – or cannot afford to-purchase an extensive collection themselves, who need material no individual can reasonably be expected to have, or who require professional assistance with their research. In addition to providing materials, libraries also provide the services of librarians who are experts at finding and organizing information and at interesting information needs.

A library is an organized collection of sources of information and similar resources, made accessible to a defined community for reference or borrowing purposes. It provides physical or digital access to materials, and may be a physical building or room, or a virtual space, or both. A library's collection can include books, periodicals, newspapers, manuscripts, films, maps, prints, documents, microform, CDs, cassettes, videotapes, DVDs, Blu-ray Discs, e-books, audio books, databases, and other formats. Libraries range in size from a few shelves of books to several million items.

Libraries often provide quiet areas for studying, and they also often offer common areas to facilitate group study and collaboration. Libraries often provide public facilities for access to their electronic resources and the internet. Modern libraries are increasingly being redefined as places to get unrestricted access to information in many formats and from many

sources. They are extending services beyond the physical walls of a building, by providing material accessible by electronic means, and by providing material accessible by electronic means, and by proving the assistance of librarians in navigating and analyzing very large amounts of information with a variety of digital tools.

Information sources in the library come in different formats which is print and non-print. The formats has evolved from primarily print materials (books and periodicals), to multi-media materials such as videotapes and more recently electronic resources. Therefore, electronic resources are information resources which are accessed through the use of computer and internet based facilities. The different types of electronic resources are e-book, e-journals, databases subject gateways, e-theses and so on.

According to Ekwelem, Okafor and Ukwoma (2007), asserts that information resources that are available and can be accessed electronically through such computer networked facilities can be done through online library catalogue, the internet, World Wide Web and digital libraries.

Electronic information resources greatly increase access to information and its implementation must be carefully planned to ensure optimal use of space and time (Adeleke, 2005). Oduwole and Akpati (2003) identified the available electronic resources that are commonly used in Nigeria Universities which includes CD-ROM databases, electronic mail, online public access catalogue (OPAC), and Web resources.

According to Azubuike (2016) see information sources as the bedrock of the university community. Electronic information sources according to the Dictionary for library and information science are materials consisting of data or computer programmes conceded for reading and manipulation by the computer use of a peripheral device directly connected to the computer or remotely via a network such as internet. Electronic information resources are; electronic journals, e-magazines, e-newsletter, and e-book.

Electronic information resources by Asiru (2011) are provided in electronic form and these include, online journals, online public access catalogue (OPAC), internet and other computer-based electronic networks.

Information resources however, are materials consulted for aid or for knowledge about a topic, a theme, and event, a date, a number, a place or even a word. Some information resources like books, which lend themselves to quick and easy use, are consulted more frequently than other media for certain kinds of information. Of course, reference sources are not to be read from cover to cover. Students and other library users doing research within their various fields need to consult most of these resources.

The explosive growth of information has made it a matter of survival for companies to have at their disposal good information retrieval tools. Information storage is becoming cheaper, and because of this more voluminous. Due to this fact a growing amount of (expensive) information disappears unused simply because there are no possibilities to retrieve this information effectively. The problem, however, has been studies for years, as what has become known as "the information retrieval problem" and can be described as follows (Olson, 2003).

"In which way relevant information can be distinguished from irrelevant information corresponding a certain information need". Systems trying to solve this problem automatically are called information retrieval system. These systems which are developed from a defined models of information retrieval system; the most publicized ones are the Boolean, the Vector Space and the probabilistic models. More recently, Van Rijisbergen suggested a model of an information retrieval system based on logic because the use of an adequate logic provides all the necessary concepts to embody the different functions of an information retrieval system.

The Concept of Information Retrieval

According to Olson (2003), the term Information Retrieval was coined in 1952 and gain popularity in the research communities from 1961. At that time, Information Retrieval's organizing function was seen as a major advance in libraries that were no longer just storehouses of books, but as places where information was catalogued and indexed. The concept of Information Retrieval presupposes that there are some documents or records containing information that have been organized in an order suited for easy retrieval. An Information Retrieval system is designed to retrieve the documents or information required by the user community. It should make the right information available to the right and targeted users. Thus, an Information Retrieval system aims at collecting and organizing information in one or more subject areas in order to provide it to users as soon as it is requested for Craven

(1988), opined that an Information Retrieval system does not inform in change of knowledge of the users on the subject of his enquiry; it merely informs him/her f existence or non-existence and where about of documents relating to his request. The Information Retrieval system serves as a bridge between the world of creators or generation of information and the users of that particular information.

Two categories of Information Retrieval have been mentioned:

- In-house Information Retrieval.
- Online Information Retrieval.

In-house Information Retrieval systems are set up by a particular library or information centre to serve mainly the users within the organization. An example of an in-house database is the library catalogue. Online public access catalogue (OPAC) provides facilities for library users to carryout online catalogue searches, and then check the availability of the item required. By online Information Retrieval systems, we mean those that have been designed to provide access to remote databases to a variety of users. Such services are available mostly on commercial basis, and there are a number of vendors that handle this sort of service.

Writers in times past have suggested that an effective and reliable Information Retrieval system must have provision for:

- Prompt dissemination of information.
- The right amount of information at the right time.
- Getting information in an economical way.
- Filtering of information.
- Browsing.
- Current literature.
- Interpersonal communication.
- Personal assistance.

In typical library environment, there are two categories of patrons, the library and information personnel and the end users. Library and information personnel often act as intermediaries and they may also act as end users seeking for information for their own use or for decision making. All Information Retrieval system should be user oriented. As such the interest of every users should be given due importance at every point of information storage and retrieval.

Information Retrieval Tools and their Utilization

Libraries have been in existence since the beginning of writing and have served as a repository of the intellectual wealth of the society. As such, libraries have always been concerned with storing and retrieving information in the media it is created on. As the quantities of information grew exponentially, libraries were forced to make maximum use of information retrieval tools to facilitate the storage and retrieval process.

These major tools are Catalogues, Classification Schemes, Indexes, Abstracts, Bibliographies. Other Information Retrieval tools in the library include the following: Encyclopedia, Directories, Dictionaries, Almanacs, Handbooks, Atlases, Periodicals, and Concordances among others.

Catalogue

Catalogue is a very crucial saint information source in the library. In fact, for the proper, efficient and effective use of the library, a reader cannot bypass or totally ignore the catalogue. Going straight to the shelves without consulting the catalogue to pick books may have its own little advantages, but it does not however give the user or the readers the opportunity to know very well the library's complete and comprehensive holdings. The catalogue indicates where the books are on the library shelves.

Apart from indicating the where about or location of every books in the library, it will also indicate whether or not the library has a particular book on a particular discipline.

Nevertheless, the precise purposes of the library catalogue varies, they can be broadly summarized thus:

- **To help a library user to find a book which:**
- The author is known.
- The title is known.
- The subject is known.
- **To show the library holdings:**
- By a given author.
- On a given subject and related subject.
- In a given form of literature.
- **To help in the choice of books:**
- As to its edition.
- As to its other characteristics.

Furthermore, according to the work of Su (1994), Large & Behesti (1997), Online Public Access Catalogue (OPAC) were first used in mid 1970s, it was only at the beginning of the next decade that a significant number of libraries switch form card to automated catalogues. However, those first catalogues were usually modules liked to the automated circulation system and had brief catalogue records and very limited functionality. Online Public Access Catalogues (OPACs) are the interfaces that help users communicate with the collections of a library. Typically, Online Public Access Catalogues (OPACs) allow users to search the library's catalogue, and also provide other facilities, such as checking borrower records, reserving reading materials, library news bulletins, and so on. Several changes have taken place and OPACs have improved significantly since then.

CLASSIFICATION

The arrangement of library books is what called for classification in the library to allow easy access and retrieval of information resources on the library shelves. Nnadozie (2007) defined classification scheme as a system created for the division into categories of the universe of human knowledge into broad subjects and narrow topics. The original rationale behind the creation of classification schemes was to help librarians map the universe of knowledge such that documents can be put aside for future consideration into specific locations for easy identification and retrieval.

However, without the grouping of collections of books in the library to their subject matter, books on the same subject would not have been found together on the shelf. Also, without the classification schemes, class numbers that are seen in indexes cannot be obtained. Moreover, several types of classification schemes have been devised and used in libraries depending on the size and nature of their collections.

Although, classification schemes were mainly designed for organizing bibliographic items on the library shelves, many librarians and information professionals have also used library classification schemes for organizing information resources electronically. Typical examples are: BUBL LINK: which provides access to catalogue of over 11,000 selected internet resources is catalogued according to DDC on all academic sources. Clienteles can search the catalogue by selecting a dewy class for example, 300 Social Sciences or by selecting a term/phrase from the alphabetical index. Thus, a patron can gain access to the digital resources by a classified list or through an alphabetical list of subject.

INDEX

The word "Index" according to Ita (1987) denote one of three distinct species of bibliographic guides, to wit "(i) a guide to the content of a particular publication. (ii) a guide to the content of a particular library. (iii) a guide to what literature exist, say in a given area, or in a given time or period". It is on the above premise that the library catalogue is sometimes described as an index to the content of the library and a bibliography as an index to the existence/ availability or otherwise of a publication.

There is no doubt that indexes have been employed in several ways to help trace information and without indexes, information cannot be found and retrieved quickly. Most books have indexes at the end of the pages. There are also indexes on particular subjects which also make retrieval easier. In fact, it is possible to trace an article by an author or by subject through the use of indexes.

Furthermore, there are periodical and newspaper indexes on particular subject. It is these indexes that are often referred to wherever librarians talk about indexes. Indexes, especially those of periodicals and newspapers are usually published monthly or quarterly. These are then cumulated yearly for easy reference materials.

Xin Lu (1990) writes in BUBL Link that in the ideal document retrieval environment, a document or query statement is represented by a group of distinct index terms as well as the semantic relationships between these terms, so that retrieval could be bases on a structure of semantic relationship. Hildreth (1998) also opined that documents are retrieved on the basis of the correspondence between search terms expressed in the query and the terms in the document. Indexing systems designed to assist in the retrieval of documents operate by assigning index terms to the analyzed subject of each document either manually or automatically.

BIBLIOGRAPHY

Bibliography as one of the following retrieval tools to accessing sources in the library are list of works, books or shorter works, which help identify sources where information can be found. It is true that without the aid of Bibliographies, additional works by a certain author or works on a certain subjects cannot be found. There are hundreds of different kinds of bibliographies

compiled for different purposes, and it is with the aid of bibliographies that your reference librarian can let you know which one might be useful in the topic area of your research.

However, it is a bibliography that will tell (the clientele) a work exist, but it may not be held by that particular library. After writing a journal article or a book, the writers usually refer to the sources he had used. The source could be book or articles that he had used or added to his own information, thus list is referred to as reference or bibliographies.

The materials listed in bibliographies are usually arranged in alphabetical order of surnames before other names, the title, place of publication, publisher, date of publication and numbers of pages. It is important to know that this arrangement is referred to as MPA style. However, the date comes immediately after the names of the author, it is referred to as Harvard style.

Bibliographies are of particular to those doing research or advanced work without the assistance of bibliographies these people would not have found it easier to locate what have earlier been published in the field they are working on which is to enable them identify and make a choice of materials. It is in fact advisable and important for patrons to consult bibliographies as a first step to finding the available literature on their chosen topics.

CONCLUSION

For centuries, libraries have been organizing reading materials on shelves for easy access. However, systematic methods that have been widely adopted for the organization of library materials and their recordings for use by readers came into being a little more than a century ago. Today's information professionals should know and be conversant with the traditional information retrieval tools and methods like cataloguing, classification, and vocabulary control as well as the traditional methods show the process of evolution of information retrieval and most importantly, many recent developments in information retrieval in web and digital library environments have their roots in these traditional tools and methods. Different measures are currently taken for informing patrons about various materials accessible through a given digital or hybrid library as opined by (Kowalski, 2000).

It is pertinent to note here also that the explosive growth of information has made it matter of survival for companies, libraries to have at their disposal good information retrieval tools in order to made it easier for the users to be able to search, retrieve and utilized information of their choice at any given time within a short while. Hence the relevance of information retrieval tools as a panacea towards accessing sources in the library.

REFERENCES

[1] Adeleke, A.A. (2005). Use of library resources by academic Staff of Nigerian polytechnics. *Journal of Library Science* 12(5) 15-24.

[2] Anglo-American cataloguing rule (1999). 2nd ed., 1998 revision Joint Steering Committee for Revision of AACR, Library Association and Canadian Library Association. www.ifla.org /VII/s36/pubs/grg03.htm

[3] Azubuike, C.O. (20160. Information literacy skills and awareness of electronic information resources as influencing factors of their use by postgraduate students in two universities in South-West, Nigeria. University of Ibadan: *literacy Philosophy and Practice (e-journal).*

[4] BUBL Link. www.bubl.ac.uk

[5] Craven, T.C. (1993). 'A Computer-aided abstracting tools kit', *Canadian Journal of Information Science*, Vol. 18, 19-31.

[6] Craven, T.C. (1983). 'Text network display editing with special reference to the production of customized abstract', *Canadian Journal of Information Science,* Vol. 13, 59-68.

[7] Craven, T.C. (1996). An Experiment in the use of the tools for computer-assisted abstracting. In ASIS 96: Proceeding of the 59th ASIS Annual Meeting 1996. Baltimore, MD, October 21-24, 1996. Vol. 33, Medford, NJ, *Information Today,* 203.

[8] Craven, T.C. (2000). 'Abstracts Production using Computer Assistance' *Journal of the American Society for Information Science*, Cyber Dewey: the fast well organized internet directory. www.anthus.com/cyberDewey.html

[9] Ekwelem, V.O., Okafor, V.N. and Ukwuoma, S.C. (2009). Students' use of electronic information sources at the University of Nigeria, Nsukka. *African Journal of Library, Archival, and Information Science*. 7 (1) 34 – 45.

[10] Engineering E-Library, Sweden: the Swedish Universities of Technology Libraries. Available at http://eels.iub.lu.se/Information Retrieval Methods in Libraries & Information Centres Copyright IAARR 2011: www.wfrevjo.com *119 Indexed African Journals Online*: www.ajol.info

[11] Frants, V.I.; Shapiro, J. And Voiskunskii (1997). Automated Information Retrieval: theory and methods, San Diego, Academic Press.

[12] Hildreth, C.R. (1998). 'Online Library Catalogues as IR system: what can we learn

from research. In Yates-Mercer, P.A. (ed.), Future trends in information science and technology, Taylor Graham, 926.

[13] Korfhage, R.R. (1997). Information Shortage and Retrieval, New York, John Wiley.

[14] Kowalski, GeraldMark T. (2000). Information storage and retrieval system: theory and implementation. Hingham, MA, USA: Kluwer Academic Publishers.

[15] Large, A. and Behesti, J. (1997). OPAC: A research review; Library and information science research, 19.

[16] Lancaster, F.;Elliker, C. and Colonell, T. H. 'Subject analysis', Annual review of information science and technology, 24, 34-84.

[17] Liston, D. And Schoene, L. (1978). 'A systems approach to the design of information system'. In: King, D. W. (ed.) key papers in the design and evaluation of information system, New York, Knowledge Industry.

[18] Nnadozie, C.O. (2010). Indexing and Abstracting for beginners, Owerri: Spring field publishers Ltd.

[19] Oduwole, A.A. and Akpati, C.B. (2003). Accessibility and retrieval of electronic information at the University of Agriculture Library, Abeokuta, Nigeria. *Library Review* 52(5). 228- 233.Olson, N. B. (2003). (ed.) Cataloguing internet resources: A manual and practical guide, 2nd ed.

[20] Rasmussen, E. (1999). 'Libraries and bibliographical systems'. In Baeza-Yates, R. and Ribeiro-Neto, B., Modern information retrieval, ACMP.

[21] Rowley, J. (1994). 'Aspects of a library systems methodology'. *Journal of Information Science,* 20(1), 41.

[22] Rowley, J. (1996). *The basic information systems,* 2nd ed. London, Library Association Publishing. Vol. 5(6), Serial No. 23, November, 2011. Pp. 108-120.