

PRINCIPLES OF CATALOGUING AND CLASSIFICATION IN THE 21ST CENTURY: ADVANTAGES, APPROACHES AND CHALLENGES OF RETROSPECTIVE CATALOGUE CONVERSION IN LIBRARY

Adamu, Mohammed Saba
mohd.adamu@futminna.edu.ng

Dogara, Ladan
dogara.ladan@futminna.edu.ng

Edimeh, Augustine
austine.edimeh@futminna.edu.ng

Garba, Shambo Mohammed
garba.mohd@futminna.edu.ng

University Library Services
Federal University of Technology Minna, Niger State, Nigeria

Abstract

This paper examined the principles of cataloguing and classification in the 21st century with emphasis on retrospective catalogue conversion. The indispensability of Information and Communication Technologies (ICTs) as the major pivot and driven force that brought the concept of library automation were highlighted. Relevant literature which were germane to the study were searched. The involvement of Information and Communication Technologies in library operations has no doubt led to the advent of new trends and models. These include: Online Public Access Catalogue (OPAC)/Web-based Public Access Catalogue (WEBPAC), Online/Copy Cataloguing and use of Resource Description and Access (RDA). The concept of MARC 21 was also highlighted. The paper enumerates the advantages, procedures, approaches, techniques and challenges of retrospective catalogue conversion in a library system. The study concluded that retrospective catalogue conversion is entirely a necessity not a luxury. The study therefore recommended that libraries should work towards converting their records from manual system to automated system for quick and easy access to information and to meet up with the current global trends.

Keywords: *Advantages; Approaches; Catalogue; Cataloguing; Century; Challenges; Classification; Conversion; Library; Principles, Retrospective;*

Introduction

The basic goal of any library or information centre is to disseminate the right information to the right clientele at the right time. This goal can only be achieved if the information resources available in the library are properly organized through the technical procedures of cataloguing and classification. Therefore, the role and activity of cataloguing and classification in library operations cannot be taken with flippancy. Nwalo (2013) asserted that cataloguing has been at

the center of the effort to organize information resources for easy identification, organization, storage, access and use. Cataloguing brought about the remedy for the chaos that would have been the case in libraries if the resources were not organized. Ola cited in Idiegbeyan-Ose et. al. (2016) stated that the process of cataloguing entails the preparation and maintenance of a catalogue including classification, assigning subject headings and subject indexing. The essence of cataloguing is essentially to organize information resources in such a way that patrons can easily locate or access them.

Prior to the introduction of computer and Internet into library operations, bibliographic information of library materials were catalogued manually such as on a card catalogue and AACR2 rules as a guide in order to achieve uniformity and maintain standards. Throughout this period, cataloguing was seen as a conventional image of typewriters, 3x5 inches cards and a work with complex rules, while Cataloguers were described as Librarians who had to work hard with rules, in dusty offices surrounded by books and catalogue cards (Ajulo, 2007). In support of this assertion, Eguaveon (2013) posited that cataloguing and classification exert much energy, requires great concentration, commitment and application of high intellectual ability; it is also described as being dull and uninspiring.

Methodology

This study adopted a theoretical approach utilising data gathered through the content analysis of secondary data such as journals, textbooks and Internet resources. The paper also presents evidence from literature of other related studies on principles of cataloguing and classification in the 21st century and retrospective catalogue conversion.

Conceptual Elucidation of Key Terms

The key terms that would be elucidated here include Information and Communication Technology (ICT), OPAC/WEBPAC, RDA, Online/Copy cataloguing, MARC 21, advantages, procedures, approaches, techniques and challenges of retrospective catalogue conversion.

ICT: Tool for Library Transformation

The advent of library automation is attributed to the 21st century revolutions in information and communication technology which brought about the use of computers and communication networks in library services and operations. ICT has also brought significant changes to the processes and practice of cataloguing and classification. According to Idiegbeyan-Ose et. al. (2016), the 21st century automated library is fast drifting away from the use of manual to automated means for carrying out its operations and services. In a nutshell, library automation can be defined as the use of digital means usually computer systems and other information technology devices for carrying out the major operations of a library; these operations include acquisition, cataloguing, classification, circulation, reference services, serials services, etcetera.

The use of automated means in carrying out library operations provides a platform for efficient and effective services. Libraries and Librarians are able to do more work within a short time, with less physical energy. Beside the increased level of productivity, automation also facilitates uniformity amongst libraries, ensures standardization of the cataloguing process and enhances the process of information resource sharing (Raval and BankLaw, 2013, Idiegbeyan-ose and Ilo, 2013).

The emergence of library automation software such as Koha, Librarian, Evergreen, Lib-Portal, Greenstone, Verso etcetera and Internet have facilitated library automation. Library software helps librarians to carry out operations and services through computer systems and network. Thus, cataloguing and classification processes are now carried out through the use of computers and the Internet. These software Koha for example, is an open source integrated library system with all the international standards such as MARC21, Z39.50, AACR2R etcetera. Koha software supports libraries of all shapes and sizes including public, academic, special, law and large consortia. Koha includes modules for acquisitions, circulation, cataloguing, serials, authorities, report, patron, label printing and much more. This paper focuses on the advantages, procedures, approaches, techniques and challenges of retrospective catalogue conversion in a library system.

Retrospective catalogue conversion is a process of converting the existing bibliographic record or information of a library collections from traditional manual system or non-machine readable form to machine readable form or computerized system. Harrod's Librarians' Glossary and Reference Book (2009) defined retrospective conversion as a partial or complete conversion of an existing catalogue into machine-readable form as opposed to converting records created currently. The word "Retrospective" indicates that the process is only for already existing records, and the meaning of the word "Conversion" refers to the form and format of the records changing from one form to another. American Library Association (ALA) Glossary of Library and Information Science (2013) also defined retrospective conversion as the process of converting to a machine-readable form the records in a manual or non-machine readable file and that are not converted through day to day processing. Subsequently, Thus, retrospective conversion in library and information center means "changing already existing catalogue from existing traditional form to a machine-readable form (Dabas, 2004). Ihejirika and Ekere (2016) posited that the introduction of computers into library activities has been a turning point that suggest for change from the traditional cataloguing process to automated system. There is need therefore for library catalogues to provide access to more content and to enhance functionality based on the features of popular search engines. They stated further that more users want, expect, and pursue full text, in increasing numbers, they look beyond the catalogue when searching for electronic journals, databases and websites. Considering the ineffectiveness, delay and inadequacy of the existing library manual system, most of the libraries in Nigeria such as academic libraries are moving from traditional manual library system to automated system as a means of coping with massive literature output and huge demand on their services in this era of information boom. According to Ajala cited in Okoroma (2010), opined that the most important decision in automation are the hardware and the software requirement. In the same vein, Gibbarelli cited in Ihejirika and Ekere, (2016) recommended that an automation exercise should start with the acquisition of hardware and software.

For retrospective catalogue conversion to be viable, the service of library staff and other competent hands are needed as one of the resource for retrospective catalogue conversion. The staff are expected to have basic knowledge of traditional cataloguing skills and ICT skills. Nwachukwu cited in Ihejirika and Ekere, (2016) opined that in the modern age of information explosion, no library can satisfy client demand with the manual library process. This he contends, is especially the case of university libraries where speed and versatility in making their bibliographic searches, as such computer skill among librarians should be seen as a valuable prerequisite that would help to facilitate library computerization efforts and functions in order to

meet the demand of ever-growing clients. In view of the above, Csapo (2001) outlined some of the basic computer skills needed in a work place as: using the computer and managing files, word processing, spreadsheet, database, Internet and e-mail. Manaf et. al., (2009) enumerated cataloguing and classification skills to include: Basic knowledge of cataloguing tools, Working knowledge of cataloguing tools, Library of Congress Rule interpretations, knowledge of MARC format, Library of Congress Classification, Dewey Decimal Classification, Library of Congress Subject Headings as well as Knowledge of relevant national and international cataloguing standards.

Advantages of Retrospective Catalogue Conversion

At this present time, cataloguing has appeared as one of the most interesting areas of library activities or practice as a result of Information and Communication Technology (ICT). Oketunji cited in Okoroma, (2010) stated that in choosing an automated library system the library should do a need analysis so as to review the existing system; its strengths and weakness. It has however been identified that retrospective catalogue conversion of library system to computerized or automated system is of tremendous benefits both to the users and the library staff. Some of the advantages as outlined by Tedd cited in Okoroma, (2010) include: provision of online access, ability to easily access more information via the online, saves time and cost, and makes for more accurate completion of tasks or processes. Similarly, Nwalo (2013) asserted that computerization of libraries in Africa will permit the acquisition and use of literature on Compact Disc Read-Only Memory (CD-ROM) which has huge advantage both in terms of cost and durability. It collapses time, space as well as reduces the incidence of mutilation, defacing and theft of library materials. Lang (2007) observed that cataloguers use the Internet as a device for locating cataloguing documentation and other information. She opined further that the main strengths of electronic cataloguing over traditional cataloguing are its ease of use and its ability to reduce the amount of time required to access information.

Collectively, automation enhances various operations and services in the library such as acquisition, serials, cataloguing, circulation and information networks as well as library management (Edoka cited in Okoroma, 2010). Manjunath (2004) stated that automation eliminates cumbersome job of printing the cards, enhance simultaneous access to the same database as well as quick and remote access to information on the network. Oladapo (2006) outlined some benefits of ICT to cataloguing to include:

- It standardizes efficient cataloguing of records produced for libraries
- It allows the formation of networks for resource sharing (online access to cooperative databases)
- Machine Readable Cataloguing (MARC) allows libraries to share bibliographic resources with those that use it
- It helps libraries to easily migrate to commercially available library automation system
- It joins and shares online access to cooperative databases/bibliographic utilities.

In support of this, Mosuro cited in Idiegbeyan-Ose et. al. (2016) asserted that Information and Communication Technology has turned the world into a global village and everyone to an electronic neighbor. Internet connectivity has made it easy to log on to the databases of libraries all over the world, especially the Library of Congress and the OCLC to view their catalogues and then import records available which are relevant to collections in your library. Computerization

of cataloguing process according to Ugoji (2001) has become fashionable in order to enhance efficient and effective service delivery. Most libraries now rely on various software packages to manage their day to day operations in order to meet their users' needs. All this software has cataloguing modules embedded in them.

Procedures for Retrospective Catalogue Conversion

The retrospective conversion of physical materials is more preferable compared to that of existing files. This is because some of the information needed to be captured into the system are not on the existing catalogue cards such as barcode number, branch library, binding (i.e. hard cover or paperback) etcetera. The procedures involve moving books to the cataloguing unit; generation of data into the worksheet/input sheet; entering of data into the system (i.e. computer); catalogue card production using computer and supervision of quality work done. Nwalo (2013) opined that, copying of cataloguing in publication (CIP) data from either the printed book or MARC tape by the librarian onto a cataloguing worksheet marked the first phase of computerization in the library. CIP records help in improving library services to users since it provides all the information cataloguers need to create a record for a particular material into their databases or card catalogue. Most of the procedures in cataloguing have been greatly simplified by the application of information and communication technology.

Approaches to Retrospective Catalogue Conversion

The approaches to retrospective catalogue conversion can be managed in the following manners. The alternatives available in retrospective catalogue conversion according to Ola cited in Okoroma (2010) are basically three:

- In-house retrospective catalogue conversion: This involves applying all the necessary devices/tools for the exercise using the library staff and materials on ground internally.
- Outsourced retrospective catalogue conversion: This involves contracting out the exercise to a vendor or agency away from the library or information centre. These agencies/vendors could be Saztec Europe LTD, OCCC Europe, North- West data systems, Ebsco, the periodicals subscription agents etc.
- Shared retrospective catalogue conversion: This is a situation where the two alternatives identified above are used. Some part of the records can be given to agencies/vendors to manage while the remaining records can be managed internally by library staff.

Dabas (2004) established some approaches for retrospective conversion to include: (i) In-House Conversion: In in-house conversion, the conversion is completed by the existing library staff that leads to high quality and control, as the staff understands the users' needs, quality requirements, and the objectives of the conversion very well; (ii) Outsourced In-House Conversion: In outsourced in-house conversion, the conversion is completed by outside contracted persons within the library premises; (iii) Outsourced Off-Site Conversion: In outsourced off-site conversion, the process is completed by an agency away from the library or information center. In a similar assertion, Oni (2009) also identified three main approaches for retrospective catalogue conversion as follows: Retrospective Catalogue Conversion by an Outside Agency:- letting an outside bureau take care of such a comprehensive task seems to be attractive to some librarians; Deriving records from external databases:- this option uses existing databases from outside the library. An example is the employment of the database of a library which has a similar collection profile. A copy of such a database can be used as a basis for one's own data-

conversion; In-house conversion: - this option is perhaps the best one available to libraries in this part of the globe.

Techniques for Retrospective Catalogue Conversion

Keying manually is synonymous with original cataloguing as resources database is synonymous with copy cataloguing. Ola cited in Ihejirika and Ekere, (2016) identified the techniques to include: (i) Keying manually: - this is the most accurate technique of getting libraries database into machine readable form, but the technique is time consuming and needs both properly trained people as well as expert supervision. This is done via "New record" point. (ii) Resource database: - this involves matching of records through the use of International Standard Book Number (ISBN) or Library of Congress Classification Number (LCCN) or uses other bibliographic particulars such as authors, titles, publication data and other data elements to search item at hand or similar title from other libraries database and import into the database of the library concerned via "Z39.50/SRU" point. (iii) Editing: - this has to do with ensuring that converted records are properly edited to ensure that converted records are consistent with local practice. In another assertion, Dabas (2004) observed that the three basic techniques for retrospective conversion are filling of data input sheets/worksheets, entering data into software and editing the database.

Challenges of Retrospective Catalogue Conversion

The retrospective catalogue conversion exercise is associated with some challenges that pose to its success. Dabas (2004) stated that retrospective conversion is irritating primarily because of the following facts: with traditional techniques, retrospective conversion is very expensive; typically, it is multi-year project; and since it is often considered a lackluster or boring subject, the topic generates little managerial interest and involvement. He further stated that despite the unfortunate reputation retrospective conversion has acquired, its importance cannot be overemphasized. The database resulting from a retrospective conversion project may long outlive the first, second, or third generation of automated systems installed in a library. Over the years, it can be very difficult to try to live with a poor database that is the result of budgetary or staff shortages.

In a similar opinion, Okoroma (2010) averred that the major problems that can face libraries as they become progressively involved with the use of technologies may be summarized as follows: general inadequacy in the level of relevant infrastructure, particularly telecommunication facilities and human resources supply; a large exploitative local computer market is unsatisfactory after sales in maintenance and support; inadequate number of relevant technical staff and problems of recruitment and retention; the library staff resistance to the introduction of computer technology; the users resistance and failure to adapt to the use of online information; frequent changes in technology. There are minimal problems of power failure, Internet downtime and slow cyber-speed. All these do act as constraints to using the online cataloguing process. However, minimal the outage may be, it translates into Internet downtime which in the long term affects productivity and staff output. In another assertion, Okoroma (2011) outlined challenges of retrospective conversion to include: lack of fund; erratic electric supply; no staff training; rapid technological changes; poor maintenance; cultural barrier; huge size of library volume and regular staff strike etc.

New Trends and Models of Cataloguing

The following are the new trends and models in libraries brought about by ICT to include OPAC/WEBPAC, RDA and Copy Cataloguing.

OPAC/WEBPAC: - The change of the library card catalogue into the Online Public Access Catalogue (OPAC) is perhaps one of the most important gains of library automation. OPAC is an online bibliography of a library's collection accessible to the public through computer terminals (Idiegbeyan-Ose et. al., 2016). Guha and Saraf (2005) reported that OPAC first emerged in the developed world of North America, Europe and parts of Asia in the late 1970s and early 1980s. It has gone through subsequent generations of developments, resulting in what is now called WEBPAC (Web Based Online Public Access Catalogue). The WEBPAC is an online library catalogue that can be viewed over the Internet by graphical browsers. It appears in hypertext format which can link users from the library catalogue to full text electronic resources where available. Omoike and Oke (2014) observed that though most libraries in developed countries adopted OPAC in the early and mid-1980s, libraries in Nigeria did not join the trend until recently. Sadly, only a few libraries in Nigeria are fully automated, with functional OPAC/WEBPAC deployed.

Resource Description and Access (RDA): - The creation and subsequent acquisition of digital or electronic resources in libraries have necessitated the introduction of an international standard, to ease the description and accessibility of these resources. The Anglo-American cataloguing rules 2 revised in 2002 (AACR2R) which hitherto was used in description of library materials had no adequate provision for electronic resources. RDA is a new standard for description and access designed to overcome challenges observed in AACR2R. RDA is a collection of guidelines and instructions used to describe and create access to all kinds of information resources including digital or electronic materials. The adoption of RDA as an international standard for resource description and access has created a new frontier for libraries to fulfill their objective of providing the right material for the right user at the right time. Though, this is a developing trend which many libraries in Nigeria are yet to embrace (Esse, 2013).

Online/Copy Cataloguing: - Online or copy cataloguing is a relatively new development in the process of cataloguing. It entails the systematic utilization of information and communication technology in finding an existing cataloguing record (bibliographic record) for an item in hand, editing the retrieved information in order to suit required standard of the library in question (Idiegbeyan-Ose et. al., 2016). Orbih and Aina (2014) defined copy cataloguing as 'the process of cataloguing items by using existing bibliographic records obtained from various sources and altering those records to conform to local cataloguing standards'. Copy or online cataloguing is sometimes referred to as derived cataloguing; this is a result of the process involved in getting the details of the bibliographic records. Bhatt and Mishra (2012) noted that the process of copy cataloguing may not be considered 'professional' level work because it involves making use of records already created by someone else, although they also noted that this form of cataloguing could also include some level of upgrading and improving on the minimum records retrieved.

Features of MARC 21

When the Library of Congress began to use computers in the 1960s, it devised the LC MARC format, a system of using brief numbers, letters, and symbols within the cataloguing record itself to mark different types of information. The original LC MARC format evolved into MARC 21

and today has become the standard used by most library computer programs. MARC is an acronym for Machine-Readable Catalogue or Cataloguing. It is not a kind of catalogue nor a method of cataloguing but a system by which data elements within bibliographic records are uniquely labeled for computer handling. MARC is an international standard for bibliographic data in machine-readable form widely used by libraries and other information agencies to exchange bibliographic and related information between systems. Furthermore, the specificity provided by the use of MARC fields and sub-fields as labels for data elements comprising bibliographic records which facilitates the retrieval and manipulation of information in automated information systems. There are some general rules that help define what all the numbers used as field tags mean. The notation XX is often used to refer to a group of related tags. For example, 1XX refers to all the tags in the 100s: 100, 110, 111, 130, and so on.

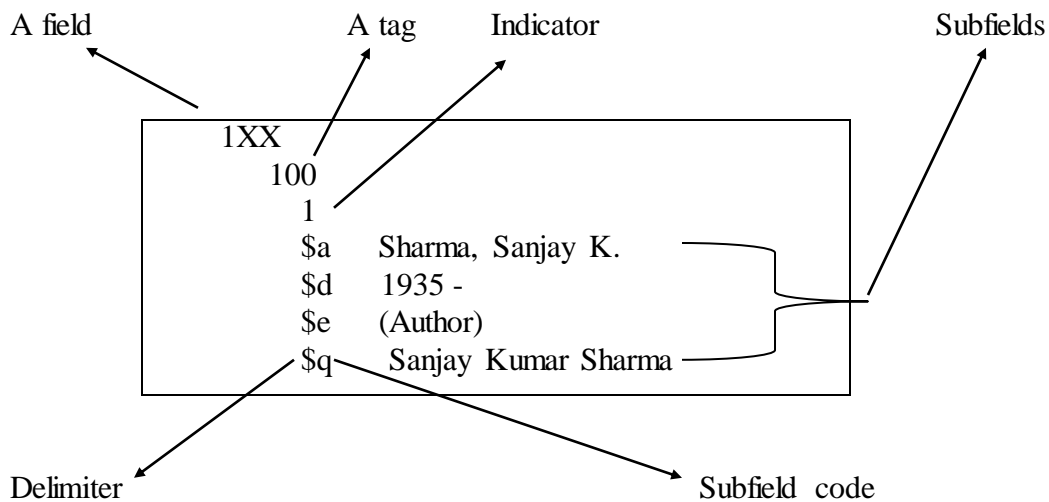
The basic divisions of the MARC 21 bibliographic record are:

- 0XX Bibliographic control information, numbers and codes.
- 1XX Main Entries.
- 2XX Titles, Edition, Imprint, Statement of responsibility and Publication information.
- 3XX Physical Description etc.
- 4XX Series Statement.
- 5XX Notes
- 6XX Subject Added Entries
- 7XX Added Entries other than Subject or Series.
- 8XX Series Added Entries (other authoritative forms) and Holdings
- 9XX Local Use Fields - for locally defined uses, such as local barcode numbers, location and other types of local information.

The MARC 21 format family include:

- Bibliographic records: - These record describe the intellectual and physical characteristics of bibliographic resources such as books, sound recordings, video recordings, etc.
- Authority records: - These record provide information about individual names, subjects, and uniform titles. An authority record establishes an authorized form of each heading, with references as appropriate from other forms of the heading.
- Holdings records: - These record provide copy-specific information on a library resource (i.e. call number, shelf location, volumes held, etc.).
- Classification record: - These record contain classification data. For example, the Library of Congress Classification has been encoded using the MARC 21 Classification format.
- Community information records: - These record describe a service-providing agency, such as a local homeless shelter or tax assistance provider.

The MARC 21 descriptors or terms include: fields, tags, indicators, subfields, subfield codes and delimiters - these descriptors defined the crucial components or elements of the MARC format. Below is a practical example of MARC 21 descriptors model for easy understanding of MARC bibliographic record.



- A field: -Each bibliographic record is divided into fields. There are fields for the author, title information, physical description area, series statement, notes, subject added entries, added entries etcetera. Each field is marked by three (3) digit tags. In the illustration above, 1XX is the main entries field. The number 100 is the tag, indicating it as personal name main entry (author) field. 1 is the indicator representing relator code for author. \$a is a subfield indicating authors personal name. \$d is a subfield indicating dates associated with a name (i.e. authors date of birth). \$e is a subfield indicating relator term. \$q is also a subfield indicating authors fuller form of name.
- A tag: - Each field is represented with three (3) digit number called tag. A tag identifies the field and a kind of data that follows. The tag is divided into groups. For example, tag 100 is for main entry - personal name, 110 is for main entry - corporate name, 111 is for main entry - meeting name, 130 is for main entry - uniform title etcetera. Some notable tags with their functions:

<u>Tags</u>	<u>Functions</u>
010	indicating Library of Congress Control Number (LCCN)
020	indicating International Standard Book Number (ISBN)
100	indicating Personal Name Main Entry
245	indicating title information (title, remainder of title, statement of responsibility and medium)
250	indicating edition and remainder of edition
260	indicating publication information "imprint" (which includes place of publication, name of publisher and date of publication)
300	indicating physical description "collation" (which includes extent, other physical details, dimension etc.)
440	Series Statement/Added Entry
590	Local Note (which includes accession number, cataloguer's initials and date of entry)
650	Topical Subject Heading

- Indicators: - Indicators provide additional information about the data in the field. Between a tag and the bibliographic data, there are two character positions often used for indicators. Each indicator has value from 0 to 9. Even though two indicators may look like a two (2) digit number, they really are two separate numbers. Indicators of different values have different meanings (Nwosu, 2012). The example below makes it more elaborate:

2XX	
245	
10	
\$a	Handbook of plant and crop physiology:
\$b	Respiration and reproduction/
\$c	by Sanjay Kumar Sharma. -
\$h	(Print resources).

The 2-single digits next to tag 245, 1 and 0 are indicator values. 1 is the first indicator which indicates that there should be a separate title entry in the catalog. In the card catalog environment, this means that a title card should be made for this item and an entry for title added to the tracings. But if 0 is the first indicator value, it means that a title main entry is involved or made.

- A subfield: - Most fields have several associated pieces of data. Each type of data within the field is called a subfield and each subfield is preceded by a subfield code. Subfield codes are one lower case letter (occasionally a number) preceded by a delimiter. Subfield codes divide the data into subfields.

Example of a subfield

3XX	
300	
\$a	272p.:
\$b	ill.;
\$c	24 cm.

The field for a book's physical description defined by the tag 300 includes a subfield for the extent (number of pages), a subfield for other physical details (illustration information), and a subfield for dimensions or sizes (in centimeters). In the example above, the subfield codes are "a" for the extent, "b" for other physical details, and "c" for dimensions or sizes.

- A delimiter: - This is a character used to separate subfields. Each subfield code indicates what type of data that follows it. Various software programs use distinct characters to represent the delimiter on the computer screen or on printouts. Examples are a double

dagger (†), an "at sign" (@), a dollar sign (\$), an underline (_), or the graphic symbol "□". In this paper the dollar sign (\$) was used.

Online Classification

Before a library can embark on online classification, the library has to be connected to the Internet. Then, the following steps are observed:

- ❖ Connect your PC to the Internet.
- ❖ On the Google search engine, type "Library of Congress Online Catalogue" at the space provided.
- ❖ Various hits on Library of Congress Online Catalog would be displayed.
- ❖ Select Browse - LC Catalog - Library of Congress
- ❖ On the Library of Congress Catalog Page
- ❖ Click on the Search Options below the Catalog dialogue box provided and select Keyword search option
- ❖ on the Keyword Search Page, Click on the small dialogue box by the left side of the screen to select the search particular of interest as shown below

- All
- TITLE
- AUTHOR/CREATOR
- SUBJECT
- EXPERT

For example, if Title is selected, type the title of the item on the search dialogue box as shown below

Search

Fundamentals of Library and Information Science

then click on highlighted search box to search for the similar title. So many titles may come up, take time to look for the most similar one and then click on it to display the full bibliographic information of the item which is usually on a worksheet.

- ❖ Now copy the Classification Number and other relevant information that would be needed during the cataloguing process

Conclusion/Recommendation

Library is an indispensable entity that needs to exist in every institution of learning, as it is the custodian of knowledge and to support the visions and missions of its parent institution. Today,

librarians can rely on the computer and network to perform all the functions of a cataloging/classification system and much more. Using an appropriate software such as Koha, cataloguers can input data for each piece of item on pre-designed worksheets/input sheet resident on the system, as well as edit or review such entries. Hence, it is now possible to go beyond the traditional fields of information on the catalogue card to provide additional access points using other criteria like the affiliation of authors, key words in the title, or thesaurus descriptors which the system of manual cataloging and classification did not encourage. Therefore, retrospective catalogue conversion is entirely a necessity not a luxury, hence libraries should work towards converting their records from manual system to automated system for quick and easy access to information and to meet up with current global trends.

References

- Ajulo, A.V. (.2007). Cooperative Cataloguing Ventures: a discourse. Retrieved from: http://www.unijos.edu.ng/lib/downloads/cooperative_cataloguing_ventures.doc
- A. L. A. (2013). *Glossary of Library and Information Science*. Chicago: ALA, p. 218.
- Beall, J. & Kafadar, K. (n.d.). The Effectiveness of Copy Cataloguing at Eliminating Typographical Errors in Shared Bibliographic Records. *LRTS*, 48 (2). Retrieved from <http://eprints.rclis.org/9297/1/LRTSarticle>.
- Bhatt, B. P. & Mishra, M. K. (2012). Needs and Importance of Copy Catalog and Cooperative Cataloguing. Retrieved from <http://www.alibnet.org/public/bookofpaper/ppts/39.pdf>
- Csapo, N. (2001). Certification of computer literacy. *The Journal of Social Sciences*, 30 (1), 46.
- Dabas, B. K. (2004). Retrospective Conversion: Guidelines for Libraries and Information Centres, 2nd International Caliber, New Delhi: 11 - 13. Retrieved from: http://www.iiflibnet.ac.in/bitstream/handle/1944/327/04cali_19.pdf?sequence=1
- Eguaveon, O.E.L. (2013). Attitude of Librarians to Cataloguing and Classification of Library Materials in Nigerian Academic Libraries. *Gateway Library Journal*, 2 & 3, 17-22.
- Esse, U. (2013). Current Trends in Cataloguing and the Challenges of a Cataloguer in the Digital Age. *Information Impact*, 4 (2), 16-23.
- Harrod's Librarians' Glossary and Reference Book (2009). 10th ed. England: p. 861.
- Idiegbeyan-Ose et. al. (2016). New Paradigms in Cataloguing in the 21st Century: A Review of Implications and Adoption of New Strategies for Nigerian Libraries. *Bilgidunyasi*, 17(1), 120.134.
- Idiegbeyan-ose, J. & Ilo, P. (2013). Libraries and Librarians in the 21st Century: A New Perspective. *African Journal of Information and Knowledge Management*, 1(1), 68-74.

- Ihejirika, K. T. & Ekere, F. C. (2016). Retrospective Catalogue Conversion in Selected Federal University in Southern Nigeria. *Library Philosophy and Practice (e-journal)*. Accessed from:<http://digitalcommons.unl.edu/libphilprac/1441>
- Lang, J. (2007). "Have you searched Google yet? Using Google as a discovery tool for cataloging. *Library of Philosophy and Practice*, Accessed from:<http://unllib.unl.edu/LPP/htm>
- Manaf, A. Z. (et. al.) (2009). Assessing the cataloguing practices in libraries of private colleges in Sarawak. Retrieved from: http://eprints.uitm.edu.my/5804/1/LP_ZURAIDAH%20ABD%20MANAF%2009_24.pdf.
- Manjunath, G. K. (2004). Library Automation: Why and How? Accessed from: <http://www.igidr.ac.in/lib/paper/htm>
- Nwalo, K. I. N. (2013) New mode of Universal Access: Challenge to Nigerian Cataloguers. *The Nigerian Cataloguer*, 1(1), 89-100.
- Nwosu, O. C. (2012). *Principles of Cataloguing and Classification with AACR2R, MARC21 and Classification Schemes: With a Brief Note on RDA*. Enugu-Nigeria: Sound and Sense Limited.
- Okoroma, F. (2010). Retrospective Conversion in Two Universities Libraries: A Comparative Study of Kenneth Dike Library and Obafemi Awolowo University Library, *Library philosophy and Practice*. Retrieved from: <http://unllib.unl.edu/LPP/lang.htm>
- Okoroma, F. (2011). The Retrospective Conversion of Card Catalogue: A case study of Kenneth Dike library, University of Ibadan, library, Nigeria. *International Research Journal of Library, Information and Archival Studies*, 1(4), 105-113.
- Oladapo, S.T.A. (2006). The challenges of Information and Communication Technologies (ICT) to cataloguing and bibliographic services. In Ikpahindi (2006) Resource sharing in cataloguing, bibliographic, and indexing services in an Information and Communication Technology(ICT)age. Paper presented at the 26th Annual Cataloguing, Classification and Indexing Seminar/Workshop, Abeokuta.
- Omoike, A. & Oke, A. (2014). Online Public Access Catalogue (OPAC) in Nigerian Libraries: A Case Study of Kenneth Dike Library and University of Lagos Library. *Ozean Journal of Social Sciences*, 6 (3), 55 - 65.
- Orbih, D. E. & Aina, A. J. (2014). Benefits and Challenges of Original Cataloguing Versus Copy Cataloguing: The Experience at the Lagos State University. *International Journal of Library and Information Science*, 16 (5), 88-97.
- Raval, A. M. & BankLaw, B. K. M. (2013). Problems of Library Automation. *International*

Journal for Research in Education, vol.2(2). Retrieved from: <http://raijmr.com/wp-content/>

<http://www.google.com>