Journal of Information and Knowledge Management
Information Impact
ISSN: 2141 - 4297 (PRINT)
ISSN: 2360 - 994X (ELECTRONIC)
VOL. 4, NO. 2 (DEC 2013)

CURRENT TRENDS IN CATALOGUING AND THE CHALLENGES OF A CATALOGUER IN THE DIGITAL AGE

Ugwunwa Chinyere Esse

Abstract

The paper explains the challenges faced by cataloguers in this age of Information explosion and Information Communication Technology (ICT) and the attendant innovations and trends that are required to cope in this new environment. Cataloguing is not just building a catalogue, but about providing users with timely access to information relevant to their needs. The task of identifying resources collected by libraries, results in rich metadata that can be used for many purposes. It involves describing resources and showing their relationships to persons, families, corporate bodies and other resources, thereby enabling users to navigate through libraries to quickly get information they need. The metadata constructed throughout the life cycle of a resource is especially valuable to many types of users, from creators of resources to publishers, subscription agents, book vendors, resource aggregators, system vendors, libraries and other institutions, and end users. The new international cataloguing code, RDA (resource description and access) is discussed in this paper, with a view to meet fundamental user tasks in a way that produces well-formed, interconnected metadata for the digital environment.

Keywords: cataloguing, RDA, digital environment, metadata, resources description

Introduction

Cataloguing refers to the process of preparing catalogue entries for all materials that are available in the library. These information materials include books, manuscripts, journals, floppy disk, DVD, CD ROMS, audio visual materials such as micro forms (i.e. microfilms, microfiches and micro cards), digital materials, motion pictures, sound recording, graphic materials and cartographic materials.(Adeyemi, 2001). The technical section of the library is where cataloguing (organization, processing, subject analyses and intellectual activities of all the library materials mentioned above are implemented). Through the process of cataloguing, cataloguers are able to individualize each material acquired by the library, by giving them a unique number for proper identification and thus, provide an access point for each. These materials are large in number and are of different nature in various disciplines. According to Aina (2004) “if there were no prior organization of objects, it would be difficult to retrieve a particular object from among the various objects in the collection when needed”. Cataloguing and classification are therefore, the major activities of cataloguers in cataloguing working environment.

In this information age, where easy access to information is the zeitgeist, Information Communication Technology (ICT) becomes very germane for the cataloguing process. Consequently, the cataloguing department which is a major unit in the library is most relevant in this technological age as it is responsible for creation and maintenance of the Online Public Access Catalogue (OPAC) and the manual catalogue in its various forms such as author/title, subject, shelf list, accession, serials, and authority file catalogues. Manual catalogue of many

libraries are now converted to OPAC or WEBPAC. It is noteworthy that the whole library operations depend totally on the working environment of cataloguers, as the department is the nerve centre of any library.

The creation of new types of resources as well as new forms of communication as a result of digitization has a major impact on cataloguing. Also the evolution of scholarly publication from print to digital form coupled with the explosion of online content on the web resulted in a paradigm shift in libraries from mainly "ownership" of collection to a combination of "ownership" and "access" to subscription databases and other free web resources which provide full text of Journals and books (Jagboro, 2003).

This paper is designed to achieve two objectives: to show that advances in information and communication technologies is only a compliment to the tools used by the cataloguer to do his/her work. It has in no way taken over the job of the cataloguer. More fundamentally, the paper is designed to show that with commitment and resourcefulness on the part of cataloguers in Nigerian university libraries, ICT could be adapted to solve our peculiar needs in our libraries.

Information and Communication Technology and the Library

We live in a fast paced digital age. The growing popularity of the Web influences all aspects of our lives and has changed the way we live, work, study and even think. As a result, the role of librarians and information professionals is subject to radical changes. Information and communication technology has come to stay in libraries in respect to automation and computerization. For libraries, it is not a matter of free choice of alternatives. Malholt (1997) made it clear that libraries and librarians must come to terms with the use of ICT in their operations if they hope to fit properly into the profession. Equally, one does not think that this is the time to argue if a change in society, especially technological changes hitherto affects the operations of the Library. The fact remains that the profession has transformed substantially due to changes in the Information and ICT environment. Knopp (1994) and Sullivan (1995) discussed the effects, of the changes which ICT brought to library operations. It is a veritable tool for information generation and dissemination to this extent; it requires much tact and techniques including doggedness to keep pace with it. The tact one would argue is the ability of the librarians to improve their professional competence to suit the realities of the present day. The technique is the ability to manipulate and operate those technologies that help in the generation, storage and dissemination of information.

Nowadays the ever-expanding growth of information and information technology, increasing volumes and multiple formats of information, changing user expectations and behaviours brought about even higher levels of challenges for cataloguers. To pursue professional ethics in creating timely and high quality records, cataloguers need to develop a new mindset to deal with the increased complexity in cataloguing. New technologies require new skills. The modern cataloguer has to be multi-skilled, computer literate, able to operate different in-house library systems, able to use the online packages, such as MARC21 standard online, WEB Dewey, Web LC, Search interfaces. Cataloguers have to keep pace with the changing environment, managing materials in new formats, able to manipulate different metadata schemes, catalogue for diverse user environments and audiences.

Libraries which were considered only as a gradually growing"storehouses" of knowledge have got a new outlook in the modern Information Communication Technology era. The activities which were carried out manually in libraries with so much pain and strain are being carried out

smoothly with the help of ICT with greater effectiveness. Library organization, administration and other technical processing have become easier and more quantum of work can be done in relaxed mood.

The Catalogue and the Cataloguer

Cataloguing is simply the bibliographic description of documents to make it easy for a searcher to identify the documents in a collection when seen. On the other hand classification is the correct placement of a document with a view to availing patrons, easy access to it at a specific location among the collections of a system. Given the above definition, it could be seen that any library could choose a systematic way of cataloguing materials in its system. Since librarianship is a profession, there has to be a standard way for describing documents to give them an acceptable format internationally, irrespective of where the documents is produced or the subject it is treating. This was the argument of Tiamiyu (2007), when he opined that a universal standard approach to document description helps to foster uniformity in how catalogues describes documents. A lot of classification procedures and rules have been developed by groups and individuals. The most popular among these are Universal Decimal Classification (UDC), Library of Congress Classification Scheme (LC), Dewy Decimal Classification (DDC), Colon Classification and Bliss. These have standardized their subject hierarchies that most libraries adopt them as standard classification scheme. The Anglo-American Cataloguing Rule (AACR), which is now in its second edition, is the standard rule for document description (Cataloguing) for printed materials while Resource Description and Access (RDA) have now been introduced for the electronic environment.

One of the questions this paper is addressing is, whether information technologies changed the basic principles upon which the cataloguer does his work? The answer is simply no. The cataloguer has to catalogue his book based on the AACR or RDA principles and use any of the classification schemes to assign subject and class marks to them. Technology has nothing to do with this and it's clear that it will not affect it in the near future. It is after the cataloguer has finished with his work that technology comes in. Adeyemi (2001) opines that cataloguing is a professional function for which there is no substitutes for the human begin. Technology can only assist; it cannot replace the intellectual rigor of capturing the essential details, which are required to identify a specific item within a collection.

In what ways then has information and communication technologies affected the work of a cataloguer? The United Nations (2009) while assessing the social consequences of advances in information technologies stated:

> *One of the most visible consequences of such advances (new technologies) has been the knitting together of all parts of the world, whether newsgathering, data flows, financial transactions or the exchange of other types of information. The new technologies have effectively broken down national boundaries with regards to flow of information (p.176).*

The implication of this is that information technologies are changing the way information is stored and disseminated not necessarily the way it is processed in library terms. The notion of virtual library is a reality, it is now clear that good libraries are not those that subscribe to and store multimillion volume of books, journals, serials etc in their local collections, but rather, libraries whose resources or database are remotely accessible and are linked to information network of electronic information systems. This situation is summarized by Parekh (2003) thus:

"In the past the librarian unlike most professionals has been associated with a place, the library a building. In the future the librarian will be a vector searching for and establishing connections. The library in which he works is more a state of the mind than a location. It is a set of neural connectors".

The implication of this to the cataloguer is that in addition to his professional competence he must add computer literacy and competence. The cataloguer must be able to work with the new information technologies to develop machine-readable catalogues that can be accessed in remote locations. Cataloguers must come to terms with the idea of the digital library, he should understand that his clientele are no longer those within its immediate environment, but the entire universe of users worldwide, and also make other relevant catalogues in the information world available to his immediate clientele. In the actual sense, the emerging technologies have not threatened the cataloguer's job, but have only added responsibilities and finesse to his job.

How then do these technologies affect us presently?

The new Information age has strictly divided the work of the information profession into two: creating access to, and the communication (dissemination) of information. Access creation is within the task of the librarian (Iloegbunam & Olorunsola, 2006). This implies that the library should be able to structure workforce and to create good access base, starting from an interaction base that involves its users in the selection/ acquisition stage. This access should be based on available materials/ books and journals, which should be indexed; catalogued and classified properly. Cataloguing and indexing should no longer be based on imaginary subject listing but on user need. Index theory has suggested the "aboutness" theory as the most feasible means of creating access to users. The "user aboutness" mode of indexing is hereby suggested for Nigerian libraries, which are not yet in the practice of this theory.

Users' aboutness incorporates the user's context of what a document is about. In this regard a user is brought into contact with a book or document which has a potential to enlarge his present state of knowledge. This might look abstract, but it is real. The present information age is user centred so we must know our users needs before we go for acquisitions and access creation. Ingwersen (1993) and Soergel (1995) treated the aboutness theory of indexing in relative details. Soergel argued that indexers should lay more emphasises on required oriented indexing. This means that the cataloguer should know his users and their information needs. It is clear that in this information and communication technology age, it is not just about cataloguing; it is cataloguing for the clientele.

AACR2 and the New Trend in Cataloguing RDA

Since mid-2010, Resource Description and Access (RDA) have been introduced as an alternative to past cataloguing practices for the electronic environment. This new code for identifying resources has emerged from years of international collaborations, and it produces well formed, interconnected metadata for the digital environment, offering a way to keep libraries relevant on the Web (Atinmo, 2011). RDA is built on the traditions of the *Anglo-American Cataloguing Rules* (AACR). The JointSteering Committee for Development of RDA (JSC) recognized during the 1990s that AACR2 was not a code that would serve 21st-century users. It was structured around card catalogs and linear displays of citations, createdbefore the internet and well-formed metadata that could be used by computer systems. During the 1990s, the JSC received many complaints about AACR2, which are:

- had become increasingly complex as updates were added, particularly to address new digital resources,

- lacked a logical structure and instead focused on individual rules for each type of material rather than on commonalities and basic principles for a simplified, consistent approach
- was arranged by class of materials, which caused problems when cataloging e-resources with multiple characteristics,
- did not adequately address bibliographic relationships, whereas the web is all about networks of interconnected information,
- displayed a strong Anglo-American bias, eventhough it is used around the world,
- Segregated bibliographic data from the rest of the information community's data, in a world of its own with MARC- (Machine-Readable Cataloging1) formatted records. Although MARC is widely used among libraries worldwide, it is not used by the larger information community (Tillet, 2011).

According to Miller (2011), there is a logical flaw in the way materials are categorized in AACR2. Some materials are based on content, (cartographic materials, graphic materials, three dimensional artefacts') while other are based on carrier, that is the physical medium in which data are stored(sound recordings, motion pictures, video recordings, computer files and microforms). Atinmo (2011) asserts that it was in response to the complaints received that JSC swung into action, to develop the Resource Discovery and Access tool using the IFLA conceptual models. RDA emerged in response to worldwide comments from and beyond the Anglo-American community of libraries and other information agencies. It is built on the idea of reusing identifying information coming from publishers and vendors, building on descriptions and making relationships not just by libraries but all stakeholders in the information chain. The focus on users and their needs has been a guiding principle during the development of RDA. RDA is shaped by the conceptual framework expressed in the Functional Requirement for Bibliographic Records (FRBR) model and also by the one expressed in the Functional Requirements for Authority Data (FRAD) model (Oliver, 2009). These conceptual models brought a new perspective on describing resources to focus on the content and carriers and view persons, families, and corporate bodies associated with them in terms of their identifying characteristics. The FRBR entities and relationships and the vocabulary used to describe them were important to the international community of responders. One of the key aspects coming from the conceptual models was a focus on using the identifying characteristics in describing resources to meet basic user tasks: find, identify, select and obtain. Moreover, a call to move to an element-based approach to metadata, rather than building citations, was more compatible with metadata services for web use in the broader information community; it fitted nicely with the entity relationship approach of IFLA's conceptual models (Atinmo, 2011).

One question that might be asked is: why not throw AACR2 out and start from scratch? AACR2 is a widely used standard for resource description and access, used not only in the English-speaking library world, but around the globe, as can be seen by the fact that there are translations in 24 languages (Anglo Heritage2007). It has been the resource description standards used to create millions of bibliographic records that are shared electronically around the world. AACR2 has certain characteristics that have made it an attractive standard, such as the way it aims to reflect common usage for citations of works and recording authorship. Its rules closely follow actual publication practices; it has encouraged consistency of practices and enabled record sharing; and it to change or add rules as publishing practices evolved or new types of resources became common additions to library collections. But one of its drawbacks as observed by Atinmo (2011) is that it is reactive, in the sense of reacting to change after the

change has happened. At the end of the 20th century, we witnessed the start of a proliferation of new publication practices and new methods of scholarly and creative communication.

AACR2 was not able to accommodate these changes in a logically consistent and theoretically coherent way. AACR2 is not inherently extensible, and this slowness to accommodate new types of resources led to a major re-evaluation, which had its formal beginning with the 1997 Toronto conference: International Conference on the Principles & Future Development of AACR. Following the Conference's recommendations, work began on a major revision. It soon became evident that there were some fundamental problems with the way AACR2 was organized, and revisions were not going to be enough. (Kuhagen & Tillett 2011). AACR is amended and revised through an international consultation and decision-making process that hinges on consensus. To achieve a major reorientation of a shared standard requires frequent testing of the waters with new models, and building on what is clearly demonstrated to make sense. The early revisions were good because they pushed toward a new direction. They demonstrated that the new ideas were solid but that the actual proposed changes were not sufficient. The conclusion became that if you are going to change, do it thoroughly and go for logical consistency. The new name of RDA was adopted as a signal of the shift to a thoroughly reworked standard that would aim to have broader applicability.

RDA is designed to be used with a variety of metadata encoding schema. Its records can be stored and transmitted in MARC format or metadata schema such as Dublin Core or MODS (Metadata Object Description Standard). It's easily extensible to cover new types of resources that have not yet been invented. Rather than follow AACR2's reactive course of amendments, much attention has been focused on creating a categorization of content, media and carrier types that can be easily used or extended to cover the description of new resources (IFLA, 2009).

There has been a conscious effort to generalize the guidelines wherever possible so that the same instruction applies to a range of resources, regardless of content, media or carrier type. Where necessary, specialized instructions follow the general guidelines. Compatibility with existing records is essential. According to US RDA Testing Coordinating Committee (2011) Records created using RDA as the standard must be able to integrate in the same databases with AACR2 records, without causing major disconnects and split files. Thus, the guidelines relating to the form and choice of access points are unlikely to deviate much from AACR2 unless there are very convincing reasons for such deviations. RDA will probably encourage the addition of data to access points rather than changing the way access points are made.

How will this affect cataloguers and professional librarians? The organization of the guidelines in RDA has been structured to lead the cataloguer through a logical decision process. When this structure is translated into a web tool, it will become even more evident how easy it is to move through the steps required to produce a useful record. When RDA is called a content standard for the digital world, this also means that it is particularly well adapted to be used as a digital tool. RDA is a set of principle-based guidelines. By making clear the theoretical foundation on which the guidelines rest, it provides the cataloguer with the conceptual framework within which the cataloguer can exercise judgment. RDA equips the cataloguer to make decisions based on principles. Thus, even if a particular case is not explicitly covered by the guidelines or examples, the principles and theory that show up in the introductions, the scope and purpose statements, etc., should enable the cataloguer to make a decision that is logically consistent with existing RDA guidelines.

Conclusion

RDA offers a data element set for all types of materials. It is based on internationally agreed principles, incorporating the entities and relationships from IFLA's conceptual models. It focuses on the commonalities acrossall types of resources while providing special instructions when there are different needs for types of resources, such as music, cartographic, legal, religious and rare materials and archives, for description of such materials. Libraries around the world are being encouraged to develop better systems that build on RDA. Once RDA is adopted, systems can be redesigned for today's technical environment, moving libraries into linked data information discovery and navigation systems in the internet environment and away from online public access catalogs (OPACs) with only linear displays of textual data. This is a transition period when libraries want and need to move bibliographic data to the web for use and re-use. RDA may not be the complete solution, but its role as a new kind of content standard may smooth the path in that direction.

RDA makes library bibliographic descriptions and access to data more internationally acceptable. Library administrators need to understand that the full benefits of investment in this component now will not be realized immediately, but the investment is critical to the future health and role of libraries. To this extent, it is recommended that cataloguers should invest consistently in self development and skills acquisition that is required of them to keep pace with these innovations and be relevant in the 21st century information environment.

REFERENCES

Adeyemi, N.M (2001). Cataloguing and classification and challenges of new information technologies in Nigerian libraries in the next millennium; automation of cataloguing practices in Nigeria libraries In*:* proceedings of the selected papers presented at various workshops of Nigerian Library Association and Indexing section. Lasisi J. et al (eds.) (1-5)

Aina, L. O. (2004). *Library and information science text for Africa*. Ibadan: Third World

Atinmo M.I. (2011). *New directions in Cataloguing and metadata management.* Paper presented at the 31st annual cataloguing and classification and indexing seminar/ workshop (ASCON) Badagry, 23rd-28th October, 2011

Barbara B Tillett (2011*).* Keeping libraries relevant with RDA. Available at *http://web.ebscohost.com/ehost/pdfviewer/pdfviewe* Accessed 8 February, 2011

IFLA (2009). Final report of study group on functional requirements for bibliographic records. Available at:http://www.ifla.org/files/cataloguing/frbr/frbr_ Accessed 6 February 2012.

Iloegbulam, I.J. & Olorunsola R. (2006).Reconstructing academic libraries in Nigeria: Issues to Consider. *Library Management*, 22 (8/9), 381-386

Ingwersen, P. (1993). *Information retrieval interaction*, London: Taylor Graham Pub.

Jagboro, K.O (2003).Computerization of academic libraries: A case study of Hezekiah Oluwasami library, Obafemi Awolowo University, Ile Ife. *Lagos Journal of Library and Information Science.* 1 (1) 47-52

Anglo-Heritage (2007). Joint Statement of National Libraries on Coordinated RDA Implementation, Available at http://www.rda-jsc.org/rdaimpl.html Accessed 12 Febuary, 2012 Knopp, W. (1994). The library in a technological world: problems and queries put forward by the client. *IFLA journal*, 10 (10), 14-21

Malhort, P. (1997). A view from the chip: the influence of information technology on library and librarianship. *IFLA Journal*, 13 (1), 14-22.

Parekh, H. (2003). *The scholarly communication process: the merging roles of Publishers, Librarians and information technology in higher education.* New Delhi: Association of Indian University.

Kuhagen J. & Tillett (2010). RDA Test Train the Trainer Northeastern University, Boston, Mass. Modules 1-9 http://www.loc.gov/bibliographic-future/rda/trainthetrainer.html Accessed 26 September 2011.

Sullivan, P (1995). Technology and behaviour: an essay on meaning. *American Libraries,* 22 (10) 994-996

Tiamiyu, Muta (2007) *organization of Data in Information System: A Synthesis for the information Professions.* Ibadan: Stirlin-Horden Pub.

US RDA Test Coordinating Committee (2011). Report and recommendations revised for public release PDF available at: http://www.loc.gov/bibliographic-future/rda/rdatesting-finalreport-20june2011.pdf Accessed 1 February, 2012.

Ugwunwa Chinyere Esse is of the Centre for Learning Resources, Covenant University, Nigeria. She can be reached at ugwunwa.esse@covenantuniversity.edu.ng and pleasantug@yahoo.com .