An Algorithmic approach to AACR-II: an e-learning tool in Digital Environment

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Abstract

This paper provides an algorithmic approach to cataloguing. E-learning is a new development which makes use of ICT. An algorithm can be converted into an e-learning mechanism. This paper discusses the process of data entry for “Title Proper” of an item using AACR-II, as followed at J.R.D. Tata Memorial Library.
1. Introduction

Networked technologies such as the Internet and World Wide Web are dramatically changing education and training as they enable people to access information and communicate with others across terrestrial boundaries, cultures and on a global scale. They offer the potential for sharing high-quality learning resources, exchanging information and working in learning groups.

2. Importance of Catalogue in a Library

According to Steven Frank (5), the easiest method to keep track of items in a collection is with a list or index. The list may be in random order, but as the list grows, confusion will set in. Therefore, some order or classification method is needed to control the list. Most users are familiar with numerical and/or alphabetical classification schemes. An index tells the user that an item exists, but does not tell the user where to find that item. If we add instructions or data about how to find the item, we have created a directory. He further elaborates that a directory tells the user whether an item exists and where it can be located. The directory must register the unique characteristics of each particular item listed in the directory to determine whether or not it is suitable for users’ particular need. As the collection grows, the unique characteristics of each item diminish, along with the user’s ability to remember distinctions among the various items. It becomes necessary to add information that will describe the item and its unique characteristics to assist the user in his/her assessment of suitability of use of a particular item. The directory containing such descriptive information is commonly referred to as a Catalogue.

Technically, a catalogue refers to a list of descriptions found in a single collection. This definition has been broadened in this age of computer databases to include multiple collections. A catalogue differs from an index or directory in a manner that indices and directories are guides intended to guide searchers to, rather than inform them about the contents of the work.
3. Basic Objectives Of The Library Catalogue

A library catalogue consists of a file of entries or records of materials contained in a library. Each entry contains certain information about the item recorded: sufficient to:

a) **Identify the Document**: i.e., To distinguish it from any other item and further, to distinguish one edition or version of a work from other editions or versions of the same work.

b) **Characterize the document**: i.e., convey some impression of the nature of the work—both its physical make-up and its intellectual content.

4. Functions of Library Catalogue

On the basis of the objectives of library catalogue, its functions may be grouped in two categories:

1. Functions in readers’ service
2. Functions in Library Operations

The first function is not covered in this paper; only the second one, which includes assistance in book description using metadata and guides the library staff in bibliographic data in the computer record, has been dealt with.

5. An Algorithmic Approach To AACR-II – What does it reflect?

We know that AACR-II helps the library professionals in taking decisions when cataloguing library materials; ‘cataloguing principles’ guide in consistent and adequate descriptive information which have evolved into models and rules that are used to compile modern bibliographic catalogues.

Here, algorithmic approach refers to as decision making flowcharts which would enable the ‘Rules’ to be applied in a sequence of logical steps. In
other words, flowchart which represents the sequence of operation and actions, and flow of entries.

The web can be used as an e-learning tool to teach apprentices coming to libraries the application of the cataloguing rules.

6. E-learning with Particular Reference to Cataloguing

E-learning is a learning style that uses information technologies. E-learning is different from that of traditional learning environment where the learner uses printed resources as learning aids. The key characteristics of electronic resources must be kept in mind while designing the e-learning programme. Hence, e-learning finds out something new and would enable browsing more quickly through the text, looking for salient features. E-learners basically want guidance, an opinion, and may also look for assistance from professionals. E-learning environment is explained as follows:

1. Individual learning environment with ICT based learning materials
2. Web-enabled group learning/collaborative learning environment with some shared tools/applications
3. Virtual Classroom Learning (Lecturing)

For more than a century traditional library cataloguing and its objectives are guided by the rules suggested by C.A. Cutter (6) like rules for the choice and form of index term; standardized thesaurus; List of Subject Headings; cross reference, etc. Those seeking information in electronic form are perusing the same objective as in the non-digital universe.

The goal of e-learning activity is to promote collaborative learning; that is, doing new things in new ways. Patsy Cullen (8), (Director of learning and teaching at York St John college) argues that library and information services staff have to work harder to demonstrate their usefulness in the online world through the planning and design of programmes to support the provision of an e-learning library services and LIS staff must understand the learning and teaching structure and the learning process in order to support e-learning effectively. Librarians need to be the team involved in developing the courses.
E-learning environments that handle these requirements for identification of the metadata elements can make everyone a cataloguer. Decisions vary from one library to another. What is a title proper for one library may be an alternate title for another. For example, a title in English for a French book is title proper for a library in India instead of the French title. This is called ‘Local Variation’. What is needed is a generalized algorithm for cataloguing in the web environment whose explanations and interpretations may vary from library to library. This results in a total change in the working environment for the cataloguers.

In this paper we propose an e-learning algorithm for ‘title’ as followed in the J.R.D. Tata Memorial Library

7. An Algorithm for Title Entry

Here, we have taken Title Entry as a representative example for writing an algorithm. The algorithm is not totally comprehensive, but only indicative of the assistance that can be provided. ‘Title Proper’ is defined by AACR-II as ‘the chief name of an item, including any alternative title but excluding parallel titles and other title information’.

The Diagram given below depicts an algorithm for Title proper. With every go to or yes or no, a new link in the web page can be provided so that the navigation continues to an end point where a solution is introduced which will help the trainee to enter data properly. This flowchart is based on the principles followed for bibliographic data entry at J.R.D. Tata Memorial Library.
The above Diagram depicts an algorithm for Title proper
7.1 Application of the Rules in AACR-II and their modifications followed in IISc Library:

1) The Title Proper should be transcribed as to wording, order and spelling but not necessarily as to punctuation and capitalization. An alternative Title needs to be provided a separate entry (Rule 1.1B).

2) When the Title Proper includes Statement of Responsibility that becomes an integral part of Title Proper(Rule 1.1B2) is not followed here because statement of responsibility is treated separately.

3) If the Title Proper consists solely of the name of the person, or body responsible that itself taken as Title (Rule 1.1B3).

4) Abridge a long Title Proper (Rule 1.1B4) is not followed.

5) A letter or word appears or repetition of the letter or word appears even in the chief source of information repetition of the letter or word is not done. i.e., rule is not followed (Rule 1.1B5).(modified rule)

6) If a Title Proper includes separate letters or initials without full stop between them, transcribe such letters without spaces between them (Rule 1.1B6).

7) A Title Proper is supplied in the absence of Title (Rule 1.1B7).

8) If the Title Proper is in one language and script is in another language, then the preference is given to language of the library (Rule 1.1B8). (modified rule)

9) Title Proper supplementary to sections is not entered after the Title but is entered separately (Rule 1.1B9).
10) If the document has a collective Title and Titles for individual works, the collective Title is given as Title Proper and the separate Titles are treated as alternative Title (Rule 1.1B10). (modified rule)

8. Conclusion

Hence in this digital/electronic environment, cataloguer can easily arrive to an appropriate decision by using algorithmic approach. And individual workers can get the learning opportunities, developing new skills and performing new roles and responsibilities. E-learning is also having an impact on individual LIS services as the increased use of ICT and web-based learning technologies has created opportunities for the provision of new services and resources for users.

9. References